As filed with the Securities and Exchange Commission on April 14, 2008

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CODEXIS, INC.

(Exact name of Registrant as specified in its charter)

Delaware	8731	71-0872999
(State or other jurisdiction of incorporation or organization)	*(Primary Standard Industrial Classification Code Number)*	*(I.R.S. Employer Identification Number)*

200 Penobscot Drive, Redwood City, CA 94063
(650) 421-8100
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Alan Shaw, Ph.D.
President and Chief Executive Officer
Codexis, Inc.
200 Penobscot Drive, Redwood City, CA 94063
(650) 421-8100
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☐

Non-accelerated filer (Do not check if a smaller reporting company) ☐ Smaller reporting company ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
Common Stock, $0.0001 par value	$100,000,000	$3,930

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information contained in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED APRIL 14, 2008

Shares

Codexis, Inc.

Common Stock

Prior to this offering, there has been no public market for our common stock. We anticipate that the initial public offering price will be between $ and $ per share. We intend to apply to list our common stock on The Nasdaq Global Market under the symbol "CDXS."

We are selling shares of our common stock.

The underwriters have an option to purchase a maximum of additional shares from us to cover over-allotments of shares.

Investing in our common stock involves risks. See " Risk Factors" beginning on page 9.

	Price to Public	Underwriting Discounts and Commissions	Proceeds to Codexis
Per Share	$	$	$
Total	$	$	$

Delivery of the shares of common stock will be made on or about , 2008.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Credit Suisse **Goldman, Sachs & Co.**

Piper Jaffray

RBC Capital Markets

Thomas Weisel Partners LLC

The date of this prospectus is , 2008.

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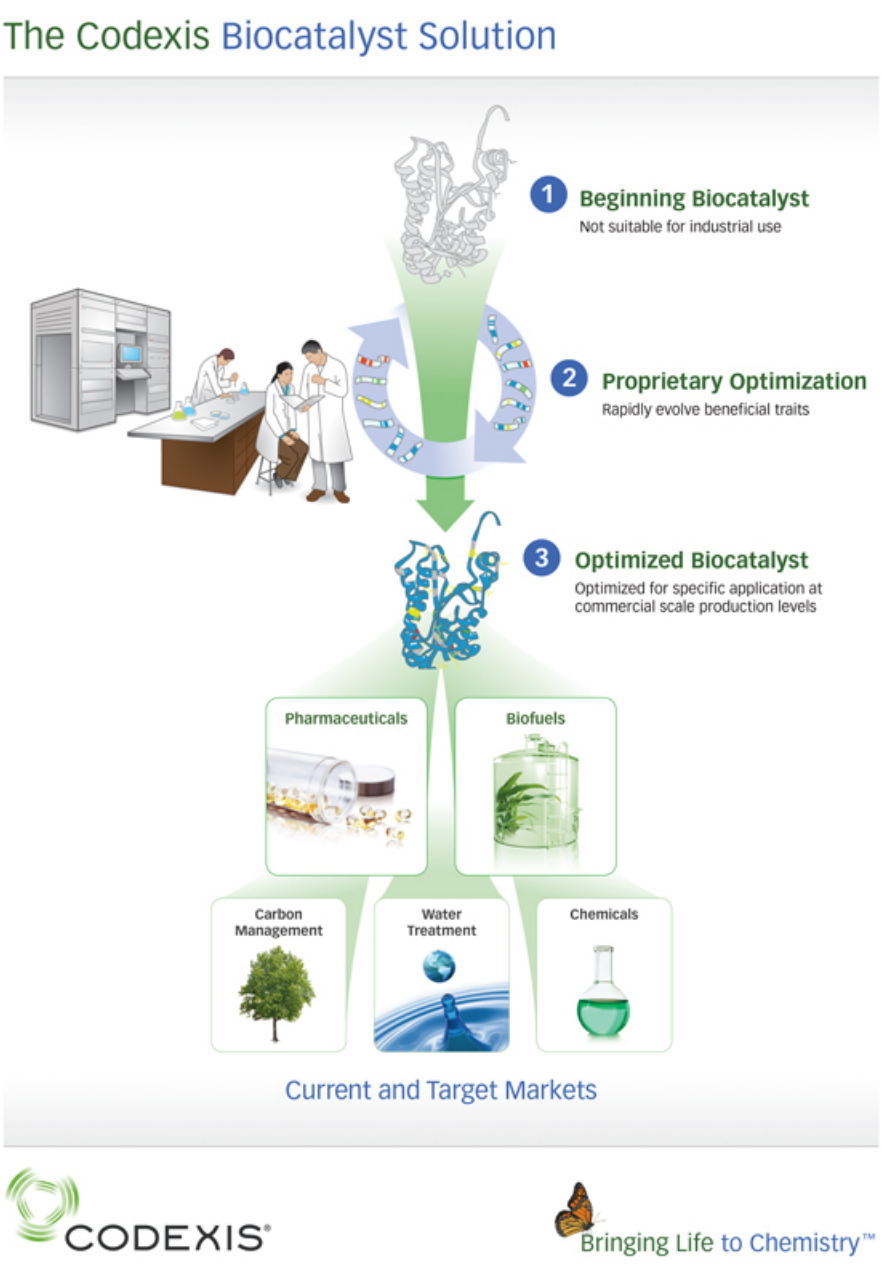

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You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, or such other dates as are stated in this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

Dealer Prospectus Delivery Obligation

Until , 2008 (25 days after commencement of this offering), all dealers that buy, sell, or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information you should consider in making your investment decision. You should read this summary together with the more detailed information, including our financial statements and the related notes, elsewhere in this prospectus. You should carefully consider, among other things, the matters discussed in "Risk Factors," before making an investment decision. Unless otherwise indicated herein, "Codexis, Inc.," "Codexis," "the Company," "we," "us" and "our" refer to Codexis, Inc. and its subsidiaries.

Our Company

We are a leading developer of proprietary biocatalysts that we believe have the potential to revolutionize chemistry-based manufacturing processes across a variety of industries. We have focused our biocatalyst development efforts on large and rapidly growing markets, including pharmaceuticals and biofuels. We have used our technology platform to enable biocatalyst-based commercial scale drug manufacturing processes and delivered biocatalysts and drug products to some of the world's leading pharmaceutical companies. In addition to our commercial success in the pharmaceutical industry, we have a research collaboration with Shell to apply our technology platform to the biofuels market. We are also pursuing funded collaborations in several other bioindustrial markets, including carbon management, water treatment and chemicals.

Biocatalysts are enzymes or microbes that catalyze chemical reactions that can enable the production of products used in everyday life. Our proprietary technology platform allows us to rapidly evolve and optimize biocatalysts to perform specific and desired chemical reactions for commercial scale industrial applications. We believe we can use our technology platform to improve industrially relevant characteristics of any biocatalyst, enabling manufacturing processes that are faster, less complex, less capital intensive and lower cost than conventional chemistry-based processes. In addition, we believe that our technology platform can enable the production of products that are currently impossible to produce economically at commercial scale.

Our pharmaceutical customers have included Arch Pharmalabs Limited, Bristol-Myers Squibb Co., Dr. Reddy's Laboratories Ltd., Merck & Co., Inc., Pfizer Inc., Ranbaxy Laboratories Limited, Schering-Plough Corporation and Teva Pharmaceutical Industries Ltd. In 2007, after exceeding performance targets under an initial one-year research agreement, we entered into a new, five-year collaborative research agreement with Equilon Enterprises LLC dba Shell Oil Products US, or Shell, to develop biocatalysts for use in producing biofuels from renewable sources of non-food sustainable plant materials, commonly known as cellulosic biomass. In the year ended December 31, 2007, we generated $25.3 million in revenues from various sources including collaborative research and development funding, product sales and government grants.

The Biocatalysis Opportunity — Industry Overview

Many industries, from pharmaceuticals to energy to chemicals, use conventional chemical reactions in manufacturing processes. However, conventional chemistry-based manufacturing often requires highly complex, energy-intensive processes that use extreme environments in terms of temperature and pressure, as well as hazardous reagents to effect chemical reactions. These processes often require equipment that is expensive to build and operate, and frequently generate high volumes of waste, some of it hazardous to health or the environment, that must be treated, contained and disposed of.

Biocatalysts can enable superior alternatives to conventional chemistry in industrial applications. For example, biocatalysts can operate at or near room temperature and pressure and therefore can enable significant cost savings by using less complex manufacturing equipment. Biocatalyst-enabled processes can produce the same or higher quality products than conventional chemistry-based manufacturing, while reducing the risks associated with extreme manufacturing environments, without generating nearly the same level of waste.

Despite the potentially significant advantages of biocatalysts, naturally occurring biocatalysts have not achieved their full potential in industrial applications. Naturally occurring biocatalysts often require alteration of their composition in order to perform adequately under industrial manufacturing conditions or at productivity levels that would make their use in commercial scale applications economical. Some companies and researchers have tried to improve the performance of naturally occurring biocatalysts or even produce novel biocatalysts using various other methods and technologies, but to date few have had success. Moreover, for certain industrial applications, there are no known naturally occurring biocatalysts that catalyze the relevant reactions.

Our Approach to Biocatalysis

Our proprietary technology platform has the potential to dramatically transform the commercial and industrial application of biocatalysts. Our platform uses advanced biotechnology methods, bioinformatics and years of accumulated know-how to significantly expedite the process of developing customized enzymes and microbes. In the case of enzymes, we start with a diverse set of genes that encode for variations of an enzyme and recombine, or shuffle, these genes to produce new variants of the enzyme. We then evaluate these new variants to identify enzymes that exhibit improved characteristics under conditions that resemble the desired manufacturing process. ProSAR, our bioinformatics software technology, allows us to identify and quantify the potential value of beneficial mutations and distinguish them from detrimental mutations. The genes that code for improved enzyme variants are put back through this process until a highly efficient enzyme is produced that meets or exceeds targeted performance characteristics. This enzyme can then be incorporated into the actual manufacturing process, where it can reduce or eliminate costly chemical-based steps and the resulting wastes. We have also used our technology platform to improve enzymes in engineered microbes to make fermentation products. We also have a complementary technology for directed evolution of microbes, called Whole Genome Shuffling, that allows us to recombine, or shuffle, the entire genome of two or more cells to produce new variants of the microbe. Our biocatalysts can significantly improve the manufacturing of pharmaceuticals, and we believe that our technology platform may enable us to develop biocatalysts for use in producing advanced biofuels and in providing solutions to other important bioindustrial markets.

Our Target Markets and Solutions

Pharmaceuticals

We initially focused our biocatalyst development efforts on the pharmaceutical industry. Over the last several years, pharmaceutical companies that develop branded drugs, which we refer to as innovators, have struggled with declining operating margins resulting in large part from patent expirations for their key products. As a result, innovators are increasingly looking for opportunities to improve their operating margins by reducing their manufacturing costs and outsourcing the manufacturing of active pharmaceutical ingredients, or APIs, and components used in the manufacture of APIs, commonly known as intermediates. The rise in patent expirations has also led to rapid growth of the generics industry. Because generics manufacturers compete primarily on price, these companies are also pursuing opportunities that reduce their manufacturing costs and provide them with access to low cost sources of intermediates and APIs.

Our products and services address the needs of both innovator and generics manufacturers. For example, we have developed four enzymes that enabled significant improvements in the manufacturing process for, and reduced the cost of two key intermediates used in, the production of atorvastatin, which is the API in Lipitor. We supply Pfizer with one of these intermediates, and we supply generic atorvastatin manufacturers with the other intermediate. We are currently developing intermediates or APIs for the generic equivalents of several branded pharmaceutical products including Singulair, Nexium and Crestor. We have also developed tools, which we call our Codex Biocatalyst Panels, that allow innovators to screen our biocatalysts across their product pipelines and portfolios to identify desired biocatalytic activity that can then be incorporated into their drug manufacturing processes. In February 2007, Merck became the first customer for this product. Once a

useful biocatalyst is identified, either through the use of our Codex Biocatalyst Panels by our customers or our in-house screening services, we can supply that biocatalyst through and to commercial scale, or we can provide further biocatalytic screening and optimization, if needed.

Biofuels

In 2006, we began exploring the application of our technology platform in biofuels. Due to underlying economic, political and environmental concerns surrounding petroleum, the world is seeking renewable alternative fuel solutions. First generation biofuel manufacturers use biocatalysts to produce biofuels such as ethanol and biodiesel at commercial scale. However, these fuels do not provide an optimal solution to the petroleum dependence problem for several reasons. For many of these manufacturers, margins are volatile as costs of key commodity inputs such as corn and natural gas are highly variable, often outpacing changes to ethanol prices. In addition, there are ethical concerns with the diversion of food crops and fertile acreage to fuel production, which has also resulted in higher food and animal feed prices.

We believe that our technology platform may enable the development of biocatalysts that can be used to produce commercially viable non-ethanol biofuel alternatives to petroleum-based fuels from cellulosic biomass. As we work on this long term goal, we also intend to work on the conversion of biomass to sugars, which could also be used for near term opportunities, such as cellulosic ethanol. Shell has the right, but not the obligation, to commercialize any technology that we may develop under the research collaboration. If Shell chooses to commercialize any biofuels products that may be developed through our collaboration, we believe that Shell, which is an affiliate of one of the world's largest distributors of biofuels, has the resources and the infrastructure to commercialize these products on a global scale. We believe that the use of biocatalysts to transform cellulosic biomass into biofuels that have characteristics similar to current petroleum-based gasoline could address the limitations of alcohol-based fuels and could ultimately transform the liquid transportation fuels industry.

Additional Bioindustrial Opportunities

We are pursuing funded collaborations in several other bioindustrial markets, including carbon management, water treatment and chemicals. We believe that our technology platform, together with the knowledge and experience gained from our efforts in the pharmaceutical market and in our biofuels research program, will allow us to capitalize on these opportunities. We will target collaborators that are industry leaders, allowing us to leverage their competitive strengths and resources in pursuit of these opportunities.

Competitive Strengths

Our key competitive strengths are:

- *Proprietary and Disruptive Technology Platform.* Our proprietary platform is potentially disruptive because it addresses the significant limitations of current approaches used to develop biocatalysts and ultimately enables biocatalytic-based processes that have substantial advantages over conventional chemistry. Our technology platform allows us to quickly develop biocatalysts suitable for commercial scale and enables the development of biocatalysts with improved performance characteristics that are rarely present in naturally occurring biocatalysts.
- *Multiple Major Target Markets.* We currently use our technology platform to produce biocatalysts that are used at commercial scale in both the generic and innovator pharmaceutical markets. We are working with our collaborator, Shell, to develop biocatalysts for use in producing biofuels from cellulosic biomass sources. We are also pursuing funded collaborations in several other bioindustrial markets, including carbon management, water treatment and chemicals.
- *Partnerships with Global Industry Leaders.* We believe that our technology platform has been validated through the delivery of drug manufacturing processes or products to numerous leading

pharmaceutical companies, including Arch, Merck, Pfizer and Schering-Plough. In biofuels, after an initial one-year research agreement in which we exceeded performance targets, we entered into a new, five-year research collaboration with Shell in 2007.

- *Capital-Efficient Business Model.* We have adopted a business model that leverages our collaborators' engineering, manufacturing and commercial expertise, their distribution infrastructure and their ability to fund commercial scale production facilities. If our collaborators choose to utilize our technology to commercialize new products, we believe that this capital-efficient business model will allow us to expand into new markets without having to finance or operate large industrial facilities.
- *Diversified and Visible Revenue Base.* Our 2007 revenues were derived from the innovator and generic pharmaceuticals and biofuels markets, and consisted primarily of collaborative research and development funding, product sales and government grants. Revenues from our expected sales of generic intermediates and APIs, as well as the revenues that we expect to recognize from our five-year biofuels collaborative research agreement with Shell, should provide a high degree of visibility into our aggregate revenues for the foreseeable future.

Strategy

Our objective is to be the leading provider of optimized biocatalytic solutions across a wide range of industries. Key elements of our strategy are as follows:

- *Expand into new bioindustrial markets.* We believe that we can deploy our technology platform to transform manufacturing processes throughout various bioindustrial markets. We have a research collaboration with Shell to develop biocatalysts for use in producing commercially viable fuels from cellulosic biomass. We intend to leverage our intellectual property developed under this research collaboration to pursue other funded collaborations in non-fuel bioindustrial markets, including carbon management, water treatment and chemicals.
- *Continue growing our pharmaceutical business.* We plan to launch several new intermediates and APIs for the generic equivalents of branded pharmaceutical products, including Singulair, Nexium and Crestor, beginning in 2008. We will also continue to aggressively market our Codex Biocatalyst Panels to pharmaceutical companies to demonstrate the capabilities of our technology platform in an effort to integrate our products and services earlier and more deeply into drug development and manufacturing processes.
- *Enter into additional strategic collaborations.* We have grown our business by collaborating with market leaders that have funded the development of and application of our technology platform in the pharmaceutical and biofuels markets. We are pursuing additional collaborations that will allow us to continue to leverage our collaborators' competitive strengths and financial resources in our target markets.
- *Continue enhancing our technology platform.* We intend to continue to advance our technology platform by expanding our capabilities in microbe development and by increasing the quality of our biocatalyst libraries. Improvements in either of these areas can be applied to the development of new products in our current and target markets.
- *Further develop our supply chain.* We will continue to evaluate whether to invest in our own manufacturing capabilities or to establish long term supply contracts with additional contract manufacturers. We may also opportunistically seek to secure specialty manufacturing assets and expand existing relationships for the supply of our enzymes and key pharmaceutical APIs and intermediates.
- *Expand our business through acquisition of new technologies, products or businesses.* We will continue to evaluate opportunities to acquire or license new technologies, products or businesses that

complement or expand our capabilities. We may pursue licensing and acquisition opportunities in the carbon management, water treatment and chemical markets as we seek to expand into these markets.

Corporate Information

We were incorporated in Delaware in January 2002 as a wholly owned subsidiary of Maxygen, Inc. In March 2002, we licensed our core enabling technology from Maxygen and commenced operations. In September 2002, we raised our first outside funding from venture capital investors. Our principal executive offices are located at 200 Penobscot Drive, Redwood City, CA 94063, and our telephone number is (650) 421-8100. Our website address is www.codexis.com. Information contained on our website is not incorporated by reference into this prospectus, and you should not consider information contained on our website to be part of this prospectus.

Our logo, "Codexis," "Codex," "Codex Biocatalyst Panel," "Bringing Life to Chemistry" and other trademarks or service marks of Codexis, Inc. appearing in this prospectus are the property of Codexis, Inc. This prospectus contains additional trade names, trademarks and service marks of other companies. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply relationships with, or endorsement or sponsorship of us by, these other companies.

The Offering

Common stock offered to the public	shares (or shares if the underwriters exercise their over-allotment option in full).
Common stock to be outstanding after this offering	shares (or shares if the underwriters exercise their over-allotment option in full).
Proposed Nasdaq Global Market symbol	"CDXS"
Use of proceeds	We intend to use the net proceeds from this offering for working capital and other general corporate purposes. We may also use a portion of the net proceeds to acquire other businesses, products or technologies. However, we do not have agreements or commitments for any specific acquisitions at this time. Please see "Use of Proceeds."
Risk factors	See "Risk Factors" elsewhere in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.

The number of shares of common stock to be outstanding after this offering is based on 35,716,889 shares outstanding as of December 31, 2007 and excludes:

- 9,032,075 shares of common stock issuable upon the exercise of options outstanding as of December 31, 2007 at a weighted average exercise price of $1.94 per share;
- 491,513 shares of common stock issuable upon the exercise of warrants outstanding as of December 31, 2007 at a weighted average exercise price of $3.95 per share; and
- shares of common stock reserved for issuance under our 2008 Incentive Award Plan, which will become effective in connection with the consummation of this offering (plus an additional shares of common stock reserved for future grant or issuance under our 2002 Stock Plan as of December 31, 2007, which shares will be added to the shares to be reserved under our 2008 Incentive Award Plan upon the effectiveness of the 2008 Incentive Award Plan).

Except as otherwise indicated, all information in this prospectus assumes:

- the conversion of all outstanding shares of our preferred stock into 32,330,100 shares of common stock in connection with the consummation of this offering;
- no exercise of the underwriters' over-allotment option; and
- the filing of our amended and restated certificate of incorporation, which will occur in connection with the consummation of this offering.

We refer to our Series A, Series B, Series C, Series D and Series E preferred stock collectively as "redeemable convertible preferred stock" for financial reporting purposes and in the financial tables included in this prospectus, as more fully explained in Note 2 to our consolidated financial statements. In other parts of this prospectus, we refer to our Series A, Series B, Series C, Series D and Series E preferred stock collectively as "preferred stock."

Summary Consolidated Financial Data

The following table sets forth a summary of our historical consolidated financial data for the periods ended or as of the dates indicated. You should read this table together with our consolidated financial statements and the accompanying notes, "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus. The summary consolidated financial data in this section is not intended to replace our consolidated financial statements and the accompanying notes. Our historical results are not necessarily indicative of our future results.

The following table also sets forth summary unaudited pro forma and pro forma as adjusted consolidated financial data, which gives effect to the transactions described in the footnotes to the table. The unaudited pro forma and pro forma as adjusted consolidated financial data is presented for informational purposes only and does not purport to represent what our consolidated results of operations or financial position actually would have been had the transactions reflected occurred on the dates indicated or to project our financial condition as of any future date or results of operations for any future period.

	Years Ended December 31,		
	2005	2006	2007
		(in thousands, except per share data)	
Consolidated Statements of Operations Data:			
Revenues:			
Product	$ 2,265	$ 2,544	$ 11,418
Related party collaborative research and development	—	863	8,481
Collaborative research and development	9,363	8,403	4,733
Government grants	156	317	701
Total revenues	11,784	12,127	25,333
Cost and operating expenses:			
Cost of product revenues	2,233	1,806	8,319
Research and development	13,454	17,939	36,870
Selling, general and administrative	7,276	11,198	18,487
Total cost and operating expenses	22,963	30,943	63,676
Loss from operations	(11,179)	(18,816)	(38,343)
Interest income	245	742	1,491
Interest expense and other	(413)	(724)	(2,533)
Loss before provision (benefit) for income taxes	(11,347)	(18,798)	(39,385)
Provision (benefit) for income taxes	243	(127)	(408)
Net loss	(11,590)	(18,671)	(38,977)
Net loss per share of common stock, basic and diluted(1)	$ (7.69)	$ (10.99)	$ (15.53)
Shares used in computing net loss per share of common stock, basic and diluted(1)	1,508	1,699	2,510
Pro forma net loss per share of common stock, basic and diluted (unaudited)(1)			$ (1.29)
Shares used in computing the pro forma net loss per share of common stock, basic and diluted (unaudited)(1)			29,116

(1) Please see Note 2 of our consolidated financial statements appearing elsewhere in this prospectus for an explanation of the method used to calculate basic and diluted net loss per share of common stock, the pro forma basic and diluted net loss per share of common stock and the number of shares used in the computation of the per share amounts.

	December 31, 2007		
	Actual	Pro Forma(1) (unaudited)	Pro Forma As Adjusted(2) (3) (unaudited)
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash, cash equivalents and marketable securities	$ 84,070	$ 84,070	
Working capital	58,919	60,404	
Total assets	113,101	113,101	
Preferred stock warrant liability	1,485	—	
Current and long-term financing obligations	17,407	17,407	
Redeemable convertible preferred stock	132,746	—	
Stockholders' (deficit) equity	(87,468)	46,763	

(1) The pro forma data gives effect to (i) conversion of all of our outstanding shares of redeemable convertible preferred stock into shares of common stock, and (ii) conversion of all of our warrants for redeemable convertible preferred stock into warrants for common stock and the related reclassification of preferred stock warrant liability to stockholders' equity upon the completion of this offering.

(2) The pro forma as adjusted balance sheet data gives effect to the sale of shares of common stock in this offering at the initial public offering price of $ per share, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3) Each $1.00 increase or decrease in the assumed initial public offering price of $ per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase or decrease, as applicable, our cash, cash equivalents and marketable securities, working capital, total assets and stockholders' deficit by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors, as well as the other information in this prospectus, before deciding whether to invest in shares of our common stock. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may harm our business. The occurrence of any of the events described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the trading price of our common stock may decline and you may lose all or part of your investment.

Risks Relating to Our Business

We have a limited operating history, which may make it difficult to evaluate our current business and predict our future performance.

Our company has been in existence since 2002. Our operations to date have been primarily limited to organizing and staffing our company, developing our technology platform and establishing arrangements with customers, contract manufacturers and collaborators. Consequently, any assessments of our current business and predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history. We have encountered and will continue to encounter risks and difficulties frequently experienced by growing companies in rapidly changing industries. If we do not address these risks successfully, our business will be harmed.

Our quarterly operating results may fluctuate in the future. As a result, we may fail to meet or exceed the expectations of research analysts or investors, which could cause our stock price to decline.

Our financial condition and operating results have varied significantly in the past and may continue to fluctuate from quarter to quarter and year to year in the future due to a variety of factors, many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations include the following factors, as well as other factors described elsewhere in this prospectus:

- our ability to achieve or maintain profitability;
- our ability to manage our growth;
- our ability to remediate a material weakness and implement effective internal controls;
- actions that could cause us to lose our licenses from Maxygen;
- our ability to maintain rights we have under our agreement with Maxygen;
- our relationships with collaborators;
- our dependence on key customers;
- our dependence on a limited number of contract manufacturers of our biocatalysts and suppliers for our pharmaceutical intermediates;
- our ability to develop and successfully commercialize products for the pharmaceuticals market;
- our ability to commercialize our technology in the biofuels and other bioindustrial markets;
- our ability to develop or obtain commercial scale expression systems for cellulases;
- risks associated with the international aspects of our business;
- potential issues related to our ability to accurately report our financial results in a timely manner;
- our dependence on and the need to attract and retain key personnel, including management;
- our ability to prevent the theft or misappropriation of our biocatalysts, the genes that code for our biocatalysts, know-how or technologies;

- our ability to obtain, protect and enforce our intellectual property rights;
- our reliance on third parties to enforce patents for which we hold a license;
- potential advantages that our competitors may have in securing funding or developing products; and
- potential product liability claims, including claims relating to our use of hazardous materials.

Due to the various factors mentioned above, and others, the results of any prior quarterly or annual periods should not be relied upon as indications of our future operating performance.

We have a history of net losses, and we may not achieve or maintain profitability.

We have incurred net losses since our inception, including losses of $11.6 million, $18.7 million and $39.0 million in 2005, 2006 and 2007, respectively. As of December 31, 2007, we had an accumulated deficit of $94.2 million. We expect to incur losses and negative cash flow from operating activities for the next several years. To date, we have derived a substantial portion of our revenues from research and development agreements with our collaborators and expect to derive a substantial portion of our revenue from these sources for at least the next several years. Our existing agreements generally have fixed terms and may be terminated under certain conditions. Accordingly, our ability to derive revenue from collaborations following the expiration or termination of these arrangements is uncertain, and will depend in large part on our ability to either extend existing collaborations or enter into new collaborative arrangements. This in turn will be largely dependent on our ability to address the needs of current and potential future collaborators. In addition, some of our collaboration agreements provide for milestone payments and future royalty payments, the payment of which are uncertain as they are dependent on our and our collaborators' abilities and willingness to successfully develop and commercialize products. We expect to spend significant amounts to fund the development of additional pharmaceutical and potential bioindustrial products, including biofuels. As a result, we expect that our operating expenses will exceed revenues for the next several years and we do not expect to achieve profitability during that period, if ever. If we fail to achieve profitability, or if the time required to achieve profitability is longer than we anticipate, we may not be able to continue our business. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis.

We may continue to encounter difficulties managing our growth, which could adversely affect our business.

Our business has grown rapidly and we expect this growth to continue. Overall, we have grown from approximately 40 employees at the end of 2002 to approximately 230 employees as of December 31, 2007. Currently we are working simultaneously on multiple projects targeting several markets. Furthermore, we are conducting our business across several countries, including activities in the United States, Singapore, Hungary, Germany and India. These diversified, global operations place increased demands on our limited resources and require us to substantially expand the capabilities of our administrative and operational resources and to attract, train, manage and retain qualified management, technicians, scientists and other personnel. As our operations expand domestically and internationally, we will need to continue to manage multiple locations and additional relationships with various customers, collaborators, suppliers and other third parties. Our ability to manage our operations, growth, and various projects effectively will require us to make additional investment in our infrastructure to continue to improve our operational, financial and management controls and our reporting systems and procedures and to attract and retain sufficient numbers of talented employees, which we may be unable to do. As a result, we may be unable to manage our expenses in the future, which may negatively impact our gross margins or operating expenses in any particular quarter. In addition, we may not be able to successfully improve our management information and control systems, including our internal control over financial reporting, to a level necessary to manage our growth and to remediate an existing material weakness in our internal control, and we may discover additional deficiencies in existing systems and controls that we may not be able to remediate in an efficient or timely manner.

We and our independent registered public accounting firm identified a material weakness in our internal control over financial reporting. If we fail to remediate this material weakness or are unable to maintain effective internal control over financial reporting in the future, the accuracy and timeliness of our financial reporting may be adversely affected.

In connection with the audit of our consolidated financial statements for 2005, 2006 and 2007, we and our independent registered public accounting firm identified a material weakness in our internal control over financial reporting. The material weakness we identified comprises (i) our lack of policies and procedures, with the associated internal controls, to appropriately address complex, non-routine transactions and (ii) the lack of a sufficient number of qualified personnel to timely account for such transactions in accordance with U.S. generally accepted accounting principles. The evidence of this material weakness included: improper revenue recognition for certain complex revenue arrangements; incorrect application of accounting standards for, and untimely communication of information relating to, certain stock option grants; the failure to identify pre-existing accounting issues and control deficiencies at two acquired companies and the incorrect assessment of fair value of certain acquired tangible assets; the improper recording of cumulative foreign currency translation adjustments, resulting in part from our selection of the incorrect functional currency for a foreign subsidiary; and the lack of effective inventory management processes, primarily relating to the segregation of research and development materials from commercial inventories. The material weakness resulted in the recording of numerous audit adjustments, and significantly delayed our financial statement close process, for the three year period ended December 31, 2007.

We have not yet been able to remediate this material weakness. However, we plan to take significant steps intended to address the underlying causes of the material weakness in the immediate future, primarily through the hiring of additional accounting and finance personnel with technical accounting and financial reporting experience, and the development and implementation of formal policies, improved processes and documented procedures. We do not know the specific timeframe needed to remediate all of the control deficiencies underlying this material weakness. In addition, we expect to incur significant incremental costs associated with this remediation, primarily due to the hiring of additional finance and accounting personnel, the retention of third-party experts and contractors, and the procurement, implementation and validation of robust accounting and financial reporting systems. If we fail to enhance our internal controls to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act of 2002, we may be unable to accurately report our financial results, or report them within the timeframes required by law or exchange regulations. We cannot assure you that we will be able to remediate this material weakness in a timely manner, if at all, or that in the future additional material weaknesses or significant deficiencies will not exist or otherwise be discovered, a risk that is significantly increased in light of the complexity of our business and multinational operations, and the emerging need for complex inter-subsidiary transactions. If our efforts to remediate the weakness identified are not successful or if other deficiencies occur, our ability to accurately and timely report our financial position, results of operations or cash flows could be impaired, which could result in late filings of our annual and quarterly reports under the Exchange Act, restatements of our consolidated financial statements, a decline in our stock price, suspension or delisting of our common stock by The Nasdaq Global Market, or other material effects on our business, reputation, results of operations, financial condition or liquidity.

If we lose our licenses from Maxygen, we may be unable to continue our business.

We have licensed our core enabling intellectual property rights and technology from Maxygen, Inc., or Maxygen, under our March 2002 license agreement with Maxygen, which was subsequently amended in September 2002, October 2002, and August 2006. We rely heavily on this technology to develop the optimized biocatalysts that are central to our business. Under the terms of the license agreement, we are obligated, among other things, to pay Maxygen a significant percentage of certain types of consideration we receive in connection with our biofuels research collaboration with Shell. During 2006 and 2007, as a

result of consideration received in connection with this collaboration, we were obligated to pay Maxygen $0.6 million and $7.8 million, respectively. Maxygen has the right to terminate our rights under the agreement with respect to fuels, but not with respect to chemicals or pharmaceuticals, if we breach our royalty obligations to Maxygen and do not cure such breach within 60 days after we receive notice. Maxygen also has the right to terminate our license if we breach any third party agreements under which Maxygen sublicensed rights under the agreement, and fail to cure such breach within the time period specified in such third party agreement. Maxygen also has the right to terminate our license with respect to any family of related patent applications if we fail to pay our share of costs for obtaining and maintaining a patent licensed to us by Maxygen more than three times within any three year period. If the agreement were terminated, then we would lose our rights to utilize the technology and intellectual property covered by that agreement to develop, manufacture and commercialize many of our products. This would have a material adverse impact on our financial condition, results of operations and growth prospects and could prevent us from continuing our business.

We are dependent on our collaborators, and our failure to successfully manage these relationships could prevent us from developing and commercializing many of our products and achieving or sustaining profitability.

Our ability to maintain and manage collaborations with key industry leaders in our markets is fundamental to the success of our business. We currently have license agreements, collaborative research agreements, supply agreements, and/or distribution agreements with numerous parties. We may have limited or no control over the amount or timing of resources that any collaborator may devote to our partnered products or collaborative efforts. Any of our collaborators may fail to perform their obligations as expected. These collaborators may breach or terminate their agreements with us or otherwise fail to conduct their collaborative activities successfully and in a timely manner. Further, our collaborators may not develop products arising out of our collaborative arrangements or devote sufficient resources to the development, manufacture, marketing, or sale of these products. Moreover, disagreements with a collaborator could develop and any conflict with a collaborator could reduce our ability to enter into future collaboration agreements and negatively impact our relationships with one or more existing collaborators. If any of these events occur, or if we fail to maintain our agreements with our collaborators, we may not be able to commercialize our existing and potential products, grow our business, or generate sufficient revenue to support our operations. Our collaboration opportunities could be harmed if:

- we do not achieve our research and development objectives under our collaboration agreements in a timely manner or at all;
- we develop products and processes or enter into additional collaborations that conflict with the business objectives of our other collaborators;
- we disagree with our collaborators as to rights to intellectual property we develop, or their research programs or commercialization activities;
- we are unable to manage multiple simultaneous collaborations;
- our collaborators become competitors of ours or enter into agreements with our competitors;
- our collaborators become less willing to expend their resources on research and development or commercialization efforts due to general market conditions or other circumstances beyond our control; or
- consolidation in our target markets limits the number of potential collaborators.

Additionally, our business could be negatively impacted if any of our collaborators or suppliers undergoes a change of control or were to otherwise assign the provisions of any of our agreements. For example, under our license agreement with Shell, Shell may assign the agreement without our consent in connection with a change of control. If Shell or any of our other collaborators were to assign these

agreements to a competitor of ours or to a third party who is not willing to work with us on the same terms or commit the same resources as the current collaborator, our business could be harmed.

Our future success is heavily dependent on our collaborative research agreement with Shell.

Our current business plan for biofuels is heavily dependent on our collaborative research agreement with Shell, which will continue to be critical to our success in researching and developing successful biocatalysts for producing biofuel products. Shell's efforts in commercializing those products profitably will be critical to the success of our business plan for biofuels. If we are unable to successfully execute on the development of products for Shell, our ability to expand into other bioindustrial areas may be significantly impaired, which will materially and adversely affect our ability to grow our business.

A delay or failure in Shell's performance under the collaborative research agreement or license agreement with us would have a material adverse effect on our business and financial condition. We cannot control Shell's performance or the resources it devotes to our programs. For example, although Shell has agreed to fund a specified number of our full-time employee equivalents in the performance of activities under the collaborative research agreement, Shell has the right under various circumstances to decrease the number of our full-time employee equivalents that it supports. Any such reduction would have a material impact on our revenue and business plan for biofuels. Moreover, disputes may arise between us and Shell, which could delay the programs on which we are working or could prevent us from commercially exploiting our technology platform and any developments resulting from the collaborative research agreement. If that were to occur, we may have to use funds, personnel, equipment, facilities and other resources that we have not budgeted to undertake certain activities on our own. Performance issues, program delay or termination or unbudgeted use of our resources may have a material adverse effect on our business and financial condition. Even if we successfully develop commercially viable technologies, our ability to derive revenues from those technologies will be dependent upon Shell's willingness and ability to commercialize them. Disagreements with Shell could also result in expensive arbitration or litigation, which may not be resolved in our favor. Shell could merge with or be acquired by another company or experience financial or other setbacks unrelated to our research collaboration agreement that could adversely affect us.

We have agreed to work exclusively with Shell until November 2012 in the field of converting cellulosic biomass into fermentable sugars that can be converted into fuels as well as the conversion of these sugars into fuels and related products. However, Shell is not required to work exclusively with us, and could develop or pursue alternative technologies that it decides to use for commercialization purposes instead of the technology developed under our collaborative research agreement with Shell. For example, Shell is currently working with Iogen to develop cellulosic ethanol and CHOREN Industries to develop biodiesels, and it recently announced a collaboration with Virent Energy Systems to develop biogasoline. If Shell does not pursue the commercialization of any cellulosic sugars, biofuels or related products that may be developed under our collaborative research agreement, our exclusive arrangement would prevent us from pursuing these opportunities with others and could place us at a significant competitive disadvantage in the biofuels market.

We cannot guarantee that our relationship with Shell will continue. Shell can terminate its collaborative research agreement with us after November 1, 2009 for any or no reason by providing us with six months' notice, and its license agreement with us for any or no reason by providing us with six months' notice. Each party also has the right to terminate the license agreement and the collaborative research agreement in the case of an uncured breach by the other party, and to terminate the collaborative research agreement if that party believes the other party has assigned the collaborative research agreement to a direct competitor of the terminating party. If our collaboration with Shell were to fail, we would likely need to find another collaborator to provide the financial assistance and infrastructure necessary for us to develop and commercialize our products and execute our strategy with respect to biofuels. Failure to maintain this relationship would have a material adverse effect on our business, financial condition and prospects.

Our failure to enter into new collaborations in our target markets could prevent us from developing and commercializing many of our products and achieving or sustaining profitability.

In addition to our existing collaborations, we will need to enter into, maintain and manage additional collaborations in our target markets to continue to grow our business. Because we do not currently and may never possess the resources necessary to independently develop and commercialize all of the potential products that may result from our technologies, the growth and success of our business depends on our ability to continue to enter into, and derive additional revenue from, collaboration agreements to develop and commercialize potential products in our various target markets. If we are unable to enter into additional collaboration agreements on terms satisfactory to us, we may not be able to commercialize our existing and potential products, grow our business, or generate sufficient revenue to support our operations.

We are dependent on a limited number of customers.

Our current revenues are derived from a limited number of key customers. For the year ended December 31, 2007, our top five customers accounted for approximately 65% of our revenues, with Shell and Pfizer accounting for approximately 33% and 13%, respectively. We expect a limited number of customers to continue to account for a significant portion of our revenues for the foreseeable future. This customer concentration increases the risk of quarterly fluctuations in our revenues and operating results. The loss or reduction of business from one or a combination of our significant customers could adversely affect our revenues, financial condition and results of operations.

Our dependence on contract manufacturers for biocatalyst production exposes our business to risks.

We have limited internal capacity to manufacture biocatalysts and are unable to do so for commercial scale production. As a result, we are dependent upon the performance and capacity of third party manufacturers for the commercial scale manufacturing of our biocatalysts.

We currently rely primarily on one Italian contract manufacturer, CPC Biotech srl, or CPC, to manufacture substantially all of our commercial enzymes used in our pharmaceutical business. Our pharmaceutical business, therefore, faces risks of difficulties with, and interruptions in, performance by CPC, the occurrence of which could adversely impact the availability, launch and/or sales of our enzymes in the future. The failure of CPC or any other manufacturers that we may use to supply manufactured product on a timely basis or at all, or to manufacture our enzymes or other biocatalysts in compliance with our specifications or applicable quality requirements, or to manufacture our enzymes or other biocatalysts in volumes sufficient to meet demand would adversely affect our ability to achieve development milestones under our collaborations or sell our pharmaceutical products, could harm our relationships with our collaborators or customers and could negatively affect our revenues and operating results.

We do not currently have a long-term supply contract with CPC, which is under no obligation to manufacture our enzymes and could elect to discontinue the manufacture of our enzymes at any time and without cause. If CPC does not expand its facilities to match our growing demand or if we are unable to contract with other manufacturers on commercially reasonable terms or at all, we will not have enough capacity to meet our current demand projections. If we require additional manufacturing capacity and are unable to obtain it in sufficient quantity, we may not be able to increase our pharmaceutical sales, or we may be required to make very substantial capital investments to build that capacity or to contract with another manufacturer on terms that may be less favorable than the terms we currently have with CPC. If we choose to build our own additional manufacturing capacity, it could take a year or longer before that facility is able to produce commercial volumes of our biocatalysts. In addition, if we contract with other manufacturers, we may experience delays of several months in qualifying them, which could harm our relationships with our collaborators or customers and could negatively affect our revenues or operating results.

We plan to evaluate whether to invest in our own manufacturing capabilities or to establish long-term supply contracts with additional contract manufacturers. However, we cannot guarantee that we will be able to acquire, develop or contract for internal manufacturing capabilities on commercially reasonable terms, or at all. Any resources we expend on acquiring or building internal manufacturing capabilities could be at the expense of other potentially more profitable opportunities.

We are primarily dependent on contract manufacturers to manufacture our pharmaceutical products.

We currently rely on a small number of collaborators and contract manufacturers to manufacture our pharmaceutical intermediates. For example, our collaborator Arch Pharmalabs Limited, or Arch, supplies us and our customers with intermediates manufactured using our proprietary biocatalysts.

Our pharmaceutical business faces risks of difficulties with, and interruptions in, performance by Arch, the occurrence of which could adversely impact the availability, launch and/or sales of our products in the future. The failure of Arch to supply intermediates on a timely basis or at all, or to manufacture our products in compliance with our specifications or applicable quality requirements, or to manufacture the product in volumes sufficient to meet demand would adversely affect our ability to commercialize our pharmaceutical products and could negatively affect our revenues and operating results. If Arch does not expand its facilities to match our growing demand, or experiences delays related to the construction of new facilities or the expansion of existing facilities, or if we are unable to contract with other suppliers on commercially reasonable terms or at all, we will not have enough capacity to meet our current demand projections.

We intend to use Arch as the primary supplier for our planned launch of APIs. We will rely on Arch to deliver materials on a timely basis and to comply with applicable regulatory requirements, which may include current Good Manufacturing Practices, or cGMP, and will be dependent on Arch to timely manufacture and deliver sufficient quantities of materials produced under cGMP conditions to enable us to bring products to market in a timely manner. Failure by Arch, or any other contract manufacturer that we rely on to manufacture APIs, to comply with applicable regulations could adversely affect the production and commercialization of API products, which could lead to lost sales. We also rely, to a lesser extent, on other contract manufacturers to supply our pharmaceutical intermediates. The failure of these manufacturers to supply intermediates, or to manufacture products in compliance with our specifications or in sufficient volumes, would have similar negative effects on our revenues and operating results.

If we are unable to develop and commercialize new products for the generic pharmaceutical market, our business and prospects will be harmed.

We plan to launch several new intermediates and APIs for generic drugs in non-regulated markets, and plan to launch these same products in the regulated markets when the patent protection for each branded product expires. This effort is subject to numerous risks, including the following:

- we may be unable to successfully develop the biocatalysts or manufacturing processes for our intermediates and APIs in a timely and cost-effective manner, if at all;
- we may face difficulties in transferring the developed technologies to Arch, or other contract manufacturers that we may use, for commercial scale production;
- Arch, or other contract manufacturers that we may use, may be unable to scale their manufacturing operations to meet the demand for these products and we may be unable to secure additional manufacturing capacity; and
- generics manufacturers may not be willing to purchase these products from us on favorable terms, if at all.

If one or more of these risks were to materialize, our future business, results of operations and financial condition could be materially adversely affected, and we may be unable to grow our business.

We will face numerous risks relating to any pharmaceutical products that we commercialize.

The commercialization of pharmaceutical intermediates and APIs will expose us to a number of risks, including risks related to product liability litigation, unexpected safety or efficacy concerns, product recalls or withdrawals, changes in laws or regulations relating to the generics industry, negative publicity affecting doctor or patient confidence in the products, and pressure from existing or new competitive products. In addition, our existing and potential innovator customers may view us as competitors and be less willing to do business with us. Moreover, we may be subject to claims alleging that our pharmaceutical products violate the patent or other intellectual property rights of third parties, particularly in connection with any generic products on which the patent covering the branded drug is expiring. These claims could give rise to litigation, which may be costly and time-consuming and could divert management's attention. If we are unsuccessful in our defense of any such claims, we may lose our right to develop or manufacture the products, be required to pay monetary damages, or be required to enter into license agreements and pay substantial royalties. The occurrence of any of these events could have a material adverse effect on our business, results of operation, financial condition and cash flows.

Our business could be adversely affected if the clinical trials being conducted by our innovator customers who sell branded drugs fail or if the processes used by those customers to manufacture their final pharmaceutical products fail to be approved.

Our biocatalysts are used in the manufacture of intermediates and APIs which are then used in the manufacture of final pharmaceutical products by our customers who sell branded drugs, which we refer to as innovators. In order to sell these pharmaceutical products in markets that provide effective patent protection, which we refer to as regulated markets, the products must be approved by the FDA in the United States, and similar regulatory bodies in other regulated markets, prior to commercialization. If these customers experience adverse events in their clinical trials, fail to receive regulatory approval for the drugs, or decide for business or other reasons to discontinue their clinical trials or drug development activities, our revenues will be negatively impacted. The process of producing these drugs, and their generic equivalents, is also subject to regulation by the FDA in the United States and equivalent regulatory bodies in other regulated markets. If any pharmaceutical process that uses our biocatalysts does not receive approval by the appropriate regulatory body or if customers decide not to pursue approval, our business could be adversely affected.

Our business could be adversely affected if customers do not adopt our processes.

Historically, pharmaceutical companies have been reluctant to use biocatalysts in the manufacture of their intermediates or APIs because naturally occurring biocatalysts were not economically viable for production at commercial scale. For example, naturally occurring biocatalysts are often not stable enough to be used in industrial settings. Additionally, the activity and productivity of these biocatalysts are often too limited to be effective in commercial scale manufacturing and often result in incomplete reactions and insufficient product yields. Although our biocatalysts have been developed to address these problems, we may still encounter reluctance by pharmaceutical companies to adopt processes that use our biocatalysts. If customers decide not to adopt processes using our biocatalysts over other methods of producing the intermediates or APIs for their drugs, our revenues will be negatively impacted.

Moreover, we believe that the lower manufacturing costs enabled by our technology platform is one of the principal reasons pharmaceutical companies have purchased and will continue to purchase our products and processes. If we are unable to maintain the cost advantages provided by our technology platform, customers may be less willing to acquire our products and processes, which would also negatively impact our revenues.

If we fail to fund research in certain areas, we will lose rights to develop products in those areas using technology licensed from Maxygen.

Under our license agreement with Maxygen, we can extend the scope of our license into several additional areas related to hydrogen, coal and natural gas-based fuels if we meet certain funding thresholds for research in those fields by September 2009. If we do not meet the funding requirements in any of those areas, we would lose our rights to use the licensed technology and intellectual property to develop products or pursue collaborations in that area, which could have a material adverse effect on our ability to grow our business and revenues.

We may need additional licenses from Maxygen to pursue certain future business opportunities in the chemical market.

Under our license agreement with Maxygen, we obtained exclusive rights to manufacture certain types of chemicals for specified purposes within particular fields. Should we desire to work on any chemicals that are outside the scope of these license rights, we may need to seek additional rights from Maxygen. Maxygen has no obligation to grant such rights to us and may choose not to license such rights to us on favorable terms, if at all. If we are unable to obtain rights to those additional areas, we may not be able to develop products or services or pursue collaborations in those areas, which could limit our ability to expand into the chemicals market.

Our government grants are subject to uncertainty, which could harm our business and results of operations.

We have received grants funded by various agencies of the federal government and foreign governments to complement and enhance our own resources. Funds available under these grants and contracts must be applied by us toward the research and development programs specified by the granting agencies rather than for all our programs generally. Moreover, revenues from such sources are uncertain because these agreements and grants generally have fixed terms and may be terminated, modified or recovered by the granting agency under certain conditions.

We may also be subject to audits by the government agencies as part of routine audits of our activities funded by our government grants. As part of an audit, these agencies may review our performance, cost structures and compliance with applicable laws, regulations and standards. If any of our costs are found to be allocated improperly, the costs may not be reimbursed and any costs already reimbursed for such contract may have to be refunded. Accordingly, an audit could result in an adjustment to our revenue and results of operations.

If we are unable to successfully commercialize our technology in biofuels and other bioindustrial markets, our business may fail to generate sufficient revenue, which would adversely affect our operating results.

We expect to derive a significant portion of our future revenue from the development of bioindustrial products, including biocatalysts for the production of biofuels, that we may develop with our collaborators, and by licensing our proprietary technology. In order to develop a viable biofuels business, we will need to demonstrate that we can develop biocatalysts that can be used to produce biofuels from cellulosic biomass. We do not know when we will be able to demonstrate these capabilities, if at all. If we are able to develop this technology, Shell has the right, but not the obligation, to commercialize this technology. If Shell decides to commercialize our technology, Shell will need to build a demonstration facility, design, finance and construct commercial scale biofuel facilities, and operate commercial scale facilities at costs that are competitive with traditional petroleum-based fuels and other alternative fuel technologies that may be developed.

In addition to biofuels, we expect to invest a significant amount of our future research and development efforts in other bioindustrial areas, including carbon management, water treatment and chemicals. We do not currently have any, and may be unable to secure, funded collaborations in these areas. Even if we are able to enter into collaborations in one or more of these areas, we and our collaborators may be unable to develop commercially viable solutions to these problems. Moreover, because we have limited financial and managerial resources, we will be required to prioritize our application of resources to particular development and commercialization efforts. Any resources we expend on one or more of these efforts could be at the expense of other potentially profitable opportunities. If we focus our efforts and resources on one or more of these areas and they do not lead to commercially viable products, our revenues, financial condition and results of operations could be adversely affected.

Production and commercialization of cellulosic biofuels and other chemicals derived from cellulose may not be feasible.

Production and commercialization of cellulosic biofuel products, and other chemicals derived from cellulose, may not be feasible for a variety of reasons. For example, the development of technology for converting sugar into a commercially viable non-ethanol biofuel alternative to petroleum-based fuels is still in its infancy, and we do not know whether this can be done commercially or at all. To date there has been a lack of significant private and government funding for research and development. Furthermore, there have been very few, if any, well-directed research and development public policies emphasizing investment in the research and development of, and providing incentives for the commercialization of, and transition to, biofuels.

Substantial development of infrastructure will be required for the biofuels industry to grow. Areas requiring expansion include, but are not limited to, additional rail capacity, additional storage facilities for biofuels, increases in truck fleets capable of transporting biofuels within localized markets, expansion of refining and blending facilities to handle biofuels, and growth in the fleet of vehicles capable of using biofuels. Substantial investments required for infrastructure changes and expansions may not be made on a timely basis or at all. Any delay or failure in making the changes to or expansion of infrastructure could harm demand or prices for potential biofuel products and impose additional costs that would hinder the commercialization of biofuels.

Currently, we believe that there are no commercial scale cellulosic biofuel production plants in operation in the United States. There can be no assurance that anyone will be able or willing to develop and operate biofuel production plants at commercial scale or that any biofuel facilities can be profitable.

Additionally, it is likely that different biocatalysts will be required to produce biofuels and other chemicals from cellulosic biomass. Therefore, different biocatalysts may be needed to be developed for use in different geographic locations to convert the biomass available in each locale into sugars that can be used in the production of these biofuels and chemicals. This will make the development of biofuels and other chemicals derived from cellulose more expensive.

Finally, if existing tax credits, subsidies and other incentives in the United States and foreign markets are phased out or reduced, the overall cost of commercialization of cellulosic ethanol will increase.

We will have to develop or acquire rights to a commercial scale expression system for enzymes that convert cellulosic biomass to sugars.

In order to commercialize cellulosic biofuels, we will need access to an expression system that is capable of producing the necessary biocatalysts at commercial scale. Because we do not currently have access or rights to a commercial expression system for enzymes that convert cellulosic biomass to sugars, we will need to buy, license or develop this type of expression system. We may not be able to license the systems on commercially reasonable terms or at all, particularly since Danisco (which purchased Genencor International) and Novozymes are major sources of expression systems and also potential competitors of

ours. If we cannot license the system on commercially reasonable terms, we would be required to attempt to develop such a system on our own, which may be difficult, costly and time consuming, in part because of the broad, existing intellectual property rights owned by Danisco, Novozymes and others. We cannot be certain whether we would be successful in developing such a system.

Fluctuations in the price of and demand for petroleum-based fuels may reduce demand for biofuels.

Biofuels are anticipated to be marketed as an alternative to petroleum-based fuels. Therefore, if the price of oil falls, any revenues that we generate from biofuel products could decline, and we may be unable to produce products that are a commercially viable alternative to petroleum-based fuels.

The royalties that we may earn under our agreements with Shell are indexed to the price of oil and generally increase as the price of oil increases. However, the index is set based on average prices between November 2007 and the date of first commercial sale. Therefore, if prices remain high during this period and subsequently fall, our revenues would be negatively impacted.

Our approach to the biofuels and chemical markets may be limited by the scarcity or cost of non-food sustainable biomass sources.

Our approach to the biofuels and chemical markets will be dependent upon the availability and price of the cellulosic biomass which we need to use to produce biofuels and other chemicals derived from cellulose. If the availability of cellulosic biomass decreases or its price increases, this will reduce our potential profit margins, especially if market conditions do not allow us to pass along increased costs to our customers. At certain levels, prices may make these products uneconomical to use and produce.

The price and availability of cellulosic biomass may be influenced by general economic, market and regulatory factors. These factors include weather conditions, farming decisions, government policies and subsidies with respect to agriculture and international trade, and global demand and supply. The significance and relative impact of these factors on the price of cellulosic biomass is difficult to predict, especially without knowing what types of cellulosic biomass materials we may need to use.

We face risks associated with our international business.

Significant portions of our operations are conducted outside of the United States and we expect to continue to have significant foreign operations in the foreseeable future. International business operations are subject to a variety of risks, including:

- changes in or interpretations of foreign regulations that may adversely affect our ability to sell our products or repatriate profits to the United States;
- the imposition of tariffs;
- the imposition of limitations on, or increase of, withholding and other taxes on remittances and other payments by foreign subsidiaries or joint ventures;
- the imposition of limitations on genetically-engineered products or processes and the production or sale of those products or processes in foreign countries;
- currency exchange rate fluctuations;
- uncertainties relating to foreign laws and legal proceedings;
- economic or political instability in foreign countries;
- difficulties in staffing and managing foreign operations; and
- the need to comply with a variety of U.S. laws applicable to the conduct of overseas operations, including export control laws and the Foreign Corrupt Practices Act.

We manufacture many of our pharmaceutical intermediates in India, which has stringent local regulations that make it difficult for money earned in India to be taken out of the country without being subject to Indian taxes. While our Indian subsidiary can make use of some of the funds we earn in India, these regulations may limit the amount of profits we can repatriate from operations in India.

If we engage in any acquisitions, we will incur a variety of costs and may potentially face numerous other risks that could adversely affect our business operations.

We have made acquisitions in the past, and if appropriate opportunities become available, we expect to acquire additional businesses, assets, technologies, or products to enhance our business in the future. In connection with any future acquisitions, we could:

- issue additional equity securities which would dilute current stockholders' percentage ownership;
- incur substantial debt to fund the acquisitions; or
- assume significant liabilities.

Acquisitions involve numerous risks, including problems integrating the purchased operations, technologies or products, unanticipated costs, diversion of management's attention from our core businesses, adverse effects on existing business relationships with current and/or prospective collaborators, customers and/or suppliers, risks associated with entering markets in which we have no or limited prior experience and potential loss of key employees. We do not have extensive experience in managing the integration process and we may not be able to successfully integrate any businesses, assets, products, technologies, or personnel that we might acquire in the future without a significant expenditure of operating, financial and management resources, if at all. The integration process could divert management time from focusing on operating our business, result in a decline in employee morale and cause retention issues to arise from changes in compensation, reporting relationships, future prospects or the direction of the business. Acquisitions may also require us to record goodwill and non-amortizable intangible assets that will be subject to impairment testing on a regular basis and potential periodic impairment charges, incur amortization expenses related to certain intangible assets, and incur large and immediate write-offs and restructuring and other related expenses, all of which could harm our operating results and financial condition. In addition, if we fail in our integration efforts with respect to any of our acquisitions and are unable to efficiently operate as a combined organization, our business and financial condition may be adversely affected.

We must rely on our suppliers, contract manufacturers and customers to deliver timely and accurate information in order to accurately report our financial results in the time frame and manner required by law.

We need to receive timely, accurate and complete information from a number of third parties in order to accurately report our financial results on a timely basis. We rely on the third parties that sell pharmaceutical products that are manufactured using our biocatalysts to provide us with complete and accurate information regarding revenue, costs of revenue and payments owed to us on a timely basis. In addition, we rely on suppliers and contract manufacturers to provide us with timely and accurate information regarding our inventories, and current and former collaborators to provide us product sales and cost saving information in connection with royalties owed to us. Any failure to receive timely information from one or more of these third parties could require that we estimate a greater portion of our revenues and other operating statistics for the period based on prior history, which could cause our reported financial results to be incorrect. Moreover, if the information that we receive is not accurate, our financial statements may be materially incorrect and may require restatement, and we may not receive the full amount of revenue that we are entitled to under these arrangements. Although we typically have audit rights with these parties, performing such an audit could be harmful to our collaborative relationships, expensive and time-consuming and may not be sufficient to reveal any discrepancies.

If we lose key personnel or are unable to attract and retain additional personnel, it could delay our product development programs, harm our research and development efforts, and we may be unable to pursue collaborations or develop our own products.

The loss of any key scientific staff, or the failure to attract or retain other key scientific employees, could prevent us from developing and commercializing our products for our target markets and entering into collaborations or licensing arrangements to execute on our business strategy. We may not be able to attract or retain qualified employees in the future due to the intense competition for qualified personnel among biotechnology and other technology-based businesses, particularly in the biofuels area, or due to the competition for, or availability of, personnel with the qualifications or experience necessary for our biofuels business. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that will adversely affect our ability to meet the demands of our collaborators in a timely fashion or to support our internal research and development programs. In particular, our product and process development programs are dependent on our ability to attract and retain highly skilled scientists. Competition for experienced scientists and other technical personnel from numerous companies and academic and other research institutions may limit our ability to do so on acceptable terms. All of our employees are at-will employees, which means that either the employee or we may terminate their employment at any time.

Our planned activities will require additional expertise in specific industries and areas applicable to the products and processes developed through our technologies or acquired through strategic or other transactions, especially in the new end markets that we seek to penetrate. These activities will require the addition of new personnel, and the development of additional expertise by existing personnel. The inability to acquire these services or to develop this expertise could impair the growth, if any, of our business. Additionally, under our agreements with Shell, we are required to meet certain hiring targets and failure to meet such targets is considered a breach of the agreements, which could give Shell a right to terminate the agreements. Furthermore, we conduct a substantial portion of our generic pharmaceutical business in India and believe that to expand our position in the generics market, we will need to employ and retain people who have or can cultivate strong relationships with contract manufacturers and/or customers in India.

Our ability to compete may decline if we do not adequately protect our proprietary technologies or if we lose some of our intellectual property rights through costly litigation or administrative proceedings.

Our success depends in part on our ability to obtain patents and maintain adequate protection of our intellectual property for our technologies and products and potential products in the United States and other countries. We have adopted a strategy of seeking patent protection in the United States and in foreign countries with respect to certain of the technologies used in or relating to our products and processes. As such, we own or have licensed rights to approximately 230 issued patents and approximately 165 pending patent applications in the United States and in various foreign jurisdictions. Of the licensed patents and patent applications, most are owned by Maxygen or the California Institute of Technology and exclusively licensed to us for use in certain fields. We own approximately 15 issued patents and approximately 75 pending patent applications in the United States and in various foreign jurisdictions directed to our enabling technologies and to our methods and products used in the production of pharmaceuticals such as atorvastatin, montelukast and azetidinone compounds, and we intend to continue to apply for patents relating to our technologies, methods and products as we deem appropriate.

Numerous patents in our portfolio involve complex legal and factual questions and, therefore, enforceability cannot be predicted with any certainty. Issued patents and patents issuing from pending applications may be challenged, invalidated, or circumvented. Additional uncertainty may result from an inconsistent policy in the United States that has emerged regarding the scope of legal claims allowed in biotechnology patents. Accordingly, we cannot ensure that any of our pending patent applications will result in issued patents, or even if issued, predict the breadth of the claims upheld in our and other

companies' patents. Given that the degree of future protection for our proprietary rights is uncertain, we cannot ensure that: (i) we were the first to make the inventions covered by each of our pending applications, (ii) we were the first to file patent applications for these inventions, and (iii) the proprietary technologies we develop will be patentable.

In addition, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our intellectual property is difficult, and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in certain foreign countries where the local laws may not protect our proprietary rights as fully as in the United States. If competitors are able to use our technology, our ability to compete effectively could be harmed. Moreover, others may independently develop and obtain patents for technologies that are similar to or superior to our technologies. If that happens, we may need to license these technologies, and we may not be able to obtain licenses on reasonable terms, if at all, which could cause harm to our business.

Our commercial success also depends in part on not infringing patents and proprietary rights of third parties, and not breaching any licenses or other agreements that we have entered into with regard to our technologies, products and business. We cannot ensure that patents have not been issued to third parties that could block our ability to obtain patents or to operate as we would like. There may be patents in some countries that, if valid, may block our ability to commercialize products in those countries if we are unsuccessful in circumventing or acquiring the rights to these patents. There also may be claims in patent applications filed in some countries that, if granted and valid, may also block our ability to commercialize products or processes in these countries if we are unable to circumvent or license them.

The biotechnology industry is characterized by frequent and extensive litigation regarding patents and other intellectual property rights, and we believe that the various bioindustrial markets will also be characterized by this type of litigation. Many biotechnology companies have employed intellectual property litigation as a way to gain a competitive advantage. Our involvement in litigation, interferences, opposition proceedings or other intellectual property proceedings inside and outside of the United States, to defend our intellectual property rights or as a result of alleged infringement of the rights of others, may cause us to spend significant amounts of money. Any potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, incorporating or using our products that use the subject intellectual property;
- obtain from the third party asserting its intellectual property rights a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all; or
- redesign those products or processes that use any allegedly infringing technology, which may result in significant cost or delay to us, or which could be technically infeasible.

We are aware of a significant number of patents and patent applications relating to aspects of our technologies filed by, and issued to, third parties. We cannot assure you that if this third party intellectual property is asserted against us that we would ultimately prevail.

If any of our competitors have filed patent applications or obtained patents that claim inventions also claimed by us, we may have to participate in interference proceedings declared by the relevant patent regulatory agency to determine priority of invention and, thus, the right to the patents for these inventions in the United States. These proceedings could result in substantial cost to us even if the outcome is favorable. Even if successful, an interference may result in loss of certain claims. Any litigation or proceedings could divert our management's time and efforts. Even unsuccessful claims could result in significant legal fees and other expenses, diversion of management time, and disruption in our business. Uncertainties resulting from initiation and continuation of any patent or related litigation could harm our ability to compete.

We may not be able to enforce our intellectual property rights throughout the world.

The laws of some foreign countries, including India, where we manufacture pharmaceutical intermediates through our collaborators, do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology and/or bioindustrials technologies, which could make it difficult for us to stop the infringement of our patents or misappropriation of our other intellectual property rights. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business. Accordingly, our efforts to protect our intellectual property in such countries may be inadequate.

If our biocatalysts, or the genes that code for our biocatalysts, are stolen, others could use these biocatalysts or genes to produce competing products.

Third parties, including our contract manufacturers, customers and those involved in shipping our biocatalysts often have custody or control of our biocatalysts. If our biocatalysts, or the genes that code for our biocatalysts, were stolen or misappropriated, they could be used by other parties who may be able to reproduce these biocatalysts for their own commercial gain. If this were to occur, it would be difficult for us to challenge this type of use, especially in countries with limited intellectual property protection.

Under our license with Maxygen, there are limitations on our ability to enforce Maxygen's patents to which we hold a license, which could have a material adverse effect on our business.

Our core enabling technology is licensed from Maxygen. Under our agreement with Maxygen, Maxygen has the first right to enforce many of the patents that we licensed, particularly those directly related to gene shuffling technology. If Maxygen declines to enforce these patent rights, we can enforce these rights after a delay of up to six months, or Maxygen can deny us the ability to enforce if Maxygen concludes that such enforcement may have a material adverse impact on Maxygen or one or more other licensees of Maxygen's technology. Some portions of the technology licensed to us by Maxygen are owned by third parties that retain the right to enforce the patents. If Maxygen or these third parties fail to enforce their patent rights, our business could be materially adversely affected. Maxygen also has the right to control the defense of patent infringement claims made by third parties alleging infringement related to gene shuffling technology. If Maxygen does not provide a timely and adequate defense to these claims, we could be forced to stop using the licensed technology, redesign our products and/or obtain a license from the party claiming infringement, which may not be available on commercially reasonable terms or at all. If Maxygen were to become acquired or controlled by a competitor of ours or a third party who is not willing to work with us on the same terms or commit the same resources as Maxygen, our business could be harmed.

Confidentiality agreements with employees and others may not adequately prevent disclosures of trade secrets and other proprietary information.

We rely in part on trade secret protection to protect our confidential and proprietary information and processes. However, trade secrets are difficult to protect. We have taken measures to protect our trade secrets and proprietary information, but these measures may not be effective. We require new employees and consultants to execute confidentiality agreements upon the commencement of an employment or consulting arrangement with us. These agreements generally require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. These agreements also generally provide that inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. Nevertheless, our proprietary information may be disclosed, third parties could reverse

engineer our biocatalysts and others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

If we lose key management personnel, it could harm our business.

Our business involves complex, global operations across a variety of markets and requires a management team that is knowledgeable in the many areas in which we operate. The loss of any key members of our management, including our chief executive officer Alan Shaw, or the failure to attract or retain other key employees who possess the requisite expertise for the conduct of our business, could prevent us from developing and commercializing our products for our target markets and entering into collaborations or licensing arrangements to execute on our business strategy.

Competitors and potential competitors who have greater resources and experience than we do may develop products and technologies that make ours obsolete or may use their greater resources to gain market share at our expense.

The biocatalysis industry and each of our target markets are characterized by rapid technological change. Our future success will depend on our ability to maintain a competitive position with respect to technological advances. We are aware that other companies, including Verenium Corporation (previously Diversa Corporation), Royal DSM N.V. and DuPont, have alternative methods for obtaining and generating genetic diversity or use mutagenesis techniques to produce genetic diversity. Academic institutions such as the California Institute of Technology, the Max Planck Institute and the Center for Fundamental and Applied Molecular Evolution (FAME), a jointly sponsored initiative between Emory University and Georgia Institute of Technology, are also working in this field. Technological development by others may result in our products and technologies, as well as products developed by our customers using our biocatalysts, becoming obsolete.

We face intense competition in the pharmaceuticals market. There are a number of companies who compete with us throughout the various stages of a pharmaceutical product's lifecycle. Many large pharmaceutical companies have internal capabilities to develop and manufacture intermediates and APIs. These companies include many of our large innovator and generic pharmaceutical customers, such as Merck, Pfizer and Teva. There are also many large, well-established fine chemical manufacturing companies, such as DSM, BASF and Lonza Group Ltd, that compete to supply pharmaceutical intermediates and APIs to our customers. We also face increasing competition from generic pharmaceutical manufacturers in low cost centers such as India and China.

In addition to competition from companies manufacturing APIs and intermediates, we face competition from companies that sell biocatalysts for use in the pharmaceutical market. There is competition from large industrial enzyme companies, such as Novozymes A/S and Amano Enzyme Inc., whose industrial enzymes (for detergents, for example) are occasionally used in pharmaceutical processes. There is also competition in this area is from several small companies with product offerings comprised primarily of naturally occurring biocatalysts or that offer biocatalyst optimization services.

We expect the biofuels industry to be extremely competitive, with competition coming from ethanol producers as well as other providers of alternative and renewable fuels. Significant competitors include companies such as Novozymes, who has partnered with BP p.l.c. to produce biofuels, and Danisco A/S/Genencor, which is marketing cellulases to convert biomass into sugar. DuPont, Iogen Corp., Verenium, Virent Energy Systems, Inc. and Amyris are also attempting to develop non-ethanol biofuels. DuPont has announced plans to develop and market biobutanol in collaboration with BP, and Virent is collaborating with Shell to develop biogasoline directly from sugars. Other potential competitors such as Range Fuels Inc. are focused on developing non-biocatalytic thermochemical processes to convert biomass into fuels.

Some or all of these competitors or other competitors, as well as academic, research and government institutions, are developing or may develop technologies for, and are competing or may compete with us in, the production of alternative fuels or biofuels.

We will face competition from a variety of companies focusing on developing biocatalytic routes to chemicals, including DuPont, DSM and Metabolix.

Our ability to compete successfully will depend on our ability to develop proprietary products that reach the market in a timely manner and are technologically superior to and/or are less expensive than other products on the market. Many of our competitors have substantially greater production, financial, research and development, personnel and marketing resources than we do. As a result, our competitors may be able to develop competing and/or superior technologies and processes, and compete more aggressively and sustain that competition over a longer period of time than we could. Our technologies and products may be rendered obsolete or uneconomical by technological advances or entirely different approaches developed by one or more of our competitors. As more companies develop new intellectual property in our markets, the possibility of a competitor acquiring patent or other rights that may limit our products or potential products increases, which could lead to litigation.

Our lack of resources relative to many of our competitors may cause us to fail to anticipate or respond adequately to new developments and other competitive pressures. This failure could reduce our competitiveness and market share, adversely affect our results of operations and financial position, and prevent us from obtaining or maintaining profitability.

We may need substantial additional capital in the future in order to expand our business.

Our future capital requirements may be substantial, particularly as we continue to develop our biocatalysis business and expand our biocatalyst discovery and development process. Although we believe that we have sufficient cash on hand to fund our operations and meet our obligations until we become cash flow positive, our current plans and assumptions may change and our need for additional capital will depend on many factors, including the financial success of our pharmaceutical business, whether we are successful in obtaining payments from customers, whether we can enter into additional collaborations, the progress and scope of our collaborative and independent research and development projects performed by our customers and collaborators, the effect of any acquisitions of other businesses or technologies that we may make in the future, whether we decide to develop an internal manufacturing capability, and the filing, prosecution and enforcement of patent claims.

If our capital resources are insufficient to meet our capital requirements, we will have to raise additional funds to continue the development of our technology and products and complete the commercialization of products, if any, resulting from our technologies. If future financings involve the issuance of equity securities, our existing stockholders would suffer dilution. If we were permitted to raise additional debt financing, we may be subject to restrictive covenants that limit our ability to conduct our business. We may not be able to raise sufficient additional funds on terms that are favorable to us, if at all. If we fail to raise sufficient funds and continue to incur losses, our ability to fund our operations, take advantage of strategic opportunities, develop products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens we may be forced to delay or terminate research or development programs or the commercialization of products resulting from our technologies, curtail or cease operations or obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we will not be able to successfully execute our business plan or continue our business.

The terms of our loan and security agreement with General Electric Capital Corporation and Oxford Finance Corporation may restrict our ability to engage in certain transactions.

In September 2007, we entered into a loan and security agreement with General Electric Capital Corporation, or GE, and Oxford Finance Corporation, or Oxford. Pursuant to the terms of the loan and security agreement, we cannot engage in certain transactions, including disposing of certain assets, transferring capital to foreign subsidiaries, declaring dividends, acquiring or merging with another entity or leasing additional real property unless certain conditions are met or unless we receive prior approval of GE and Oxford. If GE and Oxford do not consent to any of these actions that we desire to take, we could be prohibited from engaging in transactions which could be beneficial to our business and our stockholders.

Business interruptions could delay us in the process of developing our products and could disrupt our sales.

Our headquarters is located in the San Francisco Bay Area near known earthquake fault zones and is vulnerable to significant damage from earthquakes. We are also vulnerable to other types of natural disasters and other events that could disrupt our operations, such as riot, civil disturbances, war, terrorist acts, flood or infections in our laboratory or production facilities and other events beyond our control. We do not have a detailed disaster recovery plan. In addition, we do not carry insurance for earthquakes and we may not carry sufficient business interruption insurance to compensate us for losses that may occur. Any losses or damages we incur could have a material adverse effect on our cash flows and success as an overall business. Furthermore, Shell may terminate our collaborative research agreement if a force majeure event interrupts our collaboration activities for more than ninety days.

Ethical, legal and social concerns about genetically engineered products and processes could limit or prevent the use of our products, processes, and technologies and limit our revenues.

Some of our products and processes are genetically engineered or involve the use of genetically engineered products or genetic engineering technologies. If we and/or our collaborators are not able to overcome the ethical, legal, and social concerns relating to genetic engineering, our products and processes may not be accepted. Any of the risks discussed below could result in expenses, delays, or other impediments to our programs or the public acceptance and commercialization of products and processes dependent on our technologies or inventions. Our ability to develop and commercialize one or more of our technologies, products, or processes could be limited by the following factors:

- public attitudes about the safety and environmental hazards of, and ethical concerns over, genetic research and genetically engineered products and processes, which could influence public acceptance of our technologies, products and processes;
- public attitudes regarding, and potential changes to laws governing ownership of genetic material, which could harm our intellectual property rights with respect to our genetic material and discourage collaborators from supporting, developing, or commercializing our products, processes and technologies; and
- governmental reaction to negative publicity concerning genetically modified organisms, which could result in greater government regulation of genetic research and derivative products.

The subject of genetically modified organisms has received negative publicity, which has aroused public debate. This adverse publicity could lead to greater regulation and trade restrictions on imports of genetically altered products.

The biocatalysts that we develop have significantly enhanced characteristics compared to those found in naturally occurring enzymes or microbes. While we produce our biocatalysts only for use in a controlled industrial environment, we do not know what effect, if any, would result if our biocatalysts were released

into the natural environment. Any adverse effect resulting from such a release could have a material adverse effect on our business and financial condition, and we may have exposure to liability for any resulting harm.

Stringent laws and required government approvals may be time consuming and costly, and could delay our introduction of products, and changes to existing regulations and policies may present technical, regulatory and economic barriers, all of which may significantly reduce demand for biofuels.

In order to achieve and maintain market acceptance, our biofuels business will need to meet a significant number of regulations and standards, including regulations imposed by the U.S. Department of Transportation, the U.S. Environmental Protection Agency, various state agencies and others. As these regulations and standards evolve, and if new regulations or standards are implemented, we and our collaborators may be required to modify our proposed facilities and processes, or develop and support new facilities or processes, and this will increase our costs. Any failure to comply, or delays in compliance, with the various existing and evolving industry regulations and standards could prevent or delay our production of biofuels and the provision of related services could harm our biofuels business.

The market for biofuels is heavily influenced by foreign, federal, state and local government regulations and policies concerning the petroleum industry. For example, in 2007, the U.S. Congress passed an alternative fuels mandate that calls for 9 billion gallons of liquid transportation fuels sold in 2008 to come from alternative sources, including biofuels, a mandate that grows to 36 billion gallons by 2022. In the U.S. and in a number of other countries, these regulations and policies have been modified in the past and may be modified again in the future. Any reduction in mandated requirements for fuel alternatives and additives to gasoline may cause demand for biofuels to decline and deter investment in the research and development of biofuels. Market uncertainty regarding future policies may also affect our ability to develop new biofuels products or to license our technologies to third parties. Any inability to address these requirements and any regulatory or policy changes could have a material adverse effect on our biofuels business, financial condition and operating results. Our other potential bioindustrials products may be subject to additional regulations.

We use hazardous materials in our business. Any claims relating to improper handling, storage, or disposal of these materials could be time consuming and costly and could adversely affect our business and results of operations.

Our research and development processes involve the controlled use of hazardous materials, including chemical, radioactive, and biological materials. Our operations also produce hazardous waste products. We cannot eliminate entirely the risk of accidental contamination or discharge and any resultant injury from these materials. Federal, state, and local laws and regulations govern the use, manufacture, storage, handling, and disposal of these materials. We may be sued for any injury or contamination that results from our use or the use by third parties of these materials, and our liability may exceed our total assets. In addition, compliance with applicable environmental laws and regulations may be expensive, and current or future environmental regulations may impair our research, development, or production efforts.

We may be sued for product liability.

The design, development, manufacture and sale of our products involve an inherent risk of product liability claims and the associated adverse publicity. We could also be named in product liability claims that are brought against our customers that use our products, particularly those customers in the pharmaceutical market. Insurance coverage is expensive and may be difficult to obtain, and may not be available in the future on acceptable terms, or at all. Although we currently maintain product liability insurance for our products in amounts we believe to be commercially reasonable, if the coverage limits of these insurance policies are not adequate, a claim brought against us, whether covered by insurance or not,

could have a material adverse effect on our business, results of operations, financial condition and cash flows. In addition, this insurance may not provide adequate coverage against potential losses. If claims or losses exceed our liability insurance coverage, we may go out of business.

Our ability to use our net operating loss carryforwards to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Internal Revenue Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating loss carryforwards, or NOLs, to offset future taxable income. Our existing NOLs may be subject to limitations arising from previous ownership changes, and if we undergo an ownership change in connection with or after this public offering, our ability to utilize NOLs could be further limited by Section 382 of the Internal Revenue Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Internal Revenue Code. The existing NOLs of some of our subsidiaries currently may be subject to limitations arising from ownership changes prior to, or in connection with, their acquisition by us. Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations. For these reasons, we may not be able to utilize a material portion of the NOLs reflected on our balance sheet, even if we attain profitability.

Risks Relating to this Offering

We are subject to anti-takeover provisions in our certificate of incorporation and bylaws and under Delaware law that could delay or prevent an acquisition of our company, even if the acquisition would be beneficial to our stockholders.

Provisions in our amended and restated certificate of incorporation and our bylaws, both of which will become effective upon the completion of this offering, may delay or prevent an acquisition of us. Among other things, our amended and restated certificate of incorporation and bylaws will provide for a board of directors which is divided into three classes, with staggered three-year terms and will provide that all stockholder action must be effected at a duly called meeting of the stockholders and not by a consent in writing, and will further provide that only our board of directors, the chairman of the board of directors, our chief executive officers or president may call a special meeting of the stockholders. These provisions may also frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, who are responsible for appointing the members of our management team. Furthermore, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits, with some exceptions, stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us. Finally, our charter documents establish advanced notice requirements for nominations for election to our board of directors and for proposing matters that can be acted upon at stockholder meetings. Although we believe these provisions together provide for an opportunity to receive higher bids by requiring potential acquirers to negotiate with our board of directors, they would apply even if an offer to acquire our company may be considered beneficial by some stockholders.

Concentration of ownership among our existing officers, directors and principal stockholders may prevent other stockholders from influencing significant corporate decisions and depress our stock price.

When this offering is completed, our officers, directors and existing stockholders who hold at least 5% of our stock will together control approximately % of our outstanding common stock. As of December 31, 2007, Maxygen, Biomedical Sciences Investment Fund Pte Ltd and Shell owned 25%, 14% and 13% of our outstanding common stock, respectively, as calculated on an as-converted basis. If these officers, directors, and principal stockholders or a group of our principal stockholders act together, they

will be able to exert a significant degree of influence over our management and affairs and control matters requiring stockholder approval, including the election of directors and approval of mergers or other business combination transactions. The interests of this concentration of ownership may not always coincide with our interests or the interests of other stockholders. For instance, officers, directors, and principal stockholders, acting together, could cause us to enter into transactions or agreements that we would not otherwise consider. Similarly, this concentration of ownership may have the effect of delaying or preventing a change in control of our company otherwise favored by our other stockholders. This concentration of ownership could depress our stock price.

Our share price may be volatile and you may be unable to sell your shares at or above the offering price.

The initial public offering price for our shares will be determined by negotiations between us and representatives of the underwriters and may not be indicative of prices that will prevail in the trading market. The market price of shares of our common stock could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- actual or anticipated fluctuations in our financial condition and operating results;
- our cash and short-term investment position;
- actual or anticipated changes in our growth rate relative to our competitors;
- actual or anticipated fluctuations in our competitors' operating results or changes in their growth rate;
- announcements of technological innovations by us, our collaborators or our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- the entry into, modification or termination of collaborative arrangements;
- additions or losses of customers;
- additions or departures of key personnel;
- competition from existing products or new products that may emerge;
- issuance of new or updated research or reports by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- disputes or other developments related to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- changes in laws, regulations and policies applicable to our business and products;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us or our stockholders;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- general market conditions in our industry; and
- general economic and market conditions.

Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such

as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of shares of our common stock. If the market price of shares of our common stock after this offering does not exceed the initial public offering price, you may not realize any return on your investment in us and may lose some or all of your investment. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

A significant portion of our total outstanding shares of common stock is restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, could reduce the market price of our common stock. After this offering, we will have outstanding shares of common stock. Of these shares, all of the shares offered under this prospectus will be freely tradable without restriction under the federal securities laws unless purchased by our affiliates, and shares are currently restricted under securities laws or as a result of lock-up agreements but will be able to be resold after the offering as described in the "Shares Eligible for Future Sale" section of this prospectus. Moreover, after this offering, holders of an aggregate of 33,124,426 shares of our common stock will have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. As of December 31, 2007, our three largest stockholders collectively hold 52% of our outstanding common stock, as calculated on an as-converted basis. If one or more of them were to sell a substantial portion of the shares they hold, it could cause our stock price to decline.

We also intend to register all shares of common stock that we may issue under our 2008 Incentive Award Plan. Once we register these shares, they can be freely sold in the public market upon issuance and once vested, subject to the 180-day lock-up periods under the lock-up agreements described in the "Underwriting" section of this prospectus.

No public market for our common stock currently exists and an active trading market may not develop or be sustained following this offering.

Prior to this offering, there has been no public market for our common stock. An active trading market may not develop following the completion of this offering or, if developed, may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. An inactive market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

If securities or industry analysts do not publish research or reports about our business, or publish negative reports about our business, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our stock or change their opinion of our stock, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The initial public offering price will be substantially higher than the tangible book value per share of shares of our common stock based on the total value of our tangible assets less our total liabilities immediately following this offering. Therefore, if you purchase shares of our common stock in this offering, you will experience immediate and substantial dilution of approximately $ per share in the price you pay for shares of our common stock as compared to its tangible book value, assuming an initial public offering price of $ per share. To the extent outstanding options to purchase shares of common stock are exercised, there will be further dilution. For further information on this calculation, see "Dilution" elsewhere in this prospectus.

We have broad discretion in the use of net proceeds from this offering and may not use them effectively.

Although we currently intend to use the net proceeds from this offering in the manner described in "Use of Proceeds" elsewhere in this prospectus, we will have broad discretion in the application of the net proceeds. Our failure to apply these funds effectively could affect our ability to continue to develop and sell our products and grow our business, which could cause the value of your investment to decline.

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

We have never operated as a public company. As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act, as well as related rules implemented by the Securities and Exchange Commission and The Nasdaq Stock Market, imposes various requirements on public companies. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect these rules and regulations to make it more expensive for us to maintain director and officer liability insurance.

In addition, the Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, commencing in 2009, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management and our independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. We may not be able to remediate the material weakness in our internal control over financial reporting prior to the time of this testing. Our compliance with Section 404 will require that we incur substantial accounting expense and expend significant management time on compliance-related issues. We will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. Moreover, if we are not able to comply with the requirements of Section 404 in a timely manner, or if we are unable to remediate the material weakness in our internal control over financial reporting in a timely manner, our stock price could decline, and we could face sanctions, delisting or investigations by The Nasdaq Global Market, or other material effects on our business, reputation, results of operations, financial condition or liquidity.

We do not anticipate paying cash dividends, and accordingly, stockholders must rely on stock appreciation for any return on their investment.

We do not anticipate paying cash dividends in the future. As a result, only appreciation of the price of our common stock will provide a return to stockholders. Investors seeking cash dividends should not invest in our common stock.

FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve risks and uncertainties. The forward-looking statements are contained principally in the sections entitled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business." These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievement to differ materially from those expressed or implied by these forward-looking statements. These risks and uncertainties are contained principally in the section entitled "Risk Factors."

Forward-looking statements include all statements that are not historical facts. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential," or the negative of those terms, and similar expressions and comparable terminology intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. These forward-looking statements represent our estimates and assumptions only as of the date of this prospectus and, except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this prospectus.

This prospectus also contains estimates and other information concerning our current and target markets that are based on industry publications, surveys and forecasts, including those generated by IMS Health, Datamonitor and the U.S. Energy Information Association. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to these estimates and information. These industry publications, surveys and forecasts generally indicate that their information has been obtained from sources believed to be reliable. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Risk Factors." These and other factors could cause actual results to differ materially from those expressed in these publications, surveys and forecasts.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately $ million from the sale of shares of common stock offered in this offering, based on an assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the net proceeds to us from this offering by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters' over-allotment option is exercised in full, we estimate that our net proceeds will be approximately $ million.

We intend to use the net proceeds from this offering for working capital and other general corporate purposes. We may also use a portion of the net proceeds to acquire other businesses, products or technologies. However, we do not have agreements or commitments for any specific acquisitions at this time.

The expected use of net proceeds of this offering represents our current intentions based upon our present plan and business conditions. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering. Accordingly, we will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the proceeds of this offering.

Until we use the net proceeds of this offering, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade securities. We cannot predict whether the proceeds invested will yield a favorable return.

DIVIDEND POLICY

We have never declared or paid cash dividends on our common stock, and currently do not plan to declare dividends on shares of our common stock in the foreseeable future. We expect to retain our future earnings, if any, for use in the operation and expansion of our business. In addition, in certain circumstances, we are prohibited by various borrowing arrangements from paying cash dividends without the prior written consent of the lenders. Subject to the foregoing, the payment of cash dividends in the future, if any, will be at the discretion of our board of directors and will depend upon such factors as earnings levels, capital requirements, our overall financial condition and any other factors deemed relevant by our board of directors.

CAPITALIZATION

The following table sets forth our cash, cash equivalents and short-term investments and our capitalization as of December 31, 2007:

- on an actual basis;
- on a pro forma basis to reflect:
  - the filing of a restated certificate of incorporation to authorize shares of common stock and shares of undesignated preferred stock;
  - the conversion of all outstanding preferred stock warrants to common stock warrants and the related conversion of all of our outstanding shares of preferred stock into 32,330,100 shares of common stock;
  - the reclassification of the preferred stock warrant liability to stockholders' equity upon the completion of this offering; and
- on a pro forma as adjusted basis to reflect the pro forma adjustments described above and our receipt of the estimated net proceeds from this offering, based on an assumed initial public offering of shares at a price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below is illustrative only and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes appearing elsewhere in this prospectus.

	Actual	Pro Forma (unaudited)	Pro Forma As Adjusted (unaudited)
	(In thousands, except share and per share amounts)		
Cash, cash equivalents and marketable securities	$ 84,070	$ 84,070	$
Long-term debt, including current portion	$ 17,407	$ 17,407	$
Preferred stock warrant liability	1,485	—	
Redeemable convertible preferred stock, $0.0001 par value; 33,204,886 shares authorized, 32,269,494 shares issued and outstanding, actual; no shares authorized, no shares issued and outstanding, pro forma; no shares authorized, no shares issued and outstanding, pro forma as adjusted	132,746	—	
Stockholders' equity (deficit):			
Common stock, $0.0001 par value; 62,000,000 shares authorized, 3,386,789 issued and outstanding, actual; 62,000,000 shares authorized, 35,716,889 shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted	—	4	
Additional paid-in-capital	6,187	140,414	
Accumulated other comprehensive income	537	537	
Accumulated deficit	(94,192)	(94,192)	
Total stockholders' equity (deficit)	(87,468)	46,763	
Total capitalization	$ 64,170	$ 64,170	$

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus) would increase or decrease, as applicable, our cash, cash equivalents and marketable securities, working capital, total assets and stockholders' deficit by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of common stock shown as issued and outstanding in the table is based on the number of shares of our common stock outstanding as of December 31, 2007 and excludes:

- 9,032,075 shares of common stock issuable upon the exercise of options outstanding as of December 31, 2007 at a weighted average exercise price of $1.94 per share;
- 491,513 shares of common stock issuable upon the exercise of warrants outstanding as of December 31, 2007 at a weighted average exercise price of $3.95 per share; and
- shares of our common stock reserved for future issuance under our 2008 Incentive Award Plan, which will become effective in connection with the consummation of this offering (including shares of common stock reserved for future grant or issuance under our 2002 Stock Plan, which shares will be added to the shares to be reserved under our 2008 Incentive Award Plan upon the effectiveness of the 2008 Incentive Award Plan).

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

Our pro forma net tangible book value at December 31, 2007 was $38.5 million, or $1.07 per share of common stock. Pro forma net tangible book value per share represents total tangible assets less total liabilities, divided by the number of outstanding shares of common stock on December 31, 2007, after giving effect to the conversion of all outstanding shares of preferred stock into shares of common stock as if the conversion occurred on December 31, 2007. Our pro forma as adjusted net tangible book value at December 31, 2007, after giving effect to the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses, would have been approximately $ million, or $ per share. This represents an immediate increase in pro forma as adjusted net tangible book value of $ per share to existing stockholders and an immediate dilution of $ per share to new investors, or approximately % of the assumed initial public offering price of $ per share. The following table illustrates this per share dilution:

Assumed initial public offering price per share		$
Pro forma net tangible book value per share at December 31, 2007	$ 1.07	
Increase in pro forma net tangible book value per share attributable to this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors		$

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) our pro forma as adjusted net tangible book value by $ million, the pro forma as adjusted net tangible book value per share by $ per share and the dilution in the pro forma net tangible book value to new investors in this offering by $ per share, assuming the number of shares offered by us, as set forth on the cover pages of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The following table shows, as of December 31, 2007, the number of shares of common stock purchased from us, the total consideration paid to us and the average price paid per share by existing stockholders and by new investors purchasing common stock in this offering at an assumed initial public offering price of $ per share, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors					
Total		100.0%	$	100.0%	$

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) total consideration paid by new investors, total consideration paid by all stockholders and the average price per share paid by all stockholders by $, $ and $, respectively, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discount and estimated offering expenses payable by us.

The above discussion and tables are based on 35,716,889 shares of common stock issued and outstanding as of December 31, 2007 which reflects the automatic conversion of all of our preferred stock into an aggregate of 32,330,100 shares of our common stock and excludes:

- shares of common stock issuable upon the exercise of 9,032,075 options outstanding at a weighted average exercise price of $1.94 per share;
- shares of common stock issuable upon exercise of 491,513 warrants outstanding at a weighted average exercise price of $3.95 per share; and
- shares of common stock reserved for issuance under our 2008 Incentive Award Plan, which will become effective upon the completion of this offering (plus an additional shares of common stock reserved for future grant or issuance under our 2002 Stock Plan as of December 31, 2007, which shares will be added to the shares to be reserved under our 2008 Incentive Award Plan upon the effectiveness of the 2008 Incentive Award Plan).

If the underwriters exercise their over-allotment option in full, the following will occur:

- the number of shares of our common stock held by existing stockholders would decrease to approximately % of the total number of shares of our common stock outstanding after this offering; and
- the number of shares of our common stock held by new investors would increase to approximately % of the total number of shares of our common stock outstanding after this offering.

To the extent that outstanding options or warrants are exercised, you will experience further dilution. If all of our outstanding options and warrants were exercised, our pro forma net tangible book value as of December 31, 2007 would have been $40.4 million, or $0.89 per share, and the pro forma, as adjusted net tangible book value after this offering would have been $ million, or $ per share, causing dilution to new investors of $ per share.

In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read together with our consolidated financial statements and accompanying notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus. The selected consolidated financial data in this section is not intended to replace our consolidated financial statements and the accompanying notes. Our historical results are not necessarily indicative of our future results.

We derived the statements of operations data for 2005, 2006 and 2007 and the balance sheet data as of December 31, 2006 and 2007 from our audited consolidated financial statements appearing elsewhere in this prospectus. The statement of operations data for 2003 and 2004 and the balance sheet data as of December 31, 2003, 2004 and 2005 have been derived from our audited consolidated financial statements not included in this prospectus.

	Years Ended December 31,				
	2003	2004	2005	2006	2007
	(in thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenues:					
Product	$ —	$ —	$ 2,265	$ 2,544	$ 11,418
Related party collaborative research and development	—	—	—	863	8,481
Collaborative research and development	8,442	4,873	9,363	8,403	4,733
Government grants	—	—	156	317	701
Total revenues	8,442	4,873	11,784	12,127	25,333
Cost and operating expenses:					
Cost of product revenues	—	—	2,233	1,806	8,319
Research and development	12,658	12,891	13,454	17,939	36,870
Selling, general and administrative	3,053	5,187	7,276	11,198	18,487
Total cost and operating expenses	15,711	18,078	22,963	30,943	63,676
Loss from operations	(7,269)	(13,205)	(11,179)	(18,816)	(38,343)
Interest income	301	240	245	742	1,491
Interest expense and other	—	(128)	(413)	(724)	(2,533)
Loss before provision (benefit) for income taxes	(6,968)	(13,093)	(11,347)	(18,798)	(39,385)
Provision (benefit) for income taxes	—	—	243	(127)	(408)
Net loss	(6,968)	(13,093)	(11,590)	(18,671)	(38,977)
Accretion of redeemable convertible preferred stock(1)	(1,250)	(1,250)	—	—	—
Net loss attributable to common stockholders	$ (8,218)	$ (14,343)	$ (11,590)	$ (18,671)	$ (38,977)
Net loss attributable to common stockholders per share of common stock, basic and diluted(2)	$ (8.22)	$ (13.38)	$ (7.69)	$ (10.99)	$ (15.53)
Shares used in computing net loss per share of common stock, basic and diluted(2)	1,000	1,072	1,508	1,699	2,510
Pro forma net loss per share of common stock, basic and diluted (unaudited)(2)					$ (1.29)
Shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)(2)					29,116

(1) During 2003 and 2004, we recorded accretion to increase the preferred stock to its redemption value due to the voting majority held by a certain stockholder which could effect a liquidation of the preferred stock, pursuant to EITF Topic D-98. In 2005, the probability of the liquidation of the preferred stock was reduced and accordingly we no longer recorded the related accretion subsequent to December 31, 2004.

(2) Please see Note 2 of our consolidated financial statements appearing elsewhere in this prospectus for an explanation of the method used to calculate basic and diluted net loss per share of common stock, the pro forma basic and diluted net loss per share of common stock and the number of shares used in the computation of the per share amounts.

	December 31,				
	2003	2004	2005	2006	2007
			(in thousands)		
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	$11,380	$ 16,734	$ 7,005	$ 32,246	$ 84,070
Working capital	10,682	12,837	2,781	22,722	58,919
Total assets	20,298	23,276	21,380	46,364	113,101
Current and long-term financing obligations	—	2,306	4,017	4,073	17,407
Redeemable convertible preferred stock	26,529	27,779	37,750	77,513	132,746
Total stockholders' deficit	(8,665)	(12,984)	(34,774)	(52,766)	(87,468)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes that appear elsewhere in this prospectus. In addition to historical financial information, the following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from those discussed below. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this prospectus, particularly in "Risk Factors."

Overview

We are a leading developer of proprietary biocatalysts that we believe have the potential to revolutionize chemistry-based manufacturing processes across a variety of industries. Biocatalysts are enzymes or microbes that catalyze chemical reactions that can enable the production of products used in everyday life. Our proprietary technology platform allows us to rapidly evolve and optimize biocatalysts to perform specific and desired chemical reactions for commercial scale industrial applications. We believe we can use our technology platform to improve industrially relevant characteristics of any biocatalyst, enabling manufacturing processes that are faster, less complex, less capital intensive and lower cost than conventional chemistry-based processes. In addition, we believe that our technology platform can enable the production of products that are currently impossible to economically produce at commercial scale.

We were incorporated in Delaware in January 2002 as a wholly-owned subsidiary of Maxygen, Inc. In March 2002, we licensed our core enabling technology from Maxygen and commenced operations. From 2002 until 2005, our operations focused on organizing and staffing our company and developing our technology platform. During this period, we funded our activities principally from the proceeds of a venture capital equity financing in 2002 and a strategic equity investment by our collaborator Pfizer, Inc. in 2004. We also relied on borrowings under our financing arrangements and revenues from numerous research and development collaborations, including those with Bristol-Myers Squibb Company, Cargill, Inc., Chevron Corporation, Eli Lilly and Company, Hercules, Inc., Lonza A G, Matrix Pharmaceuticals Inc., Merck & Co., Inc., Novozymes A/S, Pfizer, Rio Tinto Group, Royal DSM N.V., Sandoz International GmbH, and Schering-Plough Corporation. In 2005, we recognized our first revenue from the sales of products. Since 2005, we have continued to generate revenue, to enter into collaborations in the pharmaceuticals market, and began our research collaboration with Equilon Enterprises LLC dba Shell Oil Products US, or Shell, in the biofuels market.

To date, we have generated revenues primarily from collaborative research and development funding, sales of our products and government grants. Our total revenue has grown significantly, rising five-fold over the last four years, and more than doubling over the last two years, from $12.1 million in 2006 to $25.3 million in 2007. Most of our revenue since inception has been derived from collaborative research and development arrangements, which accounted for 80%, 76% and 52% of our revenues in 2005, 2006 and 2007, respectively. Our product sales have grown over five-fold over the last three years, from $2.3 million in 2005 to $11.4 million in 2007. Notwithstanding our revenue growth, we have continued to experience significant losses as we have invested heavily in our own product pipeline, research and development capacity for our collaborations, and administrative infrastructure in connection with growth in our business. As of December 31, 2007, we had an accumulated deficit of $94.2 million. We incurred net losses of $11.6 million, $18.7 million and $39.0 million in 2005, 2006 and 2007, respectively.

We initially targeted the pharmaceutical industry as the first market for our products and services. In this market, we have historically entered into collaborations, which have involved complex service and intellectual property agreements under which we research and develop optimized biocatalysts for innovators in connection with their drug development efforts. In these collaborations, we typically receive up-front payments, milestone payments, payments based upon the number of full-time employee

equivalents, or FTEs, engaged in related research and development activities and licensing fees and royalties.

Our pharmaceutical product offerings include biocatalysts, pharmaceutical intermediates and Codex Biocatalyst Panels. Our pharmaceutical customers incorporate our biocatalysts into the manufacturing processes used to produce their drugs. Our intermediates are complex chemical substances that have been manufactured by, or on behalf of, us using our biocatalysts. Drug manufacturers use intermediates to produce the active pharmaceutical ingredients, or APIs, used in their drugs. We believe that major pharmaceutical manufacturers are increasingly willing to outsource portions of their own internal manufacturing and to purchase intermediates that are difficult or expensive to manufacture. Codex Biocatalyst Panels are plates embedded with genetically diverse variants of our proprietary biocatalysts, which allow our customers to screen our biocatalysts at their facilities and evaluate whether a biocatalyst produces a desired activity that is applicable to a particular pharmaceutical manufacturing process. We view Codex Biocatalyst Panels, which we began selling in 2007, as a way to build early and broad awareness of the power and utility of our technology platform, and we plan to increase our efforts to expand Codex Biocatalyst Panels sales.

Our pharmaceutical service offerings include screening and optimization services. We use our screening services to test our customers' pharmaceutical materials against our existing libraries of biocatalysts to determine whether our biocatalysts produce detectible activity. We use our optimization services to optimize desired biocatalysts identified through our screening services and our customers' use of Codex Biocatalyst Panels. These services, in turn, can lead to sales of biocatalysts to our pharmaceutical customers.

We provide our biocatalysts, Codex Biocatalyst Panels, screening and optimization services and intermediates to our innovator customers and provide intermediates to our generics customers. We plan to launch several new intermediates and APIs in non-regulated markets for purchase by manufacturers of generic forms of drugs and intend to sell these same intermediates and APIs for use in the regulated markets when the patent protection for each product expires. We sell our products primarily to generics manufacturers through our small direct sales and business development force in the United States, United Kingdom and Germany.

In the biofuels market, we entered into a research agreement with Shell in 2006. The goal of this initial research collaboration was to develop biocatalysts to break down sustainable non-food cellulosic biomass. In connection with this collaboration, we received up-front payments, research and development service payments and a milestone payment.

Based on the success of this initial collaboration, in 2007, we entered into a new, expanded multiyear research collaboration with Shell. We received an up-front fee and are currently receiving FTE payments under this collaboration. This up-front fee is refundable under certain conditions, such as a change in control in which we are acquired by a competitor of Shell. This refundability lapses ratably over a five-year period beginning on November 1, 2007, on a straight-line basis. We are eligible for milestone payments upon the achievement of certain technical goals beginning in 2009, as well as additional milestones in each of the subsequent years of the agreement. We will also be eligible for royalty payments if Shell produces fuel products at commercial scale that are manufactured using our intellectual property or intellectual property that was developed by us and Shell under the research collaboration.

Under the terms of our license agreement with Maxygen, we are obligated to pay Maxygen a significant portion of certain types of consideration we receive in connection with our biofuels research collaboration with Shell. The actual fees payable to Maxygen will depend on the amount, timing and type of consideration we receive, including payments from the sale of our equity securities and payments in connection with the research and development and/or sale of fuel products made with a biocatalyst developed using the licensed technology. In the case of consideration received from the sale of our equity

securities to Shell, we are obligated to pay Maxygen a significant portion of any excess paid above $3.97 per share, the price per share of our Series D preferred stock. With regard to FTE funding, we are only obligated to pay Maxygen to the extent the consideration received exceeds specified amounts which were based on historical FTE rates we charged to our pharmaceutical collaborators. During 2006 and 2007, as a result of consideration received from Shell in connection with our biofuels research collaboration, we were obligated to pay Maxygen $0.6 million and $7.8 million, respectively. During 2007, amounts owed to Maxygen in connection with Shell's FTE funding were less than 5% of the total FTE payments we received from Shell.

Our strategy for collaborative arrangements is to retain substantial participation in the future economic value of our technology while receiving current cash payments to offset research and development costs and working capital needs. These agreements are complex and have multiple elements that cover a variety of present and future activities. In addition, certain elements of these agreements are intrinsically difficult to separate and treat as separate units for accounting purposes, especially exclusivity payments. Consequently, we expect to recognize these exclusivity payments over the term of the exclusivity period.

We rely heavily on contract manufacturing organizations, or CMOs, to manufacture our biocatalysts and intermediates at commercial scale. Arch Pharmalabs Limited, or Arch, of Mumbai, India manufactures all of our commercialized drug products for sale to generic API manufacturers. CPC Biotech, srl, or CPC, of Naples, Italy provides all of our commercial scale enzyme production for use by our innovator collaborators in their internal manufacturing as well as by us for the manufacture of our own intermediates. We have recently established a subsidiary in Hungary to manufacture certain microbes at commercial scale, but that capability will not be fully operational until 2009, at the earliest.

We intend to maintain a capital-efficient business model, so we actively seek CMOs who are willing to invest in capital equipment to manufacture our products at commercial scale. As a result, we are heavily dependent on the availability of manufacturing capacity at, and the reliability of, our CMOs. We also pursue collaborations with industry leaders that allow us to leverage our collaborators' engineering, manufacturing and commercial expertise, their distribution infrastructure and their ability to fund commercial-scale production facilities. We believe that, if our collaborators choose to utilize our technology to commercialize new products, this capital-efficient business model will allow us to expand into new markets without having to finance or operate large industrial facilities.

In addition to our organic growth, we have expanded through the acquisition of technologies and of businesses. In February 2005, we acquired Jülich Fine Chemicals GmbH in Jülich, Germany, and have operated it as a wholly-owned subsidiary since then. In July 2007, we acquired BioCatalytics, Inc. in Pasadena, California. Prior to our acquisition of these businesses, both had been engaged in the sale of research enzymes and services for the pharmaceutical and fine chemical industries.

Revenue, Cost of Product Revenues

Revenue

Our revenues comprise collaborative research and development revenues, product revenues and government grants.

- Collaborative research and development revenues include license, access and exclusivity fees, FTE payments, milestones, royalties, and optimization and screening fees. We report our collaborative research and development revenues under two categories, the first consisting of revenues from related parties who own more than 10% of our outstanding capital stock and the second from all other collaborators. Related party collaborative research and development revenues consisted of revenues from Shell in 2006 and 2007.
- Product revenues consist of sales of biocatalysts, intermediates and Codex Biocatalyst Panels.

- Government grants consist of payments from government entities. The terms of these grants generally provide us with cost reimbursement for certain types of expenditures in return for research and development activities over a contractually defined period. Historically, we have received government grants from Germany and the United States and expect to receive additional grants from other governments in the future.

Cost of Product Revenue

Cost of product revenues includes both internal and third-party fixed and variable costs including amortization of purchased technology, materials and supplies, labor, facilities and other overhead costs associated with our product revenues.

Research and Development Expenses

Research and development expenses consist of costs incurred for internal projects as well as partner-funded collaborative research and development activities. These costs include license and royalty fees payable to Maxygen for consideration that we receive in connection with our biofuels collaboration, our direct and research-related overhead expenses, which include salaries and other personnel-related expenses, facility costs, supplies, depreciation of facilities, and laboratory equipment, as well as research consultants and the cost of funding research at universities and other research institutions, and are expensed as incurred. License and royalty fees payable to Maxygen may fluctuate depending on the timing and type of consideration received from Shell in connection with our biofuels research collaboration. Costs to acquire technologies that are utilized in research and development and that have no alternative future use are expensed when incurred. Our research and development efforts devoted to our internal product and process development projects increased significantly in 2007 as compared to 2006, from 31 projects in 2006 to 46 in 2007. Our internal research and development projects are typically completed in 12 to 24 months, and generally the costs associated with any single internal project during these periods were not material.

As more fully described in Note 2 of the accompanying financial statements, we do not track fully burdened research and development costs by project. However, we do estimate, based on FTE efforts, the percentage of research and development efforts (as measured in hours incurred, which approximates costs) undertaken for projects funded by our collaborative partners and government grants and projects funded by us. To approximate research and development expenses by funded category, the number of hours expended in each category has been divided by the total number of hours expended on all categories of research and development with the resulting fractions then multiplied by the total cost of research and development effort, with the products then added to project-specific external costs. In the case where a collaborative partner is sharing the research and development costs, the expenses for that project are allocated proportionately between the collaborative projects funded by third parties and internal projects. We believe that presenting our research and development expenses in these categories will provide our investors with meaningful information on how our resources are being used.

Selling, General and Administrative Expenses

Selling, general and administrative expenses consist of compensation expenses (including stock-based compensation), hiring and training costs, consulting and service provider expenses (including patent counsel related costs), marketing costs, occupancy-related costs, depreciation and amortization expense and travel and relocation expenses.

Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of our consolidated financial statements requires our management to make estimates, assumptions, and judgments that affect the reported amounts of assets and liabilities and

disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the applicable periods. Management bases its estimates, assumptions and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances. Different assumptions and judgments would change the estimates used in the preparation of our consolidated financial statements, which, in turn, could change the results from those reported. Our management evaluates its estimates, assumptions and judgments on an ongoing basis.

The critical accounting policies requiring estimates, assumptions, and judgments that we believe have the most significant impact on our consolidated financial statements are described below.

Revenue Recognition

We follow the revenue recognition criteria outlined in the SEC Staff Accounting Bulletin, or SAB, No. 104,*Revenue Recognition in Financial Statements*, and Emerging Issues Task Force, or EITF, Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables*, or EITF 00-21. When evaluating multiple element arrangements, we consider whether the components of each arrangement represent separate units of accounting as defined in EITF 00-21. Application of the standard requires subjective determinations and requires management to make judgments about the fair values of each individual element and whether it is separable from other aspects of the contractual relationship. Revenue arrangements with multiple components are divided into separate units of accounting if certain criteria are met, including whether the delivered component has stand-alone value to the customer, and whether there is objective and reliable evidence of the fair value of the undelivered items. Consideration received is allocated among the separate units of accounting based on their respective fair values. Applicable revenue recognition criteria are then applied to each of the units.

Revenue is recognized when the four basic revenue recognition criteria are met: (1) persuasive evidence of an arrangement exists; (2) products have been delivered, transfer of technology has been completed or services have been rendered; (3) the fee is fixed or determinable; and (4) collectibility is reasonably assured.

Our primary sources of revenues consist of collaborative research and development agreements, product revenues and government grants. Collaborative research and development agreements typically provide us with multiple revenue streams, including up-front fees for licensing, exclusivity and technology access, fees for FTE services and the potential to earn milestone payments upon achievement of contractual criteria and royalty fees based on future product sales or cost savings by our customers.

For each source of collaborative research and development revenues, product revenues and grant revenues, we apply the above revenue recognition criteria in the following manner:

- Up-front payments received in connection with collaborative research and development agreements, including license fees and exclusivity fees, are deferred upon receipt and recognized as revenue over the periods specified in the agreement.
- Revenue related to FTE services is recognized as research services are performed over the related performance periods for each contract. Under these agreements, we are required to perform research and development activities. The payments received under each agreement are not refundable and are based on a contractual reimbursement rate per FTE working on the project. When up-front payments are combined with FTE services in a single unit of accounting, we recognize the up-front payments using the proportionate performance method of revenue recognition based upon the actual amount of research and development labor hours incurred relative to the amount of the total expected labor hours to be incurred by us, up to the amount of cash received. In cases where the planned levels of research services fluctuate substantially over the research term, we are required to make estimates of the total hours required to perform our obligations.

- Revenues related to milestones that are determined to be substantive and at risk are generally recognized upon achievement of the incentive milestone event and when collectibility is reasonably assured. Milestone payments are triggered either by the results of our research efforts or by events external to us, such as our collaboration partner achieving a revenue target. Fees associated with milestones for which performance was not at risk at the inception of the arrangement or that are determined not to be substantive are included in a separate unit of accounting within the arrangement, or if the EITF 00-21 criteria to account for each element have not been met, to the single unit of accounting within the arrangement.
- Revenues related to royalties based on product sales or cost savings of our customers are recorded as revenue as reported to us by the customer and when collectible. Royalties are generally reported in the quarter following the underlying sales or cost savings realized.
- Product revenues are recognized once passage of title and risk of loss has occurred and contractually specified acceptance criteria have been met, provided all other revenue recognition criteria have been met.
- Revenues from government grants are recognized in the period during which the related costs are incurred, provided that the conditions under which the government grants were provided have been met and we have only perfunctory obligations outstanding.

Stock-Based Compensation

Prior to January 1, 2006, we accounted for stock-based employee compensation arrangements using the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, or APB 25, and related interpretations, and complied with the disclosure-only provisions of SFAS No. 123, *Accounting for Stock-Based Compensation*, or SFAS 123, as amended by SFAS No. 148, *Accounting for Stock-Based Compensation, Transition and Disclosure, an amendment to SFAS Statement No. 123*, or SFAS 148. Under APB 25, compensation expense for employees is based on the intrinsic value of the option, determined as the excess, if any, of the fair value of the common stock over the exercise price of the option on the date of grant. Historically, our stock options have been granted with exercise prices at or above the estimated fair value of our common stock on the date of grant. Accordingly, no stock-based employee compensation expense was recorded under APB 25 during 2005.

Effective January 1, 2006, we adopted SFAS No. 123(R), *Share-Based Payment*, or SFAS 123(R), which requires compensation expense related to share-based transactions, including the awarding of employee stock options, to be measured and recognized in the financial statements based on the estimated fair value of the awards granted. SFAS 123(R) revises SFAS 123, as amended, and supersedes APB 25. We adopted SFAS 123(R) using the prospective transition method, as options granted prior to January 1, 2006 were measured using the minimum value method for the pro forma disclosures previously required by SFAS 123. In accordance with the prospective transition method, we continued to account for non-vested employee share-based awards outstanding at the date of adoption using the intrinsic value method in accordance with APB 25. All awards granted, modified or settled after the SFAS 123(R) adoption date have been accounted for using the measurement, recognition and attribution provisions of SFAS 123(R).

The adoption of SFAS 123(R) increased loss before provision for income taxes and net loss for the year ended December 31, 2006 by approximately $32,000 each, and increased net loss per share of common stock by $0.02. We are using the straight-line method to allocate stock-based compensation expense to reporting periods subsequent to the adoption of SFAS 123(R).

We account for stock options issued to non-employees in accordance with the provisions of SFAS 123(R) and EITF Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*, or EITF 96-18. In accordance with SFAS 123(R) and EITF 96-18, stock options issued to nonemployees are accounted for at their

estimated fair value determined using the Black-Scholes option-pricing model. The fair value of the options granted to nonemployees is remeasured as they vest, and the resulting increase in value, if any, is recognized as expense during the period the related services are rendered.

In connection with determining the fair value of warrants to purchase our preferred stock under the provisions of FASB Staff Position No. 150-5, Issuer's Accounting under Statement No. 150 for *Freestanding Warrants and Other Similar Instruments on Shares that are Redeemable*, or FSP 150-5, we reassessed the fair value of the common stock with respect to options granted between January 1, 2007 through July 17, 2007. Based upon the reassessed fair value of our common stock, we determined the intrinsic value of our stock options and the related stock compensation expense under SFAS 123(R), and determined that at each option grant date during this period, the fair value of our common stock was less than the relevant exercise prices of the stock options granted. The following table summarizes the options granted from January 1, 2007 through the date of this prospectus with their exercise prices, the reassessed fair values for purposes of SFAS 123(R) compensation expense, and the intrinsic value per share:

Date of Issuance	Number of Shares Subject to Options Granted	Exercise Price per Share	Reassessed Fair Value of Common Stock per Share	Intrinsic Value
January 26, 2007	1,719,800	$ 1.63	$ 1.41	$ (0.22)
February 26, 2007	5,000	1.63	1.41	(0.22)
April 16, 2007	40,000	1.63	1.46	(0.17)
April 19, 2007	415,600	1.63	1.46	(0.17)
June 19, 2007	652,100	1.63	1.30	(0.33)
July 17, 2007	133,000	1.63	1.27	(0.36)
August 28, 2007	1,263,175	4.47	4.47	—
September 24, 2007	10,000	4.47	4.47	—
October 25, 2007	864,550	4.57	4.57	—
December 11, 2007	183,600	5.79	5.79	—
January 29, 2008	1,093,950	7.00	6.26	(0.74)
	6,380,775			

Significant Factors, Assumptions and Methodologies Used in Determining Fair Value

Under SFAS No. 123(R), we estimated the fair value of our stock option grants on or after January 1, 2006 using the Black-Scholes option-pricing model. The estimated expected term, as well as the estimated volatility rate, were calculated based on selected companies in similar markets, due to a lack of historical information regarding the volatility of our stock price and expected term of the options. We will continue to analyze the historical stock price volatility and expected term assumptions as more historical data for our common stock becomes available. The risk-free rate assumption was based on U.S. treasury instruments whose terms were consistent with the terms of our stock options. The expected dividend assumption was based on our history and expectation of dividend payouts. The fair value of the stock options granted was based on the following assumptions:

	Years Ended December 31,	
	2006	2007
Weighted average expected term (years)	6.1	6.0
Weighted average expected volatility	65.0%	48.0%
Range of risk-free rates	4.2%	4.3%
Expected dividend yield	0.0%	0.0%

As a result of our Black-Scholes fair value calculations and the allocation of value to the vesting periods using the straight-line vesting attribution method, we recognized a total $0.1 million in stock-based compensation expense during 2006, of which $32,000 was attributable to employee stock options and $32,000 was attributable to non-employee stock options. Furthermore, $0.1 million was recorded as a selling, general and administrative expense while $3,000 was recorded as a research and development expense. We recognized a total of $1.3 million in stock-based compensation expense during 2007, of which $1.0 million was attributable to employee stock options and $0.3 million was attributable to non-employee stock options. Furthermore, $0.8 million was recorded as a selling, general and administrative expense while $0.5 million was recorded as a research and development expense.

Common Stock Valuations

The fair values of the common stock underlying stock options granted during 2005, 2006 and 2007 were estimated by the board of directors with input from management based upon several factors, including progress and milestones attained in our business, projected sales and earnings for multiple future periods, and the probabilities of various financing and liquidation events, including winding up and dissolution. In determining the fair market value of our common stock as of the date of each option grant, our board of directors made a reasonable estimate of the then current value of our common stock. In the absence of a public trading market for our common stock, our board of directors was required to estimate the fair value of our common stock. Our board of directors considered numerous objective and subjective factors in determining the fair value of our common stock at each option grant date, including but not limited to the following factors: (i) prices of preferred stock issued by us primarily to outside investors in arm's-length transactions, and the rights, preferences and privileges of the preferred stock relative to the common stock, (ii) our performance and the status of research and product development efforts, (iii) our stage of development and business strategy and (iv) the likelihood of achieving a liquidity event for the shares of common stock underlying these stock options, such as an initial public offering or sale of Codexis, given then-prevailing market conditions.

All stock options were granted with exercise prices at or above the then-current fair market value of our common stock as determined by our board of directors. Although, as described below, some of those values have been reassessed in connection with the preparation of our audited consolidated financial statements, we believe that the determinations of the value of our common stock were fair and reasonable at the time they were made. The board of directors utilized methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation* (AICPA Practice Guide).

For our contemporaneous and retrospective valuations performed between December 2006 and January 2008, the board of directors used the probability-weighted expected return method, or the PWERM, which is consistent with the allocation methods outlined in the AICPA Practice Guide. The PWERM analyzes the returns afforded to common equity holders under multiple future scenarios. Under the PWERM, share value is based upon the probability-weighted present value of expected future net cash flows (distributions to shareholders), considering each of the possible future events and giving consideration for the rights and preferences of each share class. The PWERM requires a five step process: (i) for each possible future event, standard valuation methodologies, such as the application of revenue and earnings multiples from a relevant peer group, are used to estimate a range of future distribution values over a range of event dates; (ii) for each combination of value and date, the value is allocated between the share classes; (iii) the expected return for each class is then discounted back to the present; (iv) the probability for each possible event is estimated; and (v) the probability-weighted return, expressed in terms of a per-share value, is determined for each class. Although this method is complex to implement, the board of directors believes that this method's forward-looking analysis of potential future outcomes makes it the most suitable for this analysis.

The PWERM-derived fair value calculated at each valuation date was then allocated to the shares of redeemable and/or convertible preferred stock, warrants to purchase shares of preferred stock, and common stock, using a contingent claim methodology. This methodology treats the various components of our capital structure as a series of call options on the proceeds expected from the sale of the company or the liquidation of our assets at some future date. The anticipated timing of a liquidity event utilized in these valuations was based on the then-current plans and estimates of our board of directors and management regarding the likely success of an initial public offering. Estimates of the volatility of our stock were based on the limited information available on the volatility of the capital stock of comparable publicly-traded companies.

We granted stock options with exercise prices between $1.63 and $5.79 per share during 2007. In connection with the preparation of our 2007 consolidated financial statements, we also performed retrospective valuations of our common stock solely for the purpose of determining the liability associated with outstanding warrants to purchase our preferred stock as of March 31, 2007 and June 30, 2007. The estimated fair value of our common stock resulted in valuations between $1.41 and $5.79 per share during 2007. No single event caused the valuation of our common stock to increase or decrease from January 2007 to December 2007; rather it has been a combination of the following factors that led to the initial decrease and subsequent increase in the fair value of the underlying common stock:

January to June 2007: In February 2007, we introduced our Codex Biocatalyst Panels and Merck became the first customer for this product. In April 2007, we hired a Vice President and General Counsel, a key executive position. The fair value of our common stock as of March 30, 2007 was estimated at $1.46 per share and as of June 30, 2007, it was reassessed to be $1.27. The fair value of our common stock decreased during this period because our cash resources decreased significantly, which outweighed other increases in the value of our business.

July 2007 to August 2007: In July 2007, we acquired BioCatalytics, Inc., which produces custom and off-the-shelf enzymes used in chemical process manufacturing. On July 17, 2007, the fair value of our common stock was estimated to be unchanged from the $1.27 per share estimate as of June 30, 2007. As a result, we valued the common stock consideration issued in the BioCatalytics acquisition at $1.27 per share.

Between July 17, 2007 and August 28, 2007, a number of achievements significantly increased the fair value of our common stock. We negotiated and substantially finalized a $15 million loan agreement with General Electric Capital Corporation and Oxford Finance Corporation to be used as short-term capital to sustain operations. We also began discussions with Shell and other potential investors regarding a Series E preferred stock financing, in which we expected to raise over $40.0 million at a price per share of $8.50. We also received indications from Shell that they were interested in entering into a second research collaboration relating to biofuels and commenced negotiations, although we had not yet settled on the material terms of the research collaboration. In addition, we began discussions regarding an initial public offering of our common stock in August 2007. As a result of these achievements, on August 28, 2007, the fair value of our common stock was estimated to be $4.47.

September 2007 to December 2007: During this period we entered into the $15 million loan agreement with General Electric Capital Corporation and Oxford Finance Corporation. It was also during this period that the amended and restated collaborative research agreement with Shell began to take shape, although several material terms remained under negotiation until the agreement was finalized in November 2007. We continued discussions regarding an initial public offering of our common stock, and, for purposes of PWERM calculations, we deemed the probability of an IPO to have significantly increased.

In October 2007, we closed a round of preferred equity financing, led by Shell, which raised approximately $55 million. During this period, we also introduced four new Codex Biocatalyst Panels which further bolstered our business prospects and expanded on the success of the first panel introduced in February 2007. In October 2007, we announced the opening of our newest research facility located in Singapore.

During this period, even though significant losses were recognized for 2007, revenues increased by nearly 110% from 2006 to 2007. However, operating expenses also increased significantly by approximately 100% from 2006. The fair value of our common stock as of October 25, 2007 and December 11, 2007 was estimated to be $4.57 per share and $5.79 per share, respectively, which were the values used for accounting purposes and for common stock option grants made contemporaneously with those dates.

January 2008: In January 2008, we appointed a new President for Codexis Pharmaceuticals, opened a new European facility in Hungary, and introduced a new product. Also, our board of directors selected investment banks to act as managing underwriters for a potential initial public offering of our stock. As a result of these events, on January 31, 2008, the estimated fair value of our common stock increased to $6.26 per share.

Estimation of Fair Value of Warrants to Purchase Preferred Stock

Our outstanding warrants to purchase shares of our preferred stock are subject to the requirements in FSP 150-5, which require us to classify these warrants as current liabilities and to adjust the value of these warrants to their fair value at the end of each reporting period. Warrants issued in connection with debt arrangements resulted in an aggregate expense attributable to an increase of $155,000 and $1.3 million in the fair value of the warrant liability due to quarter-end remeasurements was recognized as interest expense and other in the consolidated statements of operations during 2006 and 2007. Upon the closing of this initial public offering and the conversion of the underlying preferred stock to common stock, all outstanding warrants to purchase shares of preferred stock will automatically convert to warrants to purchase shares of our common stock and, as a result, will no longer be subject to FSP 150-5. The then-current aggregate fair value of these warrants will be reclassified from liabilities to additional paid-in capital, a component of stockholders' equity, and we will cease to record any related periodic fair value adjustments. Accordingly, we estimated the fair value of these warrants on an "as-if converted" basis at the respective balance sheet dates based on the estimated fair value of the underlying common stock at the valuation measurement date, the remaining contractual term of the warrant, risk-free interest rates and expected dividends on and expected volatility of the price of the underlying common stock. In the case of a warrant, in which certain terms were variable and based on the outcome of future events, we estimated the probability of each possible outcome and weighted the pricing model accordingly. These estimates, especially the market value of the underlying common stock, the probability of future outcomes and the expected volatility, are highly judgmental and could differ materially in the future.

Impairment of Goodwill and Intangible Assets and Other Long-lived Assets

We assess impairment of long-lived assets, including goodwill, in accordance with SFAS No. 144,*Impairment of Long-Lived Assets,* on at least an annual basis and test long-lived assets for recoverability when events or changes in circumstances indicate that their carrying amount may not be recoverable. Circumstances which could trigger a review include, but are not limited to: significant decreases in the market price of the asset; significant adverse changes in the business climate or legal factors; accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of the asset; current period cash flow or operating losses combined with a history of losses or a forecast of continuing losses associated with the use of the asset; or current expectation that the asset will more likely than not be sold or disposed of significantly before the end of its estimated useful life.

Recoverability is assessed based on the sum of the undiscounted cash flows expected to result from the use and the eventual disposal of the asset. An impairment loss is recognized in the consolidated statements of operations when the carrying amount is not recoverable and exceeds fair value, which is determined on a discounted cash flow basis.

We make estimates and judgments about future undiscounted cash flows and fair value. Although our cash flow forecasts are based on assumptions that are consistent with our plans, there is significant exercise of judgment involved in determining the cash flows attributable to a long-lived asset over its estimated remaining useful life. Our estimates of anticipated future cash flows could be reduced significantly in the future. As a result, the carrying amount of our long-lived assets could be reduced through impairment charges in the future. Changes in estimated future cash flows could also result in a shortening of estimated useful life of long-lived assets including intangibles for depreciation and amortization purposes.

Net Operating Loss and Tax Credit Carryforwards

As of December 31, 2007, we had federal and state net operating loss carryforwards of $58.3 million and $55.3 million, respectively. We also had federal and state tax credit carryforwards of $1.0 million and $1.0 million, respectively. The aggregate federal and state net operating loss will begin to expire in 2013, if not utilized. The federal tax credit carryforward will expire at various dates beginning in 2022, if not utilized. The state tax credit carryforwards do not expire. As of December 31, 2007, we had foreign net operating loss carryforwards of $4.6 million, which do not expire.

Under the Internal Revenue Code, substantial changes in our ownership, including as a result of this offering or prior equity financings subsequent to our incorporation by Maxygen, may limit, or may have already limited, the amount of future taxable income which may be offset by available net operating loss and tax credit carryforwards. We could have an annual limitation on the amount of our taxable income which may be offset by net operating loss and tax credit carryforwards in future years. The annual limitation may result in the expiration of net operating losses and credits before utilization. In any event, utilization of our net operating loss and tax credit carryforwards depends upon our having taxable income.

Effective January 1, 2007, we adopted FIN No. 48, *Accounting for Uncertainties in Income Taxes*, an interpretation of SFAS No. 109, *Accounting for Income Taxes*, or FIN 48. FIN 48 prescribes a comprehensive model for how companies should recognize, measure, present and disclose in their financial statements uncertain tax positions taken or expected to be taken on a tax return. Under FIN 48, tax positions must initially be recognized in the financial statements when it is more likely than not the position will be sustained upon examination by the tax authorities. Such tax positions must initially and subsequently be measured as the largest amount of tax benefit that has a greater than 50% likelihood of being realized upon ultimate settlement with the tax authority assuming full knowledge of the position and relevant facts. Upon adoption, there was no adjustment to accumulated deficit as all of our deferred tax assets were subject to a valuation allowance. As a result of the implementation of FIN 48, we recognized a $0.1 million increase in the liability for unrecognized tax benefits, which was accounted for as a $0.1 million adjustment to deferred tax assets (fully offset by a valuation allowance). We recognize interest and penalties in income tax expense. Total interest and penalties recognized in the consolidated statement of operations and balance sheet was $49,000. The total unrecognized tax benefits, that, if recognized, would impact our effective tax rate is $0.3 million. We are not subject to examination by U.S. federal or state tax authorities for years before 2002 and foreign tax authorities for years before 2006.

Results of Operations

Years Ended December 31, 2006 and 2007

The following table shows the amounts and percentage relationships of the listed items from our consolidated statements of operations for the periods presented, showing period-over-period changes (in thousands).

	2006	2007	Increase/ (Decrease)	% Increase/ (Decrease)
Revenues:				
Product	$ 2,544	$ 11,418	$ 8,874	349%
Related party collaborative research and development	863	8,481	7,618	883%
Collaborative research and development	8,403	4,733	(3,670)	(44)%
Government grants	317	701	384	121%
Total revenues	12,127	25,333	13,206	109%
Cost and operating expenses:				
Cost of product revenues	1,806	8,319	6,513	360%
Research and development	17,939	36,870	18,931	105%
Selling, general and administrative	11,198	18,487	7,289	65%
Total cost and operating expenses	30,943	63,676	32,733	105%
Loss from operations	(18,816)	(38,343)	(19,527)	105%
Interest income	742	1,491	749	101%
Interest expense and other	(724)	(2,533)	(1,809)	249%
Loss before provision (benefit) for income taxes	(18,798)	(39,385)	(20,587)	109%
Provision (benefit) for income taxes	(127)	(408)	(281)	302%
Net loss	$(18,671)	$(38,977)	$(20,306)	108%

Revenues. From 2006 to 2007, revenues increased $13.2 million, or 109%, from $12.1 million to $25.3 million due primarily to increases in revenues from collaborative research and development projects and product sales.

Product revenues increased $8.9 million, or 349% from $2.5 million to $11.4 million in 2006 and 2007, respectively. This increase was primarily due to a $4.2 million increase in sales of our ATS-8 intermediate to Indian manufacturers of generic atorvastatin, $0.1 million in sales of our new Codex Biocatalyst Panels, $1.7 million of additional sales from our new BioCatalytics subsidiary, and a $2.9 million increase in sales of our other biocatalyst and intermediate products.

Related party collaborative research and development revenues increased $7.6 million, or 883%, from $0.9 million to $8.5 million in 2006 and 2007, respectively. This increase was primarily due to the expanded research collaboration with Shell that represented a $7.6 million increase over the prior year.

Collaborative research and development revenues decreased $3.7 million, or 44%, from $8.4 million to $4.7 million in 2006 and 2007, respectively. This decrease was primarily due to the reallocation of our research resources to related party collaborative research and development projects.

Government grant revenues increased $0.4 million, or 121%, from $0.3 million to $0.7 million in 2006 and 2007, respectively. This increase was due to a $0.3 million grant received from the National Institutes of Health and an additional $0.1 million grant received from the German government.

Our top five customers accounted for 71% and 65% of total revenues for 2006 and 2007, respectively. In 2006, Pfizer accounted for 36% of our revenues and Schering-Plough accounted for 11% of our revenues. In 2007, Shell accounted for 33% of our revenues and Pfizer accounted for 13% of our revenues.

Customers in the United States accounted for 66% and 61% of revenues, and customers outside the United States accounted for 34% and 39% of revenues in 2006 and 2007, respectively. Revenues for 2006 and 2007 by geography were as follows (in thousands):

	2006	2007	Increase/ (Decrease)	% Increase/ (Decrease)
United States	$ 7,974	$15,458	$ 7,484	94%
Europe	2,437	3,343	906	37%
Asia	1,716	6,532	4,816	281%
International	4,153	9,875	5,722	138%
Total	$12,127	$25,333	$ 13,206	109%

Cost of Product Revenues. Cost of product revenues was $1.8 million for 2006 compared to $8.3 million in 2007, an increase of $6.5 million. The increase was primarily attributable to the increase in product sales, an increase in amortization of intangible assets and an inventory fair value adjustment related to our BioCatalytics acquisition. Cost of product revenues as a percentage of product revenues increased 2% from 2006 to 2007 from 71% to 73% due to higher margin product sales to former BioCatalytics' customers since July 2007 and the introduction of Codex Biocatalyst Panels during 2007.

Research and Development. Research and development expenses were $17.9 million in 2006 compared to $36.9 million in 2007, an increase of $19.0 million. The increase was primarily due to increased royalty costs of $7.3 million due to Maxygen in connection with amounts received from Shell relating to our biofuels research collaboration, increased compensation (including stock-based compensation), and benefit, hiring and training costs of $6.8 million attributable to an increase in employee headcount in our research and development functions. Also reflecting this increased research activity were the expenses incurred for lab supplies, outside services and consultants of $2.2 million, plus higher occupancy related costs of $0.9 million and depreciation and amortization expense of $0.4 million. Travel and relocation expenses were also higher by $0.8 million as our research functions expanded in Europe and Asia. Also higher were expenses for equipment and supplies by $0.3 million, and travel by $0.3 million. Included in the above amounts were $3.5 million of additional research and development expenses that we incurred after opening our new research facility in Singapore in October 2007. Research and development expenses included stock-based compensation expense of $0 and $0.5 million during 2006 and 2007, respectively.

Selling, General and Administrative. Selling, general and administrative expenses were $11.2 million for 2006, compared to $18.5 million for 2007, an increase of $7.3 million or 65%. The increase was primarily due to increased compensation including stock-based compensation of $2.8 million attributable to higher employee headcount. We incurred higher costs for consultants and outside advisory services of $1.5 million as we prepared to become a public company, including consulting costs associated with preparation for Sarbanes-Oxley compliance. We also incurred higher professional fees of $1.0 million in 2007 mainly for legal costs connected with negotiating our collaboration agreements and other contracts during the year. Expenses related to promotional marketing materials and travel increased $0.6 million. Selling, general and administrative expenses included stock-based compensation expense of $0.1 million and $0.8 million during 2006 and 2007, respectively.

Interest Income. Interest income was $0.7 million in 2006 compared to $1.5 million in 2007, an increase of $0.7 million, or 101%. The increase resulted from the higher average cash and investment balances on hand during 2007 compared to 2006. These higher cash and investment balances resulted from cash received in connection with the issuance of the Series E preferred stock, as well as from the $20.0 million up-front payment made by Shell when we entered into our new five-year research collaboration.

Interest Expense and Other. Interest expense and other was $0.7 million in 2006, compared to $2.5 million in 2007. Interest expense and other in 2007 included the increase in the fair value of our Series D preferred stock warrants, which resulted in $1.3 million of expense, interest expense on our outstanding financing obligations, and losses from foreign currency transactions.

Provision (benefit) for Income Taxes. The tax benefit for 2006 and 2007, respectively, primarily consisted of foreign tax withheld at source on royalties earned overseas and other taxes attributable to foreign operations.

Years Ended December 31, 2005 and 2006

The following table shows the amounts and the percentage relationships of the listed items from our consolidated statements of operations for the periods presented, showing period-over-period changes (in thousands).

	2005	2006	Increase/ (Decrease)	% Increase/ (Decrease)
Revenues:				
Product	$ 2,265	$ 2,544	$ 279	12%
Related party collaborative research and development	—	863	863	NM
Collaborative research and development	9,363	8,403	(960)	(10)%
Government grants	156	317	161	103%
Total revenue	11,784	12,127	343	3%
Cost and operating expenses:				
Cost of product revenues	2,233	1,806	(427)	(19)%
Research and development	13,454	17,939	4,485	33%
Selling, general and administrative	7,276	11,198	3,922	53%
Total cost and operating expenses	22,963	30,943	7,980	34%
Loss from operations	(11,179)	(18,816)	(7,637)	68%
Interest income	245	742	497	203%
Interest expense and other	(413)	(724)	(311)	75%
Loss before provision (benefit) for income taxes	(11,347)	(18,798)	(7,451)	65%
Provision (benefit) for income taxes	243	(127)	(370)	NM
Net loss	$(11,590)	$(18,671)	$ (7,081)	61%

Revenues. Revenues increased $0.3 million, or 3%, from $11.8 million to $12.1 million in 2005 and 2006, respectively.

Product revenues increased $0.3 million, or 12%, from $2.3 million to $2.5 million in 2005 and 2006, respectively. This increase was primarily due to an increase in sales from Jülich.

Related party collaborative research and development revenues increased from $0 to $0.9 million, due to our entering into a research collaboration with Shell in 2006.

Collaborative research and development revenues decreased $1.0 million, or 10%, from $9.4 million to $8.4 million in 2005 and 2006, respectively. This decrease was primarily due to the termination of a collaboration in early 2006.

Government grant revenues increased $161,000, or 103%, from $156,000 to $317,000 in 2005 and 2006. This increase was due to an increase in a grant from the German government received in 2006.

Our top five customers accounted for 70% and 71% of total revenues for 2005 and 2006, respectively. In 2005, Pfizer accounted for 34% of our revenues and Cargill accounted for 17% of our revenues. In 2006, Pfizer accounted for 36% of our revenues and Schering-Plough accounted for 11% of our revenues.

Customers in the United States accounted for 56% and 66% of revenues, and customers outside the United States accounted for 44% and 34% of revenues in 2005 and 2006, respectively. Revenues for 2005 and 2006 by geography were as follows (in thousands):

	2005	2006	Increase/ (Decrease)	% Increase/ (Decrease)
United States	$ 6,614	$ 7,974	$ 1,360	21%
Europe	3,201	2,437	(764)	(24)%
Asia	1,969	1,716	(253)	(13)%
International	5,170	4,153	(1,017)	(20)%
Total	$11,784	$12,127	$ 343	3%

Cost of Product Revenues. Cost of product revenues was $2.2 million for 2005 compared to $1.8 million in 2006, a decrease of $0.4 million. This decrease resulted from recognition of a $0.1 million inventory fair value step up related to our Jülich acquisition in 2005 and lower cost of product in our Jülich subsidiary. Cost of product revenues as a percentage of product revenues decreased 28% from 2005 to 2006, from 99% to 71%, due to higher margin product sales to the Jülich customer base and net sales recognition in India for approximately $0.2 million of net revenue with no corresponding cost of product revenue.

Research and Development. Research and development expenses were $13.5 million for 2005, compared to $17.9 million in 2006, an increase of $4.4 million or 33%. The increase was primarily due to higher compensation and employee benefit costs of $2.7 million reflecting increased headcount in research and development functions. Additionally, there were increased royalty costs of $0.6 million paid to Maxygen in connection with amounts received from Shell relating to our biofuels research collaboration. Moreover, spending on lab equipment increased by $0.6 million also corresponding with the increased research activity in 2006. Stock-based compensation expense included in research and development was immaterial in both 2005 and 2006.

Selling, General and Administrative. Selling, general and administrative expenses were $7.3 million in 2005, compared to $11.2 million in 2006, an increase of $3.9 million or 53%. The increase was primarily due to higher compensation (including stock-based compensation) and hiring costs of $1.9 million attributable to increased staffing levels in sales and administrative functions, higher equipment costs of $0.2 million and higher travel costs of $0.2 million as our operations grew to include European facilities. Professional fees were also higher by $0.5 million as we incurred greater costs in connection with negotiating certain contracts. Selling, general and administrative expenses included stock-based compensation expense of $0.1 million in both 2005 and 2006.

Interest Income. Interest income was $0.2 million in 2005 compared to $0.7 million in 2006, an increase of $0.5 million or 203%. The increase resulted from the higher average cash and investment balances on hand during 2006 compared to 2005. These higher cash and investment balances resulted from cash received in connection with the issuance of our Series D preferred stock in August and October of 2006.

Interest Expense and Other. Interest expense and other was $0.4 million in 2005, compared to $0.7 million in 2006. This increase was due to the interest expense on our outstanding financing obligations, and a $0.7 million charge we incurred for the embedded beneficial conversion feature related to the bridge financing we raised in 2006.

Provision (benefit) for Income Taxes. The tax provision for 2005 consisted primarily of foreign tax withheld at source on royalties received from overseas and other taxes attributable to foreign operations.

The tax benefit in 2006 is due to fewer taxes withheld on royalties and the benefit recorded for a higher loss in Germany.

Liquidity and Capital Resources

Since inception, we have funded our operations to date primarily through the sale of equity securities, borrowings under financing arrangements, collaborative research and development revenues, product sales and government grants. As of December 31, 2007, our cash, cash equivalents and marketable securities totaled $84.1 million.

Operating Activities

We have historically experienced negative cash flow from operations as we continue to invest in our infrastructure and our technology platform, and expand our business. Our cash flows from operations will continue to be affected principally by the extent to which we spend on increasing personnel, primarily in research and development, in order to grow our business. The timing of hiring of skilled research and development personnel in particular affects cash flows as there is a lag between the hiring of research and development personnel and the generation of collaboration or product revenues and cash flows from those personnel. Our primary source of cash flows from operating activities is cash receipts from our customers. Our largest uses of cash from operating activities are for employee related expenditures, rent payments, inventory purchases to support our revenue growth and non-payroll research and development costs, which include payments made to Maxygen in connection with our biofuels research collaboration with Shell.

Our operating activities used cash in the amount of $6.1 million in 2007, primarily due to our net loss of $39.0 million and an increase in accounts receivable of $3.1 million, partially offset by an increase in deferred revenues of $16.4 million, an increase in accounts payable and accrued liabilities of $14.0 million and a decrease of $0.9 million in prepaids and other assets. These changes resulted primarily from the significant growth in our business, the timing of shipments and payments to vendors, our efforts to manage and monitor the balances of trade receivables and the increase in deferred revenues due to the timing of revenue recognition under our revenue recognition policy. We also had non-cash charges of $6.6 million, comprised primarily of $2.1 million in depreciation and amortization on property and equipment, $1.2 million in amortization of intangible assets and deferred costs, $1.3 million in stock-based compensation expense, $1.3 million related to the increase in the fair value of the preferred stock warrants during the period, and $0.5 million for preferred stock issued in exchange for services.

Our operating activities used cash in the amount of $13.3 million in 2006, primarily due to our net loss of $18.7 million, partially offset by an increase in our accounts payable and accrued liabilities of $2.3 million. These changes resulted primarily from the growth in our business and the timing of payments to our vendors. We also had non-cash charges of $2.7 million, comprised primarily of $1.8 million in depreciation on property and equipment, $0.7 million in amortization of intangible assets and a beneficial conversion feature related to the preferred stock warrant issued in connection with convertible debt.

Our operating activities used cash in the amount of $4.4 million in 2005, primarily due to our net loss of $11.6 million and an increase in accounts receivable of $2.5 million due to our growth in our business, partially offset by an increase in deferred revenues of $4.1 million due to the increase in shipments to customers late in the year, and a net increase in accounts payable and accrued liabilities of $2.3 million. We also had non-cash charges for depreciation and amortization expense of $2.5 million.

Investing Activities

Our investing activities used cash of $39.6 million in 2007, primarily from net purchases of marketable securities of $28.9 million, the purchase of property and equipment of $8.2 million to support the growth in our business, the $1.3 million increase in restricted cash and net payments of $1.2 million for

the BioCatalytics acquisition. Restricted cash comprises deposits securing letters of credit, primarily those associated with our facility leases. The capital expenditures consisted primarily of laboratory equipment, computer and test equipment, and software purchases.

Our investing activities provided cash of $0.2 million in 2006, primarily from proceeds of sale of marketable securities of $1.5 million, partially offset by the purchase of property and equipment of $1.1 million and the increase in restricted cash of $0.2 million. These capital expenditures consisted primarily of computer and test equipment and software purchases.

Our investing activities provided cash of $3.4 million in 2005 primarily due to the net sale of marketable securities of $9.8 million which were partially offset by the net payments of $4.1 million made in connection with our acquisition of Jülich and purchases of property, plant and equipment of $2.0 million to support growth in our business. The capital expenditures consisted primarily of computer and test equipment and software purchases.

Financing Activities

Our financing activities provided cash of $68.4 million in 2007. The primary source of these funds was the issuance and sale of approximately 6.1 million shares of Series E preferred stock and the exercise of warrants to purchase approximately 0.4 million shares of Series D preferred stock, for an aggregate net consideration of $54.8 million from various investors. We also borrowed a net amount of $14.7 million under a new loan and security agreement with General Electric Capital Corporation and Oxford Finance Corporation, which commenced in September 2007. The loan and security agreement provides for $15.0 million in borrowings, and is secured by certain assets and bears interest at 9.4% per annum. The loan is to be repaid over 42 months, from the date of funding, through monthly cash payments of principal and interest following six months of interest only payments. The loan and security agreement contains financial and non-financial covenants. As of December 31, 2007, we were in compliance with the covenants under the agreement.

Our financing activities provided cash of $39.7 million in 2006 mostly through the issuance of 10.1 million shares of Series D preferred stock for a net amount of $35.5 million, and $4.2 million from a bridge financing agreement. The balance from the bridge financing plus accrued interest thereon was converted into shares of Series D preferred stock in August 2006.

Our financing activities provided cash of $1.0 million in 2005, principally from net borrowings under new and existing credit facilities.

Contractual Obligations and Commitments

The following summarizes the future commitments arising from our contractual obligations at December 31, 2007 (in thousands):

	Total	2008	2009	2010	2011	2012 and beyond
Loans payable	$ 21,316	$ 6,098	$ 6,255	$ 5,980	$ 2,983	$ —
Lines of credit	217	217	—	—	—	—
Capital leases	165	80	67	18	—	—
Operating leases	11,723	2,591	3,064	2,943	1,553	1,572
Total	$ 33,421	$ 8,986	$ 9,386	$ 8,941	$ 4,536	$ 1,572

The table above reflects only payment obligations that are fixed and determinable. Our commitments for operating leases primarily relates to our leased facilities in Redwood City, California, and Jülich, Germany.

Off-Balance Sheet Arrangements

As of December 31, 2007, we have no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K as promulgated by the SEC.

Recent Accounting Pronouncements

In September 2006, the FASB issued SFAS No. 157,*Fair Value Measurements*, or SFAS 157. SFAS 157 defines fair value, establishes a framework for measuring fair value and expands disclosure of fair value measurements. SFAS 157 applies under other accounting pronouncements that require or permit fair value measurements and accordingly, does not require any new fair value measurements. SFAS 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007. We currently do not expect our adoption of SFAS 157 to have a significant impact on our consolidated results of operations or financial position.

In February 2007, the FASB issued SFAS No. 159,*The Fair Value Option for Financial Assets and Financial Liabilities including an amendment of FASB Statement No. 115*, or SFAS 159. This statement permits entities to choose to measure many financial instruments and certain other items at fair value that are not currently required to be measured at fair value. This statement also establishes presentation and disclosure requirements designed to facilitate comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. This statement does not affect any existing accounting literature that requires certain assets and liabilities to be carried at fair value. This statement does not establish requirements for recognizing and measuring dividend income, interest income or interest expense. SFAS 159 is effective for periods beginning after November 15, 2008. We are currently reviewing this new standard to determine the effects, if any, on our consolidated results of operations or financial position.

In December 2007, the FASB ratified EITF Issue No. 07-1,*Accounting for Collaborative Agreements*, or EITF 07-1, which defines collaborative agreements as contractual arrangements that involve a joint operating activity. These arrangements involve two or more parties who are both active participants in the activity and that are exposed to significant risks and rewards dependent on the commercial success of the activity. EITF 07-1 provides that a company should report the effects of adoption as a change in accounting principle through retrospective application to all periods and requires the parties to determine who is the principal party of an arrangement, and therefore the party to report revenues and expenses under the collaboration as well as specific additional disclosures on a company's financial statements. EITF 07-1 is effective for periods beginning after December 15, 2008. We are currently reviewing this new standard to determine the effects, if any, on our consolidated results of operations or financial position.

In June 2007, the FASB ratified EITF Issue No. 07-3,*Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities*, or EITF 07-3. EITF 07-3 provides clarification surrounding the accounting for nonrefundable research and development advance payments, whereby such payments should be recorded as an asset when the advance payment is made and recognized as an expense when the research and development activities are performed. EITF 07-3 is effective for interim and annual reporting periods beginning after December 15, 2007. EITF 07-3 is effective for periods beginning after December 15, 2007. We currently do not expect our adoption of EITF 07-3 to have a significant impact on our consolidated results of operations or financial position.

In December 2007, the FASB issued SFAS No. 141 (revised 2007),*Business Combinations*, or SFAS 141(R). SFAS 141R establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any noncontrolling interest in the acquiree and the goodwill acquired. SFAS 141(R) also establishes disclosure requirements to enable the evaluation of the nature and financial effects of the business combination. This statement is effective for periods beginning after December 15, 2008. We are currently evaluating the

potential impact of the adoption of SFAS 141(R) on our consolidated financial position, results of operations or cash flows.

In December 2007, the FASB issued SFAS No. 160,*Noncontrolling Interests in Consolidated Financial Statements*, or SFAS 160. SFAS 160 establishes accounting and reporting standards for ownership interests in subsidiaries held by parties other than the parent, the amount of consolidated net income attributable to the parent and to the noncontrolling interest, changes in a parent's ownership interest, and the valuation of retained noncontrolling equity investments when a subsidiary is deconsolidated. SFAS 160 also establishes disclosure requirements that clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners. This statement is effective for periods beginning after December 15, 2008. We are currently evaluating the potential impact of the adoption of SFAS 160 on our consolidated financial position, results of operations or cash flows.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Sensitivity

We had unrestricted cash, cash equivalents and marketable securities totaling $32.2 million and $84.1 million at December 31, 2006 and 2007, respectively. These amounts were invested primarily in money market funds, commercial paper, corporate debt obligations, asset-backed securities, and U.S. government debt securities and are held for working capital purposes. We do not enter into investments for trading or speculative purposes. We believe we do not have material exposure to changes in the fair value as a result of changes in interest rates. Declines in interest rates, however, will reduce future investment income. If overall interest rates fell by 10% in 2007, our interest income would have declined approximately $137,000, assuming consistent investment levels.

Our loan and security agreement with General Electric Capital Corporation and Oxford Finance Corporation provides for a fixed rate of interest, and therefore is not subject to fluctuations in market interest rates.

Foreign Currency Risk

As we expand internationally, our results of operations and cash flows will become increasingly subject to fluctuations due to changes in foreign currency exchange rates. For example, we operate a research facility in Singapore at which we purchase materials for that facility and pay our employees at that facility in Singapore dollars. In addition, we purchase products for resale in the United States from foreign companies and have agreed to pay them in currencies other than the U.S. dollar. As a result, our expenses and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. In periods when the U.S. dollar declines in value as compared to the foreign currencies in which we incur expenses, our foreign-currency based expenses increase when translated into U.S. dollars. Although it is possible to do so, we have not hedged our foreign currency since the exposure has not been material to our historical operating results. Although substantially all of our sales are denominated in U.S. dollars, future fluctuations in the value of the U.S. dollar may affect the price competitiveness of our products outside the U.S. The effect of a 10% adverse change in exchange rates on foreign denominated receivables as of December 31, 2007, would have been a $0.3 million foreign exchange loss recognized as a component of interest and other expenses of our consolidated statement of operations. We may consider hedging our foreign currency as we continue to expand internationally.

Controls and Procedures

In connection with the audit of our consolidated financial statements for 2005, 2006 and 2007, we and our independent registered public accounting firm identified a material weakness in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal

control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis.

The material weakness comprises (i) our lack of policies and procedures, with the associated internal controls, to appropriately address complex, non-routine transactions and (ii) the lack of a sufficient number of qualified personnel to timely account for such transactions in accordance with U.S. generally accepted accounting principles.

The following issues were identified during the audit, and collectively gave rise to the conclusion that we had an underlying material weakness:

- we had inadequate policies to address the increasingly complex revenue arrangements that we enter into, which resulted in our improper assessment of the applicability of gross versus net accounting in two complex transactions;
- while we had fairly valued our common stock for purposes of establishing exercise prices for stock options throughout the audited periods, we did not correctly and timely identify all data required to properly evaluate the accounting impact of stock option grants made to employees and consultants and did not recognize all requirements under applicable accounting standards;
- in connection with two acquisitions, we did not identify pre-existing accounting issues and control deficiencies at the acquired companies and failed to conduct a post-acquisition integration process that effectively standardized reporting or identified these pre-existing issues, and we failed to identify and correct an erroneous pre-acquisition assessment of the fair value of tangible assets, including equipment and inventory;
- we improperly recorded foreign currency cumulative translation adjustments, resulting in part from our selection of the incorrect functional currency for one of our foreign subsidiaries; and
- we did not have in place an effective inventory management process with adequate controls over management of inventory quantities and valuation, which primarily related to the segregation of research and development materials from commercial inventories.

These deficiencies in the design and operation of our internal controls resulted in the recording of numerous audit adjustments, and significantly delayed our financial statement close process, for the three year period ended December 31, 2007. We have not yet been able to remediate this material weakness. However, we have taken initial remediation steps including hiring technical accounting and SEC reporting managers in 2008 as well as contracting with a technical accounting advisory firm. We plan to take significant additional steps intended to remediate this material weakness, primarily through the hiring of additional accounting and finance personnel, and the development and implementation of formal policies, improved processes and documented procedures. We cannot currently estimate the specific time frame needed to remediate this material weakness. In addition, we expect to incur significant incremental costs associated with this remediation, primarily due to the hiring of additional accounting and finance personnel, the retention of third-party experts and contractors, and the procurement, implementation and validation of robust accounting and financial reporting systems. If we fail to enhance our internal control over financial reporting to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act, we may be unable to accurately report our financial results, or report them within the timeframes required by law or exchange regulations. We will be required to meet the requirements of Section 404 of the Sarbanes-Oxley Act beginning with our fiscal year ending December 31, 2009. The remedial actions that we plan to take will be subject to continued management review, supported by confirmation and testing, as well as audit committee oversight. While we expect to remediate this material weakness, we cannot assure you that we will be able to do so in a timely manner, if at all, or that in the future additional material weaknesses or significant deficiencies will not exist or otherwise be discovered, which could impair our ability to report our financial position, results of operations or cash flows in an accurate or timely manner.

BUSINESS

Company Overview

We are a leading developer of proprietary biocatalysts that we believe have the potential to revolutionize chemistry-based manufacturing processes across a variety of industries. We have already demonstrated commercial success in the pharmaceutical industry, and we currently have a research collaboration with Shell to apply our technology platform to the biofuels market. We are pursuing funded collaborations in several other bioindustrial markets, including carbon management, water treatment and chemicals.

Biocatalysts are enzymes or microbes that catalyze chemical reactions that can enable the production of products used in everyday life. Our proprietary technology platform allows us to rapidly evolve and optimize biocatalysts to perform specific and desired chemical reactions for commercial scale industrial applications.

We have focused our biocatalyst development efforts on large and rapidly growing markets, including pharmaceuticals and biofuels. We have enabled biocatalyst-based commercial scale drug manufacturing processes and delivered biocatalysts and drug products to some of the world's leading pharmaceutical companies. Our pharmaceutical customers have included Arch Pharmalabs Limited, Bristol-Myers Squibb Co., Dr. Reddy's Laboratories Ltd., Merck & Co., Inc., Pfizer Inc., Ranbaxy Laboratories Limited, Schering-Plough Corporation and Teva Pharmaceutical Industries Ltd. In 2007, after exceeding performance targets under an initial one-year research agreement, we entered into a new, five-year collaborative research agreement with Shell to develop biocatalysts for use in producing biofuels from renewable sources of sustainable non-food plant materials, commonly known as cellulosic biomass.

Our management team has decades of operating experience and technical expertise across several different industries, including the pharmaceutical and bioindustrial markets. Our investors include leading global companies in several different markets, including Shell, Chevron Corporation, Pfizer and The General Electric Company.

The Biocatalysis Opportunity — Industry Overview

Biocatalysts have the potential to revolutionize conventional chemistry-based manufacturing processes across a variety of industries. Many industries, from pharmaceuticals to energy to chemicals, use manufacturing processes dependent upon conventional chemical reactions. Biocatalysts can enable superior manufacturing process alternatives to conventional chemistry-based approaches.

While conventional chemistry dominates manufacturing today, this approach has several drawbacks. Conventional chemistry-based manufacturing often requires highly complex, energy-intensive processes that use extreme environments in terms of temperature and pressure, as well as hazardous reagents to effect chemical reactions. These processes often require equipment that is expensive to build and operate, and frequently generate high volumes of waste, some of it hazardous to health and the environment, that must be treated, contained and disposed of. Biocatalyst enabled manufacturing processes are able to address a number of these drawbacks of conventional chemistry-based manufacturing. For example, biocatalysts can operate at or near room temperature and pressure and often use manufacturing equipment that is less complex and less expensive to build and operate. Biocatalyst-enabled processes can produce the same or higher quality products than conventional chemistry-based manufacturing, while reducing the risks associated with extreme manufacturing environments without generating nearly the same level of waste.

Despite their potentially significant advantages, naturally occurring biocatalysts have not achieved their full potential in industrial applications. Naturally occurring biocatalysts are often not stable enough to be used in industrial settings, where conditions may differ significantly from those in the biocatalysts' natural environments. The activity and productivity of these biocatalysts is also often too limited to be cost-

effective in commercial scale manufacturing. In addition, the activity of natural biocatalysts are typically inhibited by the end product of the reactions they facilitate. This characteristic of natural biocatalysts, which is referred to as product inhibition, results in limited product yields in industrial settings. Moreover, for certain industrial applications there are no known naturally occurring biocatalysts that catalyze the relevant reaction.

Because of these limitations, naturally occurring biocatalysts often require alteration of their composition in order to perform adequately under industrial manufacturing conditions or at productivity levels that would make their use in commercial scale applications economical. Some companies and researchers have tried to improve the performance of naturally occurring biocatalysts or even produce novel biocatalysts by directing their evolution through biotechnology techniques such as the random mutation of genes in an effort to randomly find a biocatalyst having the desired characteristics. However, these early biotechnology techniques have had only limited success. For example, many of these techniques do not identify and remove mutations that exhibit undesirable characteristics. The end result is an evolved biocatalyst that may have some desired characteristics, but may also have undesirable characteristics. As a result, we believe there is a significant opportunity for novel technologies that address the limitations of naturally occurring biocatalysts as well as the limitations of other biotechnology techniques.

Our Approach to Biocatalysis

Our proprietary technology platform has the potential to dramatically transform the commercial and industrial application of biocatalysts. We believe we can use our technology platform to improve industrially relevant characteristics of any biocatalyst, including reduced product inhibition and improved stability, activity, product yield, and tolerance to industrial conditions. In addition, we can develop and optimize biocatalysts much more quickly than alternative approaches. Perhaps most importantly, we believe that our technology platform can enable the production of products that are currently impossible to economically produce at commercial scale.

Our proprietary technology platform uses advanced biotechnology methods, bioinformatics and years of accumulated know-how to significantly expedite the process of developing optimized biocatalysts. Key components of our technology platform include:

- *Gene shuffling* — we use our gene shuffling technology to manipulate the genetic code for a biocatalyst to obtain improved industrially relevant characteristics. Starting with a diverse set of genes with various characteristics, we recombine, or shuffle, these gene sequences to produce new variants of the enzyme.
- *Whole Genome Shuffling* — we use Whole Genome Shuffling to manipulate the genome of a microbe to obtain improved industrially relevant characteristics. Starting with mutational variants of the microbe, we recombine, or shuffle their genomes, to produce new microbe variants. We use protoplast fusion, which fuses two or more cells into one cell, followed by regeneration of normal cells, causing shuffling of their genomes.
- *High-throughput screening methods* — we evaluate our biocatalyst libraries of mutated genes or microbes produced by gene shuffling and identify variant biocatalysts that exhibit improved characteristics under conditions that resemble the desired manufacturing process. These improved variants can then be put through the process, and new mutations can be tested, until a highly efficient biocatalyst is produced that meets or exceeds targeted performance characteristics.
- *ProSAR* — we use bioinformatic software tools that allow us to quantify the effect of specific mutations in an improved biocatalyst variant. The ability of ProSAR to identify and quantify the potential value of beneficial mutations alongside detrimental mutations is, we believe, a distinguishing factor of our technology platform.

- *Experience and accumulated knowledge* — we have significant experience and accumulated knowledge in applying all of these methods and tools, which we believe significantly enhances our technology advantage.

In the pharmaceutical market, we have used our technology platform to significantly improve commercial scale drug manufacturing processes and to produce and deliver products to both innovator pharmaceutical manufacturers, who produce patented drugs, and generic pharmaceutical companies. These customers have used our processes and products to reduce their costs, simplify their production processes, decrease their environmental impact and increase their efficiency and product yield.

For example, we have developed four enzymes that enabled significant improvements in the manufacturing process for a key intermediate used in the production of atorvastatin, which is the active pharmaceutical ingredient, or API, in Lipitor, the world's best-selling prescription drug. Manufacturers have historically used a complex, expensive, capital intensive and hazardous chemistry-based process to produce this key intermediate, called ATS-8. As a result, they have long sought alternate ways to make the drug, including through enzymes. However, none of the naturally occurring enzymes that we tested showed the required activity and stability necessary to manufacture ATS-8. Using our technology platform, we were able to significantly improve the activity and stability of a number of these naturally occurring enzymes. In one case, we increased the performance of one of these enzymes, which previously showed less than 1% of the required activity and stability, to improve the performance of the biocatalytic reaction by approximately 4,000 times. With the improved enzymes, we were able to replace several steps in the conventional manufacturing process. While one of those steps required temperatures below at least -70 degrees Celsius, our process runs at or near room temperature and eliminates the need for expensive and energy intensive cryogenic equipment. Our process also greatly reduces the waste generated by the conventional chemistry-based processes and generates a biodegradable waste from two of the steps. In addition, the conventional chemistry-based process produces an impurity that is costly to eliminate, and which reduces valuable product yield. Our process, on the other hand, produces products with a purity level that eliminates the need for the purification step, resulting in additional cost savings and higher product yields. In 2006, we received a Presidential Green Chemistry Challenge Award from the United States Environmental Protection Agency for our development of two biocatalytic steps for ATS-8.

More recently, we have begun to explore the potential of our technology platform in the biofuels market with Shell. In 2007, after exceeding performance targets under an initial one-year research agreement, we entered into a five-year collaborative research agreement with Shell to develop biocatalysts for use in producing biofuels from renewable sources of sustainable non-food plant materials, commonly known as cellulosic biomass. We believe that there may be significant commercial opportunities for us to pursue funded collaborations in several other bioindustrial markets, including in carbon management, water treatment and chemicals.

Competitive Strengths

Our key competitive strengths are:

Proprietary and Disruptive Technology Platform. Our proprietary technology platform uses advanced biotechnology tools, bioinformatics and years of accumulated know-how to rapidly and systematically develop biocatalysts optimized for commercial scale industrial applications. Our technology platform is potentially disruptive because it:

- often provides substantial advantages over conventional chemistry, enabling processes that are less complex, expensive, capital-intensive and hazardous, and more efficient in terms of energy, materials use and product yield;

- has substantial advantages over processes using naturally occurring biocatalysts, allowing us to quickly develop biocatalysts which are stable and generate the desired activity and product yields at commercial scale; and
- enables the development of optimized biocatalysts with improved performance characteristics that are rarely present in naturally occurring biocatalysts or other currently available technologies, potentially including the production of a commercially viable non-ethanol biofuel alternative to petroleum-based fuels.

Multiple Major Target Markets. We believe we can apply our technology platform to exploit significant commercial opportunities in a number of major and growing markets. We currently use our technology platform to produce biocatalysts that are used at commercial scale in both the generic and innovator pharmaceutical markets. We are working with Shell to develop biocatalysts for use in producing biofuels from cellulosic biomass sources. We also are pursuing funded collaborations in several other bioindustrial markets, including carbon management, water treatment and chemicals.

Partnerships with Global Industry Leaders. We believe that our strategic collaborations and partnerships with leading pharmaceutical companies validate our technology platform, and will enable us to maximize the potential of our technology. We have delivered drug manufacturing processes, or products that we have made with them, to leading manufacturers of branded pharmaceuticals, including Merck, Pfizer and Schering-Plough, and generic pharmaceutical companies, including Arch. In biofuels, after an initial one-year research agreement in which we exceeded performance targets, we entered into a new, five-year collaborative research agreement with Shell, an affiliate company of one of the leading global energy companies and one of the world's largest distributors of biofuels, to develop biocatalysts for use in producing commercially viable fuels made from cellulosic biomass.

Capital-Efficient Business Model. We have adopted a business model that leverages our collaborators' engineering, manufacturing and commercial expertise, their distribution infrastructure and their ability to fund commercial scale production facilities. In the pharmaceuticals market, we are working with Arch, a leading independent producer of intermediates and generic APIs in India, where they manufacture intermediates produced using our proprietary biocatalysts for sale in the generic marketplace. In our biofuels research collaboration with Shell, we are developing biocatalysts that can be used to produce fuels from cellulosic biomass. If we are successful in these efforts and Shell decides to commercialize biofuels products resulting from our research collaboration, we will need to rely on Shell to design and build the production facilities to scale the technology to commercial volumes, and distribute the final fuel product through its worldwide distribution system. If our collaborators choose to utilize our technology to commercialize new products, this capital-efficient business model will allow us to expand into new markets without having to finance or operate large industrial facilities. This model also allows us to focus our efforts on what we do best: applying our proprietary technology platform to new opportunities.

Diversified and Visible Revenue Base. Our revenue stream is diversified across various industries, which should mitigate our exposure to cyclical downturns or regional fluctuations in any one market. Our 2007 revenues were derived from the innovator and generic pharmaceuticals and biofuels markets, and consisted primarily of collaborative research and development revenues, product sales and government grants. Revenues from our expected sales of generic intermediates and APIs, as well as the revenues that we expect to recognize from our five-year biofuels collaborative research agreement with Shell, should provide a high degree of visibility into our aggregate revenues for the foreseeable future. We intend to further diversify our revenue by pursuing funded collaborations in other bioindustrial markets, such as carbon management, water treatment and chemicals.

Strategy

Our objective is to be the leading provider of optimized biocatalytic solutions across a wide range of industries. Key elements of our strategy are as follows:

Expand into new bioindustrial markets. We believe that we can deploy our technology platform to transform manufacturing processes throughout various bioindustrial markets. We have a research collaboration with Shell to develop biocatalysts for use in producing commercially viable fuels from cellulosic biomass. We will have the right to use the intellectual property developed in this collaboration in all fields other than fuels and related products. We intend to leverage our intellectual property developed under this research collaboration to pursue other funded collaborations in several other bioindustrial markets, including carbon management, water treatment and chemicals.

Continue growing our pharmaceutical business. Beginning in 2008, we plan to launch several new intermediates and APIs for the generic equivalents of branded pharmaceutical products including Singulair, Nexium and Crestor. We will also continue to aggressively market our Codex Biocatalyst Panels to pharmaceutical companies to demonstrate the capabilities of our technology platform in an effort to integrate our products and services earlier and more deeply into drug development and manufacturing processes.

Enter into additional strategic collaborations. We have grown our business by collaborating with market leaders that have helped fund the development and application of our technology platform in the pharmaceutical and biofuels markets. Our collaborators have provided us access to marketplace expertise, industrial infrastructure, engineering capabilities and capital resources. We are pursuing additional collaborations that will allow us to continue to leverage our collaborators' competitive strengths and financial resources in our target markets.

Continue enhancing our technology platform. We intend to continue to advance our technology platform by continued investment in our research and development capabilities. To date, our most significant advances have come in the area of our gene shuffling technology for enzyme applications. We are expanding our capabilities in microbe development by metabolic engineering, synthetic biology and Whole Genome Shuffling. We also intend to further increase the quality of our biocatalyst libraries to allow us to more rapidly identify products with desired characteristics. Improvements in either of these areas can be applied in the development of new products in our current and target markets.

Further develop our supply chain. To increase our biocatalyst manufacturing capacity and establish secondary supply sources, we will continue to evaluate whether to invest in our own manufacturing capabilities or to establish long term supply contracts with additional contract manufacturers. We may also opportunistically seek to secure specialty manufacturing assets and expand existing relationships for the supply of our enzymes and key pharmaceutical APIs and intermediates.

Expand our business through acquisition of new technologies, products or businesses. In the past, we have expanded our business by acquiring companies with synergistic business plans and licensing new technology. For example, we acquired Jülich Fine Chemicals in 2005 and BioCatalytics in 2007, and we licensed technology from the California Institute of Technology and from the University of California at Los Angeles. We will continue to evaluate opportunities to acquire or license new technologies, products or businesses that complement or expand our capabilities. We may pursue licensing and acquisition opportunities in the carbon management, water treatment and chemical markets as we seek to expand into these markets.

Pharmaceutical Market Opportunity

Industry Overview

The pharmaceutical industry represents a significant market opportunity for us. In 2006, according to IMS Health, global spending on prescription drugs exceeded $600 billion. The pharmaceutical market can be divided into two categories: patent-protected, or branded drugs, and generic drugs which are not patent protected. We refer to companies that focus on the research, development and commercialization of branded drugs as innovators.

Both innovator and generic companies are under significant pressure to reduce manufacturing costs. In the regulated markets, or markets that provide effective patent protection, innovators enjoy a period of premium pricing protected by their patents and have historically been less concerned about their manufacturing costs. As a result, innovators often implement expensive, inefficient manufacturing processes early in the lifecycles of their products, only to find later that costs become more critical as operating margins decrease across their product portfolios. Once an innovator's patents in a regulated market expire, generic drugs can enter the market, and pricing rapidly drops to a small fraction of the innovator's branded pricing. The number of products losing patent protection has grown rapidly over the last decade. According to Datamonitor, generic competition is expected to eliminate $63 billion from top innovators' U.S. sales between 2007 and 2012 as more than three dozen drugs lose patent protection. While the generic companies have benefited from patent expirations, these companies compete primarily on price, and therefore low cost manufacturing processes are critical to their success. Prior to the expiration of patents, there are also substantial opportunities for generic manufacturers in countries that do not provide the same level of patent protection as regulated markets, which we refer to as the non-regulated markets. While these markets represent huge opportunities for generics companies, competition and the need for access to low-cost sources of intermediates and APIs are intense. Increasing pressures on innovator profitability and intense cost competition among generics manufacturers present opportunities for companies that can lower drug production costs.

Opportunities in the Innovator Market

As noted above, innovators are increasingly looking for opportunities to reduce their manufacturing costs and improve their operating margins. One cost-saving trend among innovators is outsourcing the manufacture of their APIs, as well as pharmaceutical intermediates to be converted to APIs. In addition, innovators have also invested in new technologies to improve their manufacturing productivity and efficiency. We expect the demand for products and services that reduce manufacturing costs for products at all stages of the drug lifecycle, from preclinical and clinical development through commercial scale manufacturing, will continue to increase.

Another strategy innovators can use to reduce manufacturing costs is to adopt processes that obviate the need for costly purification of their intermediates or APIs. The chemical structure of many small molecule drugs has two or more configurations, which are mirror-image arrangements of the same number and type of atoms that are not superimposable, similar to a person's left and right hands. While the two or more configurations have the same chemical structures, there can be differences in their therapeutic safety and efficacy profiles. For example, one form of thalidomide is efficacious and safe, but the other causes horrible birth defects. To avoid developing a drug containing enantiomers with detrimental effects, pharmaceutical companies are increasingly seeking to introduce new drugs containing only the desired enantiomer. The production of the pure configurations via conventional chemistry-based processes is rarely possible. These processes typically require late-stage purification steps that reduce product yield and can significantly increase costs. Because of the high costs associated with these purification steps, significant opportunities exist for alternatives that can produce pure configurations using more efficient and less costly methods.

Opportunities in the Generics Market

Generics manufacturers are also increasingly pursuing opportunities to reduce their manufacturing costs. The rise in patent expirations, as well as support by some governments for lower-cost alternatives to branded drugs, have led to strong growth in the generics industry in the regulated markets. According to IMS Health, patients currently fill over 60% of prescriptions in the United States with generic drugs. However, because generics manufacturers compete primarily on price, they are even more cost sensitive than innovators. Lower manufacturing costs for intermediates and APIs is the key factor that helps generics companies compete and win market share.

Prior to the expiration of patents on a branded drug, generics manufacturers also have significant opportunities to commercialize the generic equivalents of branded drugs in the non-regulated markets. Innovators typically do not sell their products in the non-regulated markets, because those countries either have economies that cannot support branded drug pricing or have legal systems that do not provide effective patent protection. As a result, these markets are dominated by generic products. Non-regulated countries represent some of the fastest growing pharmaceutical markets in the world. While these markets represent huge opportunities for generics companies, competition and the need for access to low-cost sources of intermediates and API is intense.

Our Solution for the Pharmaceutical Market

Our technology platform enables us to add value throughout the pharmaceutical drug lifecycle, for both innovator and generic pharmaceutical manufacturers, by improving the efficiency and productivity of manufacturing processes. We optimize and use biocatalysts that perform chemical transformations at a lower cost with more direct and clean transformations than is possible with conventional chemical reactions or naturally occurring biocatalysts.

Our technology platform allows our pharmaceutical customers to reduce their manufacturing costs by eliminating the need for late-stage purification in existing production processes, and eliminating the need for complex manufacturing equipment for drug products that have yet to reach the commercial stage. By reducing manufacturing costs, we allow innovators to increase their margins during the important period when a drug has patent protection, and we allow generics manufacturers to compete more effectively on price. We achieve these results in a number of ways, including:

- reducing the use of raw materials and intermediate products;
- performing reactions at or near room temperature and pressure;
- using water as a primary solvent;
- eliminating the need for certain costly manufacturing equipment;
- reducing energy requirements; and
- eliminating hazardous inputs and harmful emission by-products.

In addition, our technology platform may allow our innovator pharmaceutical customers to bring some drugs to market more rapidly increasing the useful commercial life of a patented drug after regulatory approval. We also enable our customers to improve product purity in a much more cost effective manner than is possible with traditional chemical synthesis.

Products and Services

The pharmaceutical industry product lifecycle begins with the discovery of new chemical entities and continues through preclinical and clinical development, product launch and, ultimately, patent expiration and the transition from branded to generic products. During this lifecycle, the production process for a

product evolves from the preclinical development stage, when manufacturers are focused more on speed to market and safety and efficacy than cost, to the production of small batches for clinical trials, and finally to commercial scale manufacturing.

Our products and services enable us to add value throughout the drug lifecycle, from preclinical development to clinical development and commercialization. The following chart summarizes our product and service offerings and indicates the stages of the product lifecycle in which our offerings are used:

Product or Service	Preclinical Development	Clinical Development	Commercial Scale Manufacturing
Codex Biocatalyst Panels	✓	✓	
Biocatalyst Screening Services	✓	✓	
Biocatalyst Optimization Services	✓	✓	✓
Biocatalysts	✓	✓	✓
Intermediates		✓	✓

Codex Biocatalyst Panels. We sell Codex Biocatalyst Panels to customers who are engaged in preclinical and clinical drug development to allow them to screen and identify possible biocatalytic manufacturing processes for their drug candidates. Our Codex Biocatalyst Panels are plates embedded with genetically diverse variants of our proprietary biocatalysts, which allow our customers to determine whether a biocatalyst produces a desired activity that is applicable to a particular process.

Our Codex Biocatalyst Panels:

- allow innovators to rapidly and inexpensively screen and identify possible biocatalytic manufacturing processes for many of their drug candidates in-house, without the risks of disclosing the composition of their proprietary molecules before they have received patent protection; and
- generate data that we can use to rapidly optimize biocatalysts for a particular reaction, if necessary, reducing the time required to generate a manufacturing process capable of supporting clinical trials with inexpensively produced, pure drugs.

We believe that our Codex Biocatalyst Panels will help build early and broad awareness of the power and utility of our technology platform, and will lead to further sales of our biocatalyst optimization services and biocatalysts. If our customers incorporate a biocatalytic manufacturing process early in a product's lifecycle, they can reduce their manufacturing costs throughout that lifecycle, and we can increase our potential revenue if our technology is used throughout the lifecycle of the product. For example, Merck, a leading pharmaceutical innovator, was the first customer for our Codex Biocatalyst Panels and, while conventional manufacturing process development for clinical supplies can require months, Merck used our Codex Biocatalyst Panels to move from initial screening to generating the first kilogram quantities of biocatalyst in a matter of weeks. After determining that biocatalysts in our panels showed initial activity against their product pipeline and portfolio, Merck purchased biocatalyst optimization services and biocatalysts from us.

Biocatalyst screening services. If a customers prefers, rather than subscribing to our Codex Biocatalyst Panels to use for their own screening, they can send us their materials to test against our existing libraries of biocatalysts. If we detect desired activity in a specific biocatalyst, we can supply the customer with this biocatalyst or perform optimization services to improve the performance of the biocatalyst.

Our screening services:

- allow innovators to rapidly and inexpensively screen and identify possible biocatalytic manufacturing processes through access to our extensive biocatalyst libraries; and

- generate data that we can use to rapidly optimize biocatalysts for a particular reaction, if necessary, reducing the time required to generate a manufacturing process capable of supporting clinical trials with inexpensively produced, pure drugs.

We have provided screening services to numerous innovator and generic pharmaceutical manufacturers.

Biocatalyst optimization services. We work with our innovator customers during preclinical and clinical development to customize proprietary biocatalysts, resulting in optimized biocatalysts that have been evolved specifically to perform a desired process according to a highly selective set of specifications.

Our biocatalyst optimization services:

- allow innovators to improve the manufacturing process as their drug candidates progress through preclinical and clinical development, deferring or reducing the need for significant manufacturing investment until the likelihood of commercial success is more certain; and
- enable manufacturing processes that are highly efficient, inexpensive, require relatively little energy, reduce the need for hazardous reagents, and reduce waste. For example, our activities with Pfizer have included developing an optimized biocatalytic manufacturing process for a key intermediate that eliminates three chemical steps.

Once an innovator uses our processes in later stages of the manufacturing process for its Phase III clinical trials, it must continue to use the same process for commercial launch unless it receives approval from the U.S. Food and Drug Administration, or FDA, to change its manufacturing process, which is typically cost- and risk-prohibitive. Accordingly, once an innovator incorporates our products or processes into a product in Phase III clinical trials, if it receives FDA approval and is launched, we expect to enjoy relatively predictable and significant revenue for the patent life of the approved drug.

Biocatalysts. We supply varying quantities of our proprietary biocatalysts to pharmaceutical companies, from small to moderate quantities while they are optimizing their production processes, to larger quantities during later-stage clinical development and commercial scale drug production. For example, we have supplied Merck with enzymes for the manufacture of several intermediates for drug candidates at various stages of clinical development.

Our biocatalysts:

- enable innovators to manufacture products more efficiently during preclinical and clinical development using optimized biocatalytic processes, with relatively low investment;
- eliminate the need for innovators to invest in the development of complex chemical synthesis routes during the development stage;
- allow innovators to achieve higher product purity during the development stage prior to investing in expensive late-stage clinical trials;
- reduce the risk of adverse effects arising from impurities; and
- allow the removal of entire steps from synthetic chemical production routes during commercial scale production, reducing raw material costs, energy requirements and the need for capital expenditures.

Intermediates and APIs. We can supply intermediates and APIs to our customers throughout the drug lifecycle.

Our supply of intermediates have the following uses and benefits:

- lowers capital investment for innovators through outsourcing of manufacturing; and

- provides a source of less expensive, more pure products to innovator and generics manufacturers.

In the innovator market, we are preparing to supply Pfizer with significant quantities of an intermediate in the scale-up and manufacture of a product candidate for upcoming clinical trials.

We also develop and, in partnership with Arch, manufacture and sell generic intermediates in the non-regulated markets. Our biocatalysts enable us to reduce our manufacturing costs, which enables us to compete on price, a top priority in the generics market. Our generics product portfolio and pipeline includes intermediates and APIs for infectious disease, cardiovascular and central nervous system indications, with expansion planned to a number of other therapeutic categories. For example, we developed a novel process for the manufacture of two key intermediates in the production of atorvastatin. We plan to sell this intermediate to manufacturers who will market the generic version of Lipitor in the United States and Europe once the composition of matter patents for Lipitor expire in those markets.

We have a well-developed product selection process for identifying high-volume intermediates and APIs for the generics market that we believe will enjoy the most dramatic cost savings from the application of our technology platform. This selection process is a cross-disciplinary effort, involving input from personnel in our research, marketing and operations departments, which has allowed us to establish a robust pipeline of generic intermediates and APIs. Starting in 2008, we plan to launch several new intermediates and APIs in non-regulated markets for purchase by manufacturers of generic forms of drugs, whose branded equivalents are extremely profitable in the regulated markets. We plan to launch these same intermediates and APIs in the regulated markets when the patent protection for each branded equivalent drug product expires. To help increase our product pipeline, we established in 2008 a research and development center in Hungary for microbe improvement and fermentation development. We expect that this enhanced capability will allow us to launch new pharmaceutical products through fermentation, such as antibiotics.

The following table is a representative list of some of the products for which we sell or plan to sell generic intermediates or APIs:

Generic Name	Brand Name	Indication	Our Product	Non-regulated Market Launch Date	Expected Regulated Market Launch Date
atorvastatin	Lipitor	lowers cholesterol	intermediate	2006	2012
levetiracetam	Keppra	anti-seizure	API	2008*	2010
duloxetine	Cymbalta	anti-depressant	API	2008*	2013
montelukast	Singulair	asthma/allergies	intermediate	2008*	2013
esomeprazole	Nexium	ulcers	API	2009*	2015
rosuvastatin	Crestor	lowers cholesterol	API	2009*	2015

(*) Expected launch date.

Biofuels Market Opportunity

Industry Overview — Need for Petroleum Replacement

The world currently depends on petroleum to help fuel growth, both in the transportation market and as a key ingredient in many everyday products. However, underlying economic, political and environmental concerns surrounding petroleum have increased the desire to find renewable alternatives to this limited commodity.

- *Demand for petroleum is increasing.* The United States, Europe and Japan have historically been the major consumers of petroleum. Developing economies such as India and China are all experiencing tremendous levels of economic growth. China and India alone last year saw GDP growth rates estimated at 11.4% and 8.5%, respectively. This economic growth has created new sources of demand for petroleum. Since 1998, China, India and the Middle East accounted for 51% of the global oil demand growth, with the United States, Europe and Japan only accounting for 16% of global growth over the same period.
- *Dependence on imported petroleum.* According to the U.S. Energy Information Association, or EIA, in 2006, the top five net oil exporting countries in the world were Saudi Arabia, Russia, the United Arab Emirates, Norway and Iran. The political and economic instability in some of these countries and their surrounding regions adds further uncertainty to the supply of oil. As a result, countries that have been net importers of oil are beginning to pursue approaches that provide for greater independence from these suppliers.
- *New petroleum reserves more expensive to develop.* The cost to replace known reserves is increasing significantly. Petroleum companies are now developing fields in the deep waters of the Gulf of Mexico and in the tar sands in Canada that previously would have not been economically attractive to exploit.
- *Rising petroleum prices.* Worldwide petroleum prices in dollars have risen 242% over the last five years, from $29.03 per barrel at the beginning of January 2003, to $99.32 per barrel at the end of March 2008, according to the EIA. Inflation-adjusted prices for petroleum have recently reached a new record, exceeding the prices reached in the 1973 oil crisis.
- *Limited supply of petroleum.* Growth in demand for petroleum has outpaced growth in supply. The supply growth has come mostly from non-OPEC producing countries, in particular Russia. However, this growth is expected to flatten. While OPEC producing countries may have the reserves, political instability in these regions has hindered their ability to increase production levels as well.
- *Environmental concerns.* Environmental concerns over the by-products of petroleum consumption, including greenhouse gas emissions, have led to a global search for environmentally friendly solutions to the world's growing fuel needs.

Industry Challenges and Opportunities

According to the EIA, of the 86 million barrels per day of global petroleum demand in 2006, approximately 45% was refined into gasoline for use in automobiles. There is enormous potential to replace a substantial portion of petroleum-based liquid transportation fuels with high-quality, energy-rich fuels produced through biocatalytic transformation of renewable carbon sources. For instance, in 2007, the U.S. Congress passed an alternative fuels mandate that calls for 9 billion gallons of liquid transportation fuels sold in 2008 to come from alternative sources, including biofuels, a mandate that grows to 36 billion gallons by 2022. First generation biofuels manufacturers use biocatalysts to produce biofuels such as ethanol and biodiesel at commercial scale. However, these fuels do not provide an optimal solution to the petroleum dependence problem for a number of reasons, including:

- high exposure to rising commodity and energy prices;
- increases in food and animal feed prices resulting from the diversion of food crops, such as corn and soybeans, to fuel production;
- ethical issues associated with diverting food crops and fertile acreage to fuel production; and
- energy inefficiency of production, due to the large amount of fertilizer, labor and equipment required to grow food crops and the energy required to produce biofuels from food crops.

Because of the limitations of first generation biofuels, many companies are now working to make fuels from cellulosic biomass rather than from commercial food crops. Cellulosic biomass is found in virtually all plant material, including sustainable non-food crops such as switch grass and wood chips, and agricultural plant wastes such as corn stover and sugar cane bagasse. Cellulosic biomass is comprised of, among other things, cellulose and hemi-cellulose, which are long chains of five and six carbon sugars that are linked together. To access these sugars, biofuels producers break apart cellulosic materials such as wood chips or grasses through a variety of processes that help to expose the hemicelluloses and cellulose to agents that break them down. Once exposed, these long chains can be broken down into individual sugar units which can be transformed into fuels.

While fuels produced from cellulosic biomass would represent significant advances over first generation biofuels, there have been several challenges in their development. These challenges include converting cellulose and hemicellulose into sugar, which is a more complicated process than converting corn starch and sugarcane into sugar. Solving those challenges will require cellulosic biofuels manufacturers to develop innovative, robust biocatalysts that will have greater product yield and be more cost efficient, and will react quickly and sustainably under optimal conditions. To date, no companies have successfully done this economically and at commercial scale.

Even if effective methods to produce ethanol and biodiesel from cellulosic biomass are found, these methods will not be able to overcome all of the limitations of ethanol and biodiesel, including:

- engine and fuel system modifications that may be required to utilize biofuels in ground and air transportation;
- the limited energy content of ethanol, which has only about 70% of the energy content of a gallon of gasoline, resulting in lower miles per gallon; and
- the inability to use existing gasoline distribution infrastructure to transport and dispense high concentration ethanol.

We believe that the use of biocatalysis to transform cellulosic biomass into biofuels with performance characteristics similar to current petroleum-based gasoline could address the limitations of alcohol-based fuels and could ultimately transform the liquid transportation fuels industry.

Our Solutions for the Biofuels Market

We believe that our technology platform may enable the development of biocatalysts that can be used to produce commercially viable non-ethanol biofuel alternatives to petroleum-based fuels from cellulosic biomass. As we work on this long term goal, we also intend to work on the conversion of biomass to sugars, which could be used for near term opportunities such as cellulosic ethanol.

Leveraging the knowledge and expertise we have gained through our success in the pharmaceutical market, we believe that our technology platform will enable the development of a manufacturing process for cellulosic biofuels that:

- minimizes the costs associated with next generation biofuels by eliminating exposure to volatile commodity prices;
- does not rely on diverting food resources for the production of biofuels;
- uses biomass that can be grown on acreage that is not suitable for the production of food;
- increases the speed at which biomass is converted into biofuels;
- increases the product yield of biofuels produced from cellulosic biomass;
- provides producers with more flexibility in designing processes to convert cellulosic biomass to biofuels, thereby reducing the costs associated with designing and running production facilities; and

- enables the production of new types of cellulosic biofuels that could be alternatives to petroleum-based fuels rather than supplements to them.

In November 2006, we entered into an initial research agreement with Shell, an affiliate company of one of the leading global energy companies and one of the world's largest distributors of biofuels. After exceeding the performance targets of this initial project, we entered into a new, five-year collaborative research agreement in November 2007. During the term of this collaborative research agreement, we will work exclusively with Shell on the conversion of cellulosic biomass into fuels.

Under the terms of our collaborative research agreement, we own all intellectual property developed under the research collaboration and have granted Shell exclusive license rights to use the intellectual property in the manufacture of fuels and related products. We retain all rights to use the intellectual property developed in the research collaboration in all areas outside of the collaboration. If Shell commercializes fuels, or related products that result from this research collaboration, we will receive production-based royalties.

Our research collaboration is focused on the development of biocatalysts for use in producing commercially viable fuels from cellulosic biomass, which Shell will have the right, but not the obligation, to commercialize. We are not aware of any naturally occurring biocatalysts that enable the commercial manufacture of cellulosic biofuels. Therefore, we are using our technology platform to try to develop novel enzymes that will economically enable the conversion of cellulosic biomass to sugar and microbes that will enable the conversion of sugars into optimal biofuels, going beyond alcohols and their limitations. If we produce these biocatalysts, we will work to improve their characteristics and the economics of the process. Ultimately, we believe we can use our technology platform to develop a suite of biocatalysts robust enough to convert a wide variety of biomass sources found throughout the world into fuels.

If Shell chooses to commercialize any biofuels products developed through our collaboration, we believe that Shell has the resources and the infrastructure to commercialize the products that we may develop on a global scale. If this were to occur, the combination of our technology platform with Shell's global manufacturing and distribution network could provide a complete "field to wheels" solution, from securing reliable sources of cellulosic biomass, to converting that biomass into biofuels, to delivery and distribution of refined biofuels to consumers at the pump.

Additional Bioindustrial Opportunities

We are pursuing funded collaborations in several other bioindustrial markets, including carbon management, water treatment and chemicals. We believe that our technology platform, together with the knowledge and experience gained from our efforts in the pharmaceutical market and in our biofuels research program, will allow us to capitalize on these opportunities. We will target collaborators that are industry leaders, allowing us to leverage their competitive strengths and resources in pursuit of these opportunities.

Carbon management

According to the EIA, the global emission level of carbon dioxide is projected to rise from 27 billion metric tons in 2004 to 34 billion metric tons in 2015 and 43 billion metric tons in 2030. Of the approximately six billion tons of carbon dioxide generated by the United States alone each year, approximately 39% is produced by the electric power industry. Furthermore, the share of global carbon dioxide emissions by the electric power industry could potentially increase in the future as growing demand for power increases alongside an exponentially growing population. By 2030, the EIA estimates, China and India will account for 31% of the world's carbon dioxide emissions, driven largely by their use of coal in generating electricity. As such, the need for an environmentally viable method to manage carbon dioxide emissions represents a significant opportunity.

We are exploring opportunities to apply our technology platform to the management of carbon dioxide emissions from point sources such as coal-fired power plants. It may be possible, for example, to combine biocatalytic solutions to separate carbon dioxide from other exhaust gases and direct them to separate sequestration mechanisms.

Water Treatment

Water treatment is another example of a potential major market opportunity for novel biocatalytic solutions. According to a United Nations study published in March 2007, approximately 80% of all diseases in the developing world are caused by unsafe water and poor sanitation. In addition, many industrial manufacturing operations generate large quantities of waste water, which must be treated in order to avoid contamination of our fresh water resources and our oceans. There are many sources and types of water pollution, and when different types of pollution mix together it presents complex and challenging remediation problems downstream.

The market for biocatalysis in water treatment is in a very early stage of development. However, new interest in biocatalytic water treatment has been sparked in part by concerns about possible chemical contamination of drinking water from industrial and other sources. For example, a U.S. government report released in 2006 examined the potential of biocatalysts in the treatment of groundwater and drinking water in both civilian and military applications (including the removal of hazardous industrial chemicals, and chemical and biological warfare agents). The report concluded that biocatalyst-embedded water filters held significant promise for the treatment of agents, pesticides, or other chemical contaminants in drinking water systems, as well as for the decontamination of pipes and other equipment with contaminant residue.

Chemicals

There are also significant market opportunities in the chemical industry for companies that can help reduce or eliminate petroleum dependency, as well as costly and wasteful manufacturing processes. According to the EIA, in 2006, approximately 18% of each barrel of crude petroleum were used as the raw starting material for chemicals used in a variety of products, including carpets, upholstery, food packaging, vitamins, preservatives, paints, adhesives, inks, aspirin and a multitude of plastics and rubbers.

We believe that fermentable sugars produced from cellulosic biomass will serve as an alternate source of carbon for use in the manufacture of many chemicals. This potential market may provide an opportunity to leverage our funded work with Shell into a separate business in the non-fuels chemicals industry. In addition, our technology platform could be applied to develop biocatalytic pathways for the conversion of sugar or other feedstocks, rather than petroleum-derived hydrocarbons, into commercially important chemicals. To pursue certain opportunities in the chemicals market, we will need to license from Maxygen additional rights to apply gene shuffling technology in that market.

Strategic Collaborations

Our strategic collaborations allow us to expand into new markets and to service our existing customers, while operating our business with maximum capital efficiency. By collaborating with companies such as Arch and Shell, we are able to leverage both our technology platform and our collaborators' strengths in production and distribution. This allows us to focus our capital on key areas such as research and development.

Arch

Arch Pharmalabs Limited, or Arch, of Mumbai, India manufactures intermediates produced using our biocatalytic processes for sale in the generic marketplace. Arch has extensive expertise in chemical process development and scale-up, and is a leading producer of intermediates and generic APIs in India.

In October 2005, we entered into a technology transfer and supply agreement with Arch. Under the terms of the agreement, Arch agreed to manufacture and supply ATS-8 for us and on our behalf. We granted to Arch, under certain of our patent rights and technology, a non-exclusive, royalty-free license, with no right to grant sublicense rights, solely to manufacture ATS-8 for and on behalf of us. We also agreed to transfer technology that is necessary or useful for the manufacture of ATS-8. Arch also agreed to purchase exclusively from us quantities of certain of our enzymes and an earlier intermediate, used in the production of ATS-8, known as ATS-5, sufficient to enable Arch to fulfill our orders for ATS-8. Subsequently, we transferred our ATS-5 related technology to Arch for the sole purposes of manufacturing ATS-5 for our resale to Pfizer and others and for Arch's use in the manufacture of ATS-8 manufactured for us and on our behalf. In 2006, we broadened our relationship with Arch by entering into an enzyme license and supply agreement, a supply agreement and a master services agreement with Arch.

Under our enzyme license and supply agreement with Arch, Arch agreed to pay us certain material transfer fees in exchange for transfer of enzymes and ATS-5 to Arch. Under the supply agreement, we agreed to pay certain manufacturing costs as well as a percentage of the profits we earn on our sales of ATS-8. Additionally, we agreed to pay Arch certain transfer fees in exchange for the transfer of ATS-8 and ATS-5 by Arch to us or on our behalf. We also agreed to pay Arch up to $1.5 million for certain chemical process and manufacturing method development services as Arch delivers them over the course of the master services agreement. Under our enzyme license and supply agreement with Arch, we retain rights to all intellectual property in our technology and enzymes, and Arch has assigned to us all rights in any inventions developed by Arch solely or jointly with us or with a third party prior to or during the term of the agreement that relate to our technology, our enzymes and ATS-8.

We can terminate our enzyme license and supply agreement Arch for any or no reason by providing Arch with six months written notice. Each party also has the right to terminate the agreement in the case of a breach by the other party if such breach is uncured within 45 days, and we can terminate these agreements immediately in the case of a breach by Arch of certain covenants contained in these agreements. The master services agreement will expire on August 1, 2010, and may be terminated by us for any or no reason by providing Arch with 60 days notice, or by either party in the case of a breach by the other party if such breach is uncured within 60 days.

Shell

We collaborate with Shell to develop commercially viable fuels from cellulosic biomass. If Shell decides to commercialize any biofuel products developed through our collaborative research agreement, we believe that, as an affiliate company of one of the leading global energy companies and one of the world's largest distributors of biofuels, Shell has the resources and infrastructure to commercialize the technologies that we may develop on a global scale.

In November 2006, we entered into a research agreement with Shell. After exceeding performance targets under that agreement, we entered into a new collaboration under an amended and restated collaborative research agreement in November 2007. Under the terms of the amended and restated agreement, we agreed to use our proprietary technology platform to discover and develop biocatalysts for use in converting cellulosic biomass into biofuels and related products. We received an up-front payment of $20 million upon signing the amended and restated collaborative research agreement. We have agreed to work exclusively with Shell until November 2012 in the field of converting cellulosic biomass into fermentable sugars that can be converted into fuels and related products. However, Shell is not required to work exclusively with us, and could develop or pursue alternative technologies that it decides to use for commercialization purposes instead of the technology developed under our research collaboration. This up-front fee is refundable under certain conditions, such as a change in control in which we are acquired by a competitor of Shell. This refundability lapses ratably over a five-year period beginning November 1, 2007 on a straight-line basis.

We agreed to devote to the research collaboration a number of our FTEs to be funded by Shell which will grow over time. Beginning in August 2008, Shell can elect to reduce the number of funded FTEs under certain conditions, although the number of FTEs it can reduce is limited until November 2009. We are also eligible for milestone payments upon the achievement of certain technical goals beginning in 2009, as well as additional milestones in each of the subsequent years of the agreement.

Shell purchased approximately $3.0 million of our Series D preferred stock in November 2006 and approximately $30.5 million of our Series E preferred stock in November 2007. In addition, in November 2007, Shell exercised a warrant issued in November 2006 to purchase 428,571 shares of our Series D preferred stock for $3.0 million.

Shell can terminate the amended and restated collaborative research agreement after November 1, 2009, for any or no reason by providing us with six months' notice. We will have the right to terminate the amended and restated collaborative research agreement upon 90 days' notice if Shell decides to fund less than a certain number of our FTEs in the performance of activities under the amended and restated collaborative research agreement. Each party also has the right to terminate the amended and restated collaborative research agreement in the case of a breach by the other party if such breach is uncured within 60 days. Each party also can terminate the amended and restated collaborative research agreement if such party believes the other party has assigned the amended and restated collaborative research agreement to a direct competitor of such party in the field of converting biomass into fermentable sugars that can be converted into fuels and related products.

Under our agreements with Shell, we retain rights to all intellectual property in our technology. While we will own all rights in any inventions arising under the research activities conducted under the amended and restated collaborative research agreement, Shell will have an exclusive license to these inventions. If we acquire technology from third parties for the purpose of these research activities, we will own the intellectual property while Shell will be granted an exclusive license in the field of use for the research and commercial use, with a right to sub-license.

In November 2006, we also entered into a license agreement with Shell, which was amended and restated in November 1, 2007. Under the terms of the amended and restated license agreement, we granted to Shell, under certain of our patent rights and technology, a worldwide, exclusive, royalty-bearing license, including the right to grant sublicenses, to manufacture, have manufactured, use, sell, offer for sale and import any product for use in the field of converting biomass into biofuels and related products.

With respect to biomass converted into sugars, Shell agreed to pay us a royalty per gallon of fuel product made from those sugars. With respect to sugars converted into fuel, Shell agreed to pay us a royalty per gallon of fuel product. In each case these royalties are contingent upon the fuel product being covered by or using our intellectual property or intellectual property that was developed under the amended and restated collaborative research agreement.

Shell can terminate the amended and restated license agreement for any or no reason by providing us with six months notice. Each party also has the right to terminate the amended and restated license agreement in the case of a breach by the other party if such breach is uncured within 60 days.

Technology

We are innovators in the directed evolution of enzymes and microbes to enable industrial biocatalytic reactions and fermentations via enzyme engineering, metabolic pathway engineering and fermentation microbe improvement. Our technology platform has enabled commercially viable products and processes for the manufacture of pharmaceutical intermediates, and we are in the process of applying our technology platform in connection with the development of biofuels.

Our approach to developing commercially viable biocatalytic processes begins by conceptually designing the most economical manufacturing process for a targeted product. We then develop optimized biocatalysts to enable that design, using our directed evolution technology, including screening and validating biocatalysts under relevant conditions. Typical design criteria include stability in the desired reaction conditions, biocatalyst activity and productivity (yield), ease of product isolation, product purity and cost. Previous approaches to biocatalytic process development typically involved designing and engineering around shortcomings of available enzymes, involving, for example, enzyme immobilization (for stability and/or reuse), special equipment and costly product isolation and purification methods. We circumvent the need for such costly process design features by optimizing the biocatalyst for fitness in the desired process environment. As a result, we enable and develop cost-efficient processes that typically are relatively simple to run in conventional manufacturing equipment. This also allows for the efficient technical transfer of our process to our manufacturing partners.

The successful embodiment of our platform technologies in commercial manufacturing processes requires well-integrated expertise in a number of technical disciplines. In addition to those directly involved in practicing our directed evolution technologies, such as molecular biology, enzymology, microbiology, cellular engineering, metabolic engineering, bioinformatics, biochemistry, and high throughput analytical chemistry, our process development projects also involve integrated expertise in organic chemistry, chemical process development, chemical engineering, and fermentation process development and engineering. Our tightly integrated, multi-disciplinary approach to biocatalyst and process development is a critical success factor for our company.

Enzyme Optimization Overview

The enzyme optimization process starts by identifying genes that code for enzymes known to have the desired type of chemical reactivity for a desired reaction. Typically, we identify gene sequences in published databases and then synthesize candidate genes having those sequences. Using a variety of biotechnology tools, we diversify these genes by introducing mutations, giving rise to changes in the enzymes for which they encode. The methods for diversifying such genes, and types of diversity being tested, often vary over the course of a biocatalyst optimization program. For finding initial diversity, methods typically include random mutagenesis and site-directed mutagenesis. We also test mutational variations that distinguish closely related enzymes among different organisms. Once we have identified potentially beneficial mutations, we test combinations of these mutations in libraries made using one or more of our gene shuffling methodologies. Shuffling, which recombines genes, allows us to rapidly combine beneficial mutations in the individual genes in the shuffled library, and isolate and discard detrimental mutations. Using high throughput enzyme production and screening methods, we produce and evaluate libraries of recombined enzymes and identify variant enzymes that exhibit improved performance characteristics, such as stability, activity and selectivity, under conditions that resemble those of the desired process.

The next step in our optimization process involves our software tool, protein sequencing activity register, which we call ProSAR, which we initially licensed from Maxygen and have further customized to our specific needs. ProSAR aids in the identification of specific gene and enzyme mutations responsible for beneficial, neutral or detrimental performance characteristics. Earlier directed evolution methods did not separately evaluate individual mutations in libraries of variants resulting from multiple mutations. Our ProSAR bioinformatics tools, combined with efficient gene synthesis and high quality library generation methods, has led to a significant increase in the efficiency and speed of enzyme improvement and optimization.

For enzyme applications, the best variants identified in testing are manufactured for confirmation in the desired chemical process at laboratory scale. The gene that codes for the best performing enzyme is then used as the starting gene for a next round of shuffling and screening. Biocatalysts are rapidly

optimized until the desired performance characteristics have been achieved and the economic objectives for the desired process have been met.

Codex Biocatalyst Panels

Our Codex Biocatalyst Panels were initially developed to speed our own internal process for identifying enzymes with desired characteristics for further optimization. Each Codex Biocatalyst Panel is comprised of enzyme variants that catalyze one type of reaction. We assemble, on one or more microtiter plates, variants of a parent enzyme that we have developed for stability in industrial environments and diversified for activity over a variety of suitable chemical structures. Then, either we or our innovator pharmaceutical customers can use the Codex Biocatalyst Panels to screen a new chemical structure against the assembled variants to rapidly identify variants that react with the new chemical structure. For some new structures, a variant on the panel could enable production of the desired product. We can also analyze the data from the panel screen using ProSAR techniques to identify the mutations that are beneficial for the reaction of the new structure and further optimize the enzyme as needed using the enzyme optimization techniques described above.

Microbe Optimization using Gene Shuffling

For fermentation microbes, we enhance metabolic pathways by using gene shuffling to improve one or more enzymes in a series of reactions that make a desired product. We optimize the enzyme as described above using either *in vitro* or *in vivo* screening. For fermentation applications, the microbes containing the improved gene(s) are directly evaluated in laboratory scale fermenters.

The metabolic pathway may naturally exist in the microbe, but productivity or selectivity improvements are needed to economically produce more of the desired natural product. In one example, our scientists, while we were still an operating division of Maxygen, used our gene shuffling technology to improve the selectivity of the fermentation organism that Pfizer uses to make doramectin, a veterinary drug. Optimization of a key gene by gene shuffling resulted in reduced production of what was previously a major by-product, and increased the yield of the desired product, providing for a simpler process to isolate the product from the by-product.

We can also produce a new metabolic pathway to produce a desired product using our gene shuffling technology in combination with synthetic biology, a type of metabolic engineering in which new genes are introduced into a microbe. For example, DSM inserted two genes from other organisms into a Penicillium fungus to create a new metabolic pathway to an intermediate called 7-ADCA, which is the central building block of a type of antibiotic called semi-synthetic cephalosporins. Previously, four wasteful conventional chemical steps were needed to convert a penicillin molecule made by the Penicillium into 7-ADCA. Our scientists, while we were still an operating division of Maxygen, used our gene shuffling technology to improve the characteristics of both inserted enzymes to provide adequate productivity to enable an economically practical fermentation to produce 7-ADCA eliminating the four wasteful conventional chemical steps, at lower cost, with less energy than the conventional chemical process. This enabled DSM to build a new fermentation plant that produces 7-ADCA.

We expect to use our gene shuffling technology to optimize microbes in connection with our efforts to develop biofuels through our biofuels research collaboration.

Microbe Optimization using Whole Genome Shuffling

In addition to our gene optimization technology for enzymes, we have another complimentary technology in our platform for directed evolution of fermentation microbes called Whole Genome Shuffling. Whole Genome Shuffling allows us to improve the performance of a fermentation microbe by shuffling unidentified mutations in unidentified genes across the genome. We start with a diversity of mutational

variants of a fermentation organism, generated by conventional means such as random mutagenesis. Our Whole Genome Shuffling involves introducing the entire genome of two or more such cells into a single cell, in which the genetic machinery of the combined cell recombines, or shuffles, the genomes. In one method, this is accomplished by protoplast fusion, in which the cell walls are removed to leave the cells' contents contained only by their cell membranes. The cell membranes of these protoplasts in the diverse population are induced to fuse together into fusants containing the genome of two or more of the parent cells. From these fusants, we regenerate normal cells, each with one copy of a hybridized genome. Microbial colonies are then grown and screened for their performance in the fermentative production of the desired product. This process can be repeated, including with the introduction of new mutations, until the desired performance in the fermentation process is achieved. One of our collaborators is operating a fermentation process for a generic pharmaceutical product using microbes we developed by Whole Genome Shuffling. We expect to use our Whole Genome Shuffling technology in connection with the development of biocatalysts for use in producing biofuels through our biofuels research collaboration.

License Agreement with Maxygen

In March 2002, we licensed our core enabling technology from Maxygen and commenced operations. The license agreement was amended in September 2002, October 2002, and August 2006.

Under the terms of this license agreement, Maxygen granted us a worldwide, exclusive, license, with a right to sublicense, under certain Maxygen intellectual property related to the use of shuffling technology in a variety of fields of use. This license includes the right to develop, make, have made, use, import, have imported, offer for sale, sell, otherwise commercialize or distribute biocatalysts for the manufacture of generic and branded pharmaceuticals, certain classes of chemicals and certain applications related to energy and biofuels. Under the license agreement, Maxygen also provided us with certain biological materials to facilitate use of the gene shuffling technology. We can use the licensed Maxygen shuffling technology in a wide variety of organisms including algae, bacteria, cyanobacteria, fungi and yeasts, but we are restricted from using the technology in land plants. Our license is exclusive with respect to bacteria, yeast and fungi, but is nonexclusive with respect to algae and cyanobacteria.

The license agreement also specifically excludes us from certain activities. Under the terms of this license agreement, we cannot utilize the licensed Maxygen shuffling technology for drug discovery or for the manufacture of protein-based therapeutics, such as antibodies.

Our license from Maxygen can be extended to several additional fields, including applications related to hydrogen, coal and natural gas, provided that we, or a collaborator, meet certain threshold levels of research funding related to such fields of use. We are also able to negotiate rights to commodity or fine chemicals that are not currently included in the license agreement.

Under the terms of our license agreement, we are obligated, among other things, to pay Maxygen a significant portion of certain types of consideration we receive in connection with the development and commercialization of energy products using the licensed technology. The actual fees payable to Maxygen will depend on the amount, timing and type of consideration we receive, including payments from the sale of our equity securities and payments in connection with the research and development and/or sale of energy products made with a biocatalyst developed using the licensed technology. In the case of consideration received from the sale of our equity securities, we are obligated to pay Maxygen a significant portion of any excess paid above $3.97 per share, the price per share of our Series D preferred stock. With regard to FTE funding, we are only obligated to pay Maxygen to the extent the consideration received exceeds specified amounts which were based on historical FTE rates we charged our pharmaceutical collaborators. We are also obligated to pay certain fees to Maxygen related to the prosecution and maintenance of the patents licensed from Maxygen. Further, in the event that any subsidiary or affiliate of ours develops and/or sells any energy applications using the Maxygen technology, we are obligated to transfer to Maxygen a percentage of the value of the subsidiary or affiliate that is attributable to the

Maxygen technology and give Maxygen an option to acquire a percentage of the other consideration that we invest in such affiliate or subsidiary.

The rights granted under our license from Maxygen also are subject to rights granted by Maxygen to Novo Nordisk A/d on September 17, 1997, as amended. Maxygen assigned its rights in this agreement to us.

In exchange for this license, we issued a total of 999,000 shares of common stock and six million shares of Series A preferred stock to Maxygen. As of December 31, 2007, Maxygen owned approximately 25% of our outstanding common stock.

Intellectual Property

Our success depends in large part on our proprietary products and technology under which we seek protection from patent, copyright, trademark and trade secret laws. Such protection is also maintained using confidential disclosure agreements. We own or have licensed rights to approximately 230 issued patents and approximately 165 pending patent applications in the United States and in various foreign jurisdictions. Of the licensed patents and patent applications, most are owned by Maxygen or the California Institute of Technology and exclusively licensed to us for use in certain fields. We own approximately 15 issued patents and approximately 75 pending patent applications in the United States and in various foreign jurisdictions directed to our enabling technologies and to our methods and products used in the production of pharmaceuticals such as atorvastatin, montelukast and azetidinone compounds.

We will continue to file and prosecute patent applications and maintain trade secrets as is consistent with our business plan in an ongoing effort to protect our intellectual property. It is possible that our current patents, or patents which we may later acquire, may be successfully challenged or invalidated in whole or in part. It is also possible that we may not obtain issued patents from our pending patent applications or other inventions we seek to protect. We sometimes permit certain intellectual property to lapse or go abandoned under appropriate circumstances. Due to uncertainties inherent in prosecuting patent applications, sometimes patent applications are rejected and we subsequently abandon them. It is also possible that we may develop proprietary products or technologies in the future that are not patentable or that the patents of others will limit or altogether preclude our ability to do business. In addition, any patent issued to us may provide us with little or no competitive advantage, in which case we may abandon such patent or license it to another entity.

Our registered and pending U.S. trademarks include Codexis, Codex, Codex Biocatalyst Panel, and Bringing Life to Chemistry. The Codexis and Codexis design marks have been registered or are pending in selected foreign countries.

Our means of protecting our proprietary rights may not be adequate and our competitors may independently develop technology or products that are similar to ours or that compete with ours. Patent, trademark, and trade secret laws afford only limited protection for our technology platform and products. The laws of many countries do not protect our proprietary rights to as great an extent as do the laws of the United States. Despite our efforts to protect our proprietary rights, unauthorized parties have in the past attempted, and may in the future attempt, to operate under aspects of our intellectual property or products or to obtain and use information that we regard as proprietary. Third parties may also design around our proprietary rights, which may render our protected technology and products less valuable, if the design around is favorably received in the marketplace. In addition, if any of our products or technology is covered by third-party patents or other intellectual property rights, we could be subject to various legal actions. We cannot assure you that our technology platform and products do not infringe patents held by others or that they will not in the future.

Litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement, invalidity, misappropriation, or other claims. Any such litigation could result in substantial

costs and diversion of our resources. Moreover, any settlement of or adverse judgment resulting from such litigation could require us to obtain a license to continue to make, use or sell the products or technology that is the subject of the claim, or otherwise restrict or prohibit our use of the technology.

Competition

Overview

We are a leader in the field of directed molecular evolution of biocatalysts. We are aware that other companies, including Verenium (previously Diversa), DSM, and DuPont, have alternative methods for obtaining and generating genetic diversity or use mutagenesis techniques to produce genetic diversity. Academic institutions such as the California Institute of Technology, the Max Planck Institute and the Center for Fundamental and Applied Molecular Evolution (FAME), a jointly sponsored initiative between Emory University and Georgia Institute of Technology, are also working in this field. This field is highly competitive and companies and academic and research institutions are actively seeking to develop technologies that could be competitive with our technologies.

We are aware that other companies, organizations and persons have described technologies that appear to have some similarities to our patented proprietary technologies. We monitor publications and patents that relate to directed molecular evolution to be aware of developments in the field and evaluate appropriate courses of action in relation to these developments.

We also face differing forms of competition in our various markets, as set forth below:

Pharmaceuticals

Our primary competitors in the pharmaceutical market are companies using conventional, non-biocatalytic processes to manufacture pharmaceutical intermediates and APIs that compete in the marketplace with our biocatalytically manufactured products. The market for the manufacture and supply of APIs and intermediates is large with many established players. These companies include many of our large innovator and generic pharmaceutical customers, such as Merck, Pfizer, and Teva, who have significant internal research and development efforts directed at developing processes to manufacture APIs and intermediates. The processes used by these companies include classical conventional organic chemistry reactions, chemo catalysis reactions catalyzed by chemical catalysts, or biocatalytic routes using commercially available enzymes, or combinations thereof. Our manufacturing processes must compete with these internally developed routes. Additionally, there are many large well-established fine chemical manufacturing companies that compete to supply pharmaceutical intermediate and APIs to our customers, such as DSM, BASF and Lonza. Finally, we face increasing competition from generic pharmaceutical manufacturers in low cost centers such as India and China.

In addition to competition from companies manufacturing APIs and intermediates, we face competition from companies that sell biocatalysts for use in the pharmaceutical market. The market for supplying biocatalysts for use in pharmaceutical manufacturing is quite fragmented. There is competition from large industrial enzyme companies, such as Novozymes and Amano, whose industrial enzymes (for detergents, for example) are occasionally used in pharmaceutical processes. There is also competition in this area is from several small European companies with relatively limited product offerings comprised primarily of naturally occurring biocatalysts. In addition to these biocatalyst supply companies, there is a separate group of small companies, also predominately in Europe, that offer biocatalyst optimization services.

We believe that the principal advantages of our biocatalyst products in the pharmaceutical market are the breadth of our product offerings and the performance characteristics of our biocatalysts including, for example, activity, stability, and activity on a range of substrates, when compared to traditional chemistry-based manufacturing processes naturally occurring biocatalysts. We believe that our directed evolution

technology provides substantially superior results, in shorter time frames, than companies offering competing biocatalyst development services.

Bioindustrials

There is increasing interest and activity in the bioindustrial market directed towards developing bio-based manufacturing processes for products that have traditionally been derived from fossil fuel sources, such as transportation fuels and chemicals.

Currently, most biofuels being produced at commercial scale are ethanol derived from sugar and starch food sources, such as sugar cane and corn, and biodiesel produced from vegetable oils, such as soy oil. These markets are well-established with multiple companies, such as The Archer Daniels Midland Company, Cargill and a number of smaller companies producing ethanol in the United States.

Many established companies, such as Novozymes, who has partnered with BP p.l.c. to produce biofuels, Danisco/Genencor, which is marketing cellulases to convert biomass into sugar, Iogen and Verenium, are actively developing biocatalysts to convert cellulosic biomass into fermentable sugars, the first step in the production of many biofuels. Although no company is currently converting cellulosic biomass into fermentable sugars at commercial scale, many of our competitors have been active in this area for many years, have invested significant resources in this effort, and have extensive patent portfolios regarding the relevant biocatalysts and related processes. In addition, several companies are focused on developing non-biocatalytic, thermochemical processes to convert biomass into fermentable sugars. Our routes from cellulosic biomass to fermentable sugars will need to be cost-competitive with all of these alternative sources and routes.

There are also many companies active in the area of producing non-ethanol biofuels from fermentable sugars. For example, DuPont has announced plans to develop and market biobutanol in collaboration with BP, while other companies such as Amyris are working on biocatalytic routes to a commercially viable non-ethanol biofuel alternative to petroleum-based fuels. Virent Energy Systems and Shell also recently announced a joint collaboration to develop biogasoline directly from sugars. Other potential competitors such as Range Fuels Inc. are focused on developing non-biocatalytic thermochemical processes to convert biomass into fuels. New companies are being founded in this area at an increasing rate. Many of these companies are actively developing and applying for intellectual property rights, including patent rights, in this space.

Our ability to remain competitive in this area will depend on our ongoing technical success in identifying and developing novel biocatalytic routes to fuel products that are cost-competitive not only with other biofuels but with petroleum-based fuels. Several of our competitors, including Amyris, utilize synthetic biology techniques to develop their products. Because these techniques have been in the public domain for many years, we are able to use these techniques together with our gene and genome directed evolution technologies. We believe that one of our principal advantages, particularly in the bioindustrial space, is that our directed evolution technology may enable us to develop new, more efficient — and therefore more cost-effective — biocatalysts and processes in less time than our competitors.

We will face competition from a variety of companies focusing on developing biocatalytic routes to chemicals, including DuPont, DSM and Metabolix.

Operations

We have facilities located throughout the world, including in Redwood City, California; Pasadena, California; Jülich, Germany; Singapore; and Hungary. As of December 31, 2007, we employed approximately 230 people worldwide, with approximately 70% of our employees located in Redwood City, California.

Our corporate headquarters is located in Redwood City, California and provides general administrative support to our business and is the center of our manufacturing and research and development operations. We expect most of our biofuels research to occur in Redwood City. In 2007, we established a research and development capability in Singapore to reduce our pharmaceutical research and development costs and to take advantage of the highly educated and skilled labor force in Singapore. In 2008, we established our Hungary facilities to create a research and development center for microbial biocatalyst improvement and fermentation development and to reduce our research and development costs. Similar to Singapore, Hungary also has a highly educated and skilled work force. Our facilities in Hungary will pursue opportunities in both our pharmaceutical and bioindustrial markets. Our facilities in Jülich, Germany and Pasadena, California perform research and development and small-scale manufacturing operations for our pharmaceutical business.

Our research and development operations include efforts directed towards biocatalyst evolution, bioprocess development, cellular engineering, biocatalyst screening, metabolites, strain improvement and fermentation development. We conduct enzyme evolution, enzyme production development, microbial bioprocess development, cellular engineering and microbial evolution primarily at our corporate headquarters in Redwood City. We also conduct biocatalyst enzyme evolution research in Redwood City and Singapore. Our facility in Hungary collaborates with our Redwood City facility in research and development activities relating to microbe improvement and is our center for fermentation development. Our Pasadena site conducts our research and development activities in enzyme screening, metabolites, and enzymes.

Our primary manufacturing operations are located in Redwood City, Pasadena and Jülich. However, we have limited internal manufacturing capacity and expect to rely on third-party manufacturers for commercial production of our enzymes for the foreseeable future. Our in-house manufacturing is dedicated to producing both our Codex Biocatalyst Panels and enzymes for use by our customers in pilot scale production. We also supply initial commercial quantities of enzymes for use by our collaborators to produce pharmaceutical intermediates and manufacture enzymes that we sell. We produce enzymes primarily at our Redwood City headquarters, although we manufacture some enzyme products in our Pasadena location. Finally, we manufacture small quantities of chemicals, using our enzymes at our facility in Germany.

We rely on an Italian contract manufacturer, CPC Biotech srl, or CPC, to manufacture substantially all of the commercial enzymes used in our pharmaceutical business. We also rely on Arch, headquartered in Badlapur, India, to manufacture our pharmaceutical intermediates as well as to provide sales support for these products in India. In addition to CPC and Arch, we contract with other technical suppliers in the United Kingdom, Germany, Slovakia and India.

We continue to evaluate whether to develop internal capabilities to manufacture biocatalysts at commercial scale. Among the factors we consider are the costs associated with developing and maintaining such capabilities, the time required to develop such capabilities, potential locations for manufacturing sites, including proximity to existing customers, taxes associated with manufacturing activities and local incentives.

Facilities

Our corporate headquarters are located in Redwood City, California, where we occupy approximately 87,000 square feet of office and laboratory space. The term of the lease expires in January 2011 for one part of our facilities, in May 2012 for another part and March 2013 for the third part. We have one option to extend the lease for an additional term of five years for each part, provided that we provide notice to the landlord at least nine months prior to the expiration of the initial term of the lease for each part. We believe that the facilities that we currently lease are adequate for our needs for the immediate future and that, should it be needed, additional space can be leased to accommodate any future growth.

In Pasadena, California, we occupy approximately 9,832 square feet of office and laboratory space. The term of the lease expires in February 2011. We have an option to extend the lease for an additional term of one year. We believe that the facilities that we currently lease in Pasadena are adequate for our needs for the immediate future and that, should it be needed, additional space can be leased to accommodate any future growth.

In Jülich, Germany, we occupy approximately 600 square meters of office and laboratory space. The term of the lease expires in September 2013. We believe that the facilities that we currently lease in Germany are adequate for our needs for the immediate future and that, should it be needed, the current space can be expanded and additional space can be leased to accommodate any future growth.

In Singapore, we occupy approximately 1,867 square meters of office and laboratory space within Singapore Science Park III. The term of the lease expires in July 2010. We have an option to extend the lease for an additional term of three years. We believe that the facilities that we currently lease in Singapore are adequate for our needs for the immediate future and that, should it be needed, additional space can be leased to accommodate any future growth.

We do not currently have a lease for the facilities that we are using for our operation in Hungary. We do not anticipate having difficulty leasing suitable research and development facilities to accommodate our expected growth in Hungary.

Employees

As of December 31, 2007, we employed approximately 230 full-time employees. Of the full-time employees, approximately 120 were engaged in research and development, approximately 80 were engaged in manufacturing and operations, and approximately 30 were engaged in general and administrative activities. We plan to continue to expand our research and development activities. To support this growth, we will need to expand managerial, research and development, operations, finance and other functions. None of our employees are represented by a labor union, and we consider our employee relations to be good.

Legal Proceedings

We are not currently a party to any material litigation.

MANAGEMENT

Executive Officers and Directors

The following table sets forth certain information about our executive officers and directors, as of March 31, 2008.

Name	Age	Position
Alan Shaw	45	President and Chief Executive Officer, Director
Robert S. Breuil	46	Senior Vice President, Finance and Chief Financial Officer
Nicholas Green	43	President, Pharmaceuticals
John Grate	55	Chief Technology Officer and Senior Vice President, Technology and Innovation
Douglas T. Sheehy	41	Vice President, General Counsel and Secretary
David Walshaw	47	Vice President, Operations
Thomas R. Baruch(1) (2) (3)	69	Chairman, Board of Directors
Russell J. Howard	57	Director
Bernard J. Kelley(1) (2)	66	Director
Bruce Pasternack(1) (3)	60	Director
William P. Rothwell	54	Director
Dennis P. Wolf(2) (3)	55	Director

(1) Member of the Compensation Committee.

(2) Member of the Audit Committee.

(3) Member of the Nominating and Corporate Governance Committee.

Alan Shaw, Ph.D. has served as President of Codexis since inception and Chief Executive Officer since 2002. He has been a member of our board of directors since 2002. Prior to Codexis, Dr. Shaw was Head of New Business Development for Clariant and Managing Director for Lancaster Synthesis and prior to Clariant's acquisition of BTP plc, Chief Operating Officer of Archimica, the pharmaceutical chemicals division of BTP plc. From 1994 to 1999, he was with Chiroscience Group plc, most recently as Managing Director of the pharmaceutical services unit, Chirotech Technology Limited, and a member of the board of directors of Chiroscience Ltd. Earlier in his career, Dr. Shaw held various scientific and management positions for over 15 years at Imperial Chemical Industries PLC (ICI)/Zeneca. Dr. Shaw serves on the board of directors of BIO, the biotechnology industry trade association, and is past chair of the BIO Industrial and Environmental Section. He holds a B.S. in chemistry from Teesside University, England and a Ph.D., in chemistry from the University of Durham, England. Dr. Shaw is a Fellow of the Royal Society of Chemistry (FRSC, C.Chem.) and the Chartered Institute of Marketing (FCIM, Chartered Marketer).

Nicholas Green has served as President, Pharmaceuticals of Codexis since January 2008. Prior to Codexis, Mr. Green was Chief Executive Officer and Managing Director for Shasun Pharma Solutions, Ltd. From 2003 to 2006, he was President and Chief Executive Officer for Rhodia Pharma Solutions. He has also held operating management positions with chemical and life sciences companies including Clariant Life Sciences, NIPA Biocides and Hodgson Chemicals. He holds a B.S. in chemistry from London University, Queen Mary College, and an M.B.A. from Huddersfield University.

Robert S. Breuil has served as Senior Vice President, Finance and Chief Financial Officer of Codexis since January 2006. Prior to Codexis, Mr. Breuil was Chief Financial Officer and Vice President, Corporate Development for Aerogen, Inc. from 2002 to 2005. Prior to Aerogen, Mr. Breuil held a number of senior financial management positions at ALZA Corporation from 1994 to 2002, most recently as Controller of ALZA Pharmaceuticals. He served on active duty as an aviator with the U.S. Navy from 1983 to 1991 and retired as a Commander from the U.S. Naval Reserve in 2000. He holds a B.S. in electrical engineering from the U.S. Naval Academy and an M.B.A. from the Stanford University Graduate School of Business.

John Grate, Ph.D., has served as Chief Technology Officer and Senior Vice President, Technology and Innovation of Codexis since December 2007. From July 2005 to December 2007, Dr. Grate served as Senior Vice President, Research and Development, and Chief Technology Officer of Codexis, and from September 2002 to July 2005, Dr. Grate served as the Vice President Research and Development and Chief Technology Officer. Prior to his employment with Codexis, Dr. Grate was an independent consultant and a member of Codexis' Industrial Advisory Board. Previously, Dr. Grate held various R&D leadership positions in his 20 years at Catalytica, Inc. He was founding Vice President of Research and Development for the subsidiary Catalytica Pharmaceuticals, Inc. until its acquisition by Royal DSM N.V. in early 2001. Dr. Grate is a registered U.S. Patent Agent. He holds a B.S. in chemistry from Miami University (Ohio) and a Ph.D., in chemistry from the University of California, San Diego.

Douglas T. Sheehy has served as Vice President, General Counsel and Secretary of Codexis since April 2007. Prior to Codexis, Mr. Sheehy spent five years at CV Therapeutics, Inc. in various positions, most recently as Executive Director, Legal — Corporate Law. Prior to that, Mr. Sheehy spent six years as an attorney with the law firms of Gunderson Dettmer LLP and Brobeck Phleger & Harrison LLP. Mr. Sheehy holds a B.A. in history from Dartmouth College and a J.D. from American University.

David Walshaw has served as Vice President, Operations of Codexis since January 2006. From January 2005 to January 2006, Mr. Walshaw served as our Director of Operations, and from June 2004 to January 2005, Mr. Walshaw served as our Head of Manufacturing & Supply Chain Management. Prior to joining Codexis, Mr. Walshaw held a variety of positions at Avecia, most recently as General Manager of Avecia's Early Phase Development business. Mr. Walshaw is a graduate of the Royal Society of Chemistry (GRSC) from Huddersfield University.

Thomas R. Baruch has served as a director of Codexis since 2002. Mr. Baruch is the founder and a managing director of CMEA Ventures, a venture capital firm that was established in 1989 as an affiliated fund of New Enterprise Associates. Mr. Baruch is currently on the board of directors of one public company, Entropic Communications, Inc. and several private companies, including Cnano, Inc., Intermolecular, Inc. and Wildcat Discovery Technologies, Inc. Before starting CMEA Ventures, Mr. Baruch was a founder and chief executive officer of Microwave Technology, Inc., a semiconductor manufacturer. Prior to his employment with Microwave Technology, Inc., Mr. Baruch managed a dedicated venture fund at Exxon Corp, and was president of the Exxon Materials Division. Earlier in his career, Mr. Baruch worked as a patent attorney. He is a registered patent attorney and is also a member of the board of trustees of Rensselaer Polytechnic Institute and the board of trustees of the Berkeley Institute of Synthetic Biology. Mr. Baruch holds a B.S. in engineering from Rensselaer Polytechnic Institute and a J.D. from Capital University.

Russell J. Howard, Ph.D., has served as a director of Codexis since inception. Dr. Howard has served as the chief executive officer and a director of Maxygen, Inc since June 1998. From August 1994 to June 1991, Dr. Howard was the President and Scientific Director of Affymax Research Institute. He holds a B.S. in chemistry and biochemistry, a B.S. in biochemistry (Hons.) and a Ph.D. in biochemistry from the University of Melbourne.

Bernard J. Kelley has served as a director of Codexis since April 2004. From 1993 to 2002, Mr. Kelley was the President of the Merck Manufacturing Division, a division of Merck & Co., Inc., and he served as a

member of the Merck Management Committee from 1995 to 2002. Mr. Kelley currently serves on the board of directors, compensation and audit committees of MAP Pharmaceuticals, Inc., a biotechnology company, and previously served on the board of directors of Aegis Analytical Corporation, an enterprise software company, from 2004 to 2006. He holds a B.S. in engineering from the U.S. Naval Academy.

Bruce Pasternack has served as a director of Codexis since August 2007. Mr. Pasternack is currently a venture partner of CMEA Ventures. From June 2005 to May 2007, Mr. Pasternack served as the President and Chief Executive Officer of Special Olympics, Inc. Prior to his employment with Special Olympics, Inc., Mr. Pasternack spent more than 28 years at Booz Allen Hamilton Inc., where his last position was Senior Vice President and Managing Partner of its San Francisco office. From 1973 to 1976, he served as Associate Administrator for Policy and Programs at the Federal Energy Administration, and Staff Director of the President's Energy Resources Council. From 1968 to 1972, he was a systems engineer at General Electric. Mr. Pasternack is a director of Quantum Corporation, BEA Systems, Inc. and Symyx Technologies, Inc., and a member of the board of trustees of The Cooper Union, and has previously served on the board of directors of the Special Olympics, Inc. He holds a B.E. from The Cooper Union and an M.S.E. from the University of Pennsylvania.

William P. Rothwell, Ph.D., has served as a director of Codexis since December 2007. Dr. Rothwell is Vice President of Innovation and Chemicals Technology for Shell Global Solutions (US) Inc., an affiliate of Royal Dutch Shell plc. He joined an affiliate of Shell in 1980 and was appointed to the position of General Manager of Shell Chemicals' global ethylene oxide/glycols business in 2002. He was chairman of the board of Ethylene Glycols (Singapore) Private Limited, a seventy percent Shell-owned joint venture, from 2002 to late 2006. He is also a director of Shell Global Solutions (US) Inc. He holds undergraduate degrees in mathematics and chemistry from Michigan State University and a Ph.D. in physical chemistry from the Massachusetts Institute of Technology.

Dennis P. Wolf has served as a director of Codexis since December 2007. Mr. Wolf most recently served as Executive Vice President and CFO of MySQL AB. Prior to MySQL, Mr. Wolf held financial management positions for public high technology companies including Apple Computer, Inc., Centigram Communications, Inc., Credence Systems Corporation, Omnicell, Inc., Redback Networks Inc. and Sun Microsystems, Inc. Mr. Wolf is a director of Quantum Corporation, and has been a director and chair of the audit committee for public companies including Komag, Inc., and Vitria Technology, Inc. He holds a B.A. from the University of Colorado and an M.B.A. from the University of Denver.

Board Composition

Our board of directors may establish the authorized number of directors from time to time by resolution. Eight directors are authorized and we currently have seven directors, of which three are designated by the current holders of our preferred stock, three are designated by the current holders of our preferred and common stock, and one also serves as our Chief Executive Officer. Each of the members of our board of directors, except Alan Shaw and Russell Howard, is an independent director as defined under the applicable rules and regulations of the Securities and Exchange Commission, or the SEC, and The Nasdaq Stock Market. Dr. Howard has indicated that he will resign from our board of directors in connection with the consummation of this offering.

Under the terms of our amended and restated certificate of incorporation and the voting agreement among us and the holders of our preferred stock, the members of our board of directors are to be designated as follows: Equilon Enterprises LLC dba Shell Oil Products US, or Shell, Biomedical Sciences Investment Fund Pte Ltd, CMEA Ventures Life Sciences 2000, L.P., Pequot Private Equity Fund III, L.P. and Maxygen, Inc., each have the right to designate one member; one member shall be our Chief Executive Officer; and the remainder shall be designated with the consent of the parties holding a majority of the outstanding common and preferred stock. Upon the consummation of this offering, all of these provisions will terminate, except that for a ten-year period Shell will have the right to designate one board member for

so long as: Shell holds at least 50% of the total number of shares of common stock issued upon conversion of the preferred stock purchased by Shell, and at least 5% of our fully diluted number of shares of common stock outstanding, and the collaborative research agreement between us and Shell has not expired or been terminated. The designee of Shell will be subject to the reasonable approval of a majority of the members of the board of directors other than the Shell representative.

In accordance with our amended and restated certificate of incorporation to take effect following the completion of this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. After the completion of this offering, our directors will be divided among the three classes as follows:

- the Class I directors will be , and , and their terms will expire at the annual meeting of stockholders to be held in 2009;
- the Class II directors will be , and , and their terms will expire at the annual meeting of stockholders to be held in 2010; and
- the Class III directors will be , and , and their terms will expire at the annual meeting of stockholders to be held in 2011.

Our amended and restated certificate of incorporation will provide that the authorized number of directors may be changed only by resolution of the board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consists of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change of control at our company.

Board Committees

Our board of directors has the following committees: an audit committee, a compensation committee and a nominating and corporate governance committee. The composition and responsibilities of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit Committee

Our audit committee oversees our corporate accounting and financial reporting process. Among other matters, the audit committee appoints the independent registered public accounting firm; evaluates the independent registered public accounting firm's qualifications, independence and performance; determines the engagement of the independent registered public accounting firm; reviews and approves the scope of the annual audit and the audit fee; discusses with management and the independent registered public accounting firm the results of the annual audit and the review of our quarterly consolidated financial statements; approves the retention of the independent registered public accounting firm to perform any proposed permissible non-audit services; monitors the rotation of partners of the independent registered public accounting firm on our engagement team as required by law; reviews our consolidated financial statements and our management's discussion and analysis of financial condition and results of operations to be included in our annual and quarterly reports to be filed with the SEC, reviews our critical accounting policies and estimates; and annually reviews the audit committee charter and the committee's performance. The current members of our audit committee are Thomas Baruch, Bernard Kelley and Dennis Wolf. Dennis Wolf serves as the chairman of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and The Nasdaq Stock Market. Our board of directors has determined that Dennis Wolf is an audit committee financial expert as defined

under the applicable rules of the SEC and has the requisite financial sophistication as defined under the applicable rules and regulations of The Nasdaq Stock Market. Each of the members of our audit committee, except Thomas Baruch, qualifies as an independent director under the applicable rules and regulations of the SEC and The Nasdaq Stock Market relating to audit committee independence. Within one year from the date of effectiveness of our initial public offering registration statement, our board of directors intends to replace Mr. Baruch as a member of our audit committee with a person who will meet these heightened independence standards. The audit committee operates under a written charter that satisfies the applicable standards of the SEC and The Nasdaq Stock Market.

Compensation Committee

Our compensation committee reviews and recommends policies relating to compensation and benefits of our officers and employees. The compensation committee reviews and approves corporate goals and objectives relevant to compensation of our Chief Executive Officer and other executive officers, evaluates the performance of these officers in light of those goals and objectives, and sets the compensation of these officers based on such evaluations. The compensation committee also recommends to our board of directors the issuance of stock options and other awards under our stock plans. The compensation committee will review and evaluate, at least annually, the performance of the compensation committee and its members, including compliance of the compensation committee with its charter. The current members of our compensation committee are Thomas Baruch, Bernard Kelley and Bruce Pasternack. Bruce Pasternack serves as the chairman of the committee. Each of the members of our compensation committee is an independent or outside director under the applicable rules and regulations of the SEC, The Nasdaq Stock Market and the Internal Revenue Code of 1986, as amended relating to Compensation Committee independence. The compensation committee operates under a written charter.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee is responsible for making recommendations to our board of directors regarding candidates for directorships and the size and composition of our board of directors. In addition, the nominating and corporate governance committee is responsible for overseeing our corporate governance policies and reporting and making recommendations to our board of directors concerning governance matters. The current members of our nominating and corporate governance committee are Thomas Baruch, Bruce Pasternack and Dennis Wolf. Thomas Baruch serves as the chairman of the committee. Each of the members of our nominating and corporate governance committee is an independent director under the applicable rules and regulations of the SEC and The Nasdaq Stock Market relating to nominating and corporate governance committee independence. The nominating and corporate governance committee operates under a written charter.

There are no family relationships among any of our directors or executive officers.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has at any time during the prior three years been an officer or employee of ours. None of our executive officers currently serves or in the prior three years has served as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Code of Business Conduct and Ethics

We will adopt a code of business conduct and ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. The code of business conduct and ethics will be available on our website at www.codexis.com. We expect that any amendments to the code, or any waivers of its requirements, will be disclosed on our website.

Director Compensation

In June 2007, our board of directors adopted an Independent Director Compensation Plan pursuant to which those directors designated as independent directors by the board of directors for purposes of the Independent Director Compensation Plan, prior to the consummation of this offering and as contemplated by the Plan, are entitled to receive an annual cash retainer of $35,000, paid in semi-annual installments beginning June 30, 2007, and the reimbursement of any actual out-of-pocket expenses. In addition, the Independent Director Compensation Plan provides for the grant of an annual option to purchase 25,000 shares of our common stock, to be granted at the first board of directors meeting of each year, beginning in 2008. These options vest as to 1/4th of the total number of shares subject to the option on the first anniversary of the vesting commencement date, and 1/48th of the total number of shares subject to the option shall vest monthly thereafter until all shares are vested, subject to the continued service of the director on the board of directors. During the fiscal year ended December 31, 2007, Mr. Kelley, Mr. Pasternack and Mr. Wolf were the only directors designated as independent directors by our board of directors for purposes of the Independent Director Compensation Plan.

On January 26, 2007, we granted Mr. Kelley an option to purchase 25,000 shares of our common stock, which vests as to 1/4th of the total number of shares subject to the option on the first anniversary of the vesting commencement date, and as to 1/48th of the shares subject to the option on each monthly anniversary thereafter. On June 19, 2007, we granted Mr. Kelley an option to purchase 7,500 shares of our common stock, which option was fully vested as of the date of grant.

On August 28, 2007, Mr. Pasternack was appointed to our board of directors. In connection with his appointment, Mr. Pasternack received an option to purchase 25,000 shares of our common stock, which vests as to 1/4th of the total number of shares subject to the option on the first anniversary of the vesting commencement date, and as to 1/48th of the shares subject to the option on each monthly anniversary thereafter.

On December 11, 2007, Mr. Wolf was appointed to our board of directors. In connection with his appointment, Mr. Wolf received an option to purchase 25,000 shares of our common stock, which vests as to 1/4th of the total number of shares subject to the option on the first anniversary of the vesting commencement date, and as to 1/48th of the shares subject to the option on each monthly anniversary thereafter.

Following the completion of this offering, each non-employee director shall receive an annual cash retainer of $ per year. Such directors shall also receive an additional annual cash retainer of $ per year for being a member of our compensation committee, except that the chairperson of our compensation committee shall receive an additional annual cash retainer of $ per year. Non-employee directors shall also receive an additional annual cash retainer of $ per year for being a member of our nominating and corporate governance committee, except that the chairperson of our nominating and corporate governance committee shall receive an additional annual cash retainer of $ per year. Non-employee directors shall also receive an additional annual cash retainer of $ per year for being a member of our audit committee, except that the chairperson of our audit committee shall receive an additional annual cash retainer of $ per year.

The following table sets forth information regarding compensation earned by our non-employee directors during the fiscal year ended December 31, 2007.

Name	Fees Earned or Paid in Cash	Option Awards (1)	Total
Thomas R. Baruch	—	—	—
Russell J. Howard	—	—	—
Bernard J. Kelley	$ 35,000	$ 13,097	$ 48,097
Bruce Pasternack	12,082	4,901	16,983
William P. Rothwell	—	—	—
Dennis P. Wolf	1,918	984	2,902

(1) Amount reflects the total compensation expense for the year ended December 31, 2007 calculated in accordance with Statement of Financial Accounting Standard No. 123(R), "Share-Based Payment," or SFAS No. 123(R). The valuation assumptions used in determining such amounts are described in Note 11 to our financial statements included in this prospectus. The grant date fair value of Mr. Kelley's option to purchase 25,000 shares of our common stock granted on January 26, 2007 is $15,733, the grant date fair value of Mr. Kelley's option to purchase 7,500 shares of our common stock granted on June 19, 2007 is $4,638, the grant date fair value of Mr. Pasternack's option to purchase 25,000 shares of our common stock granted on August 28, 2007 is $59,215 and the grant date fair value of Mr. Wolf's option to purchase 25,000 shares of our common stock granted on December 11, 2007 is $68,707, in each case, as computed in accordance with SFAS No. 123(R) using the valuation assumptions set forth in Note 11 to our financial statements included in this prospectus. As of December 31, 2007, Mr. Kelley had outstanding option awards to purchase an aggregate of 57,500 shares and each of Mr. Pasternack and Mr. Wolf had outstanding option awards to purchase an aggregate of 25,000 shares.

Executive Compensation

Compensation Discussion and Analysis

Our executive compensation program is designed to attract talented individuals to lead, manage and operate all aspects of our business and reward and retain those individuals who continue to meet our high expectations over time. Our executive compensation program combines short- and long-term components, cash and equity, and fixed and contingent payments in the amounts and proportions that we believe are most appropriate to incentivize and reward our executive officers for achieving our objectives. Our executive compensation program also is intended to make us competitive in our industry, where there is considerable competition for talented executives.

Our named executive officers for 2007 were Alan Shaw, Ph.D., President and Chief Executive Officer; Robert S. Breuil, Senior Vice President, Finance and Chief Financial Officer; John Grate, Ph.D., Chief Technical Officer and Senior Vice President, Technology and Innovation; Douglas T. Sheehy, Vice President, General Counsel and Secretary; and David Walshaw, Vice President, Operations.

Objectives and Philosophy of Our Executive Compensation Program

Our compensation program for our named executive officers is designed to achieve the following objectives:

- attract, engage and retain individuals of superior ability, experience and managerial talent enabling us to be an employer of choice in our highly-competitive and dynamic industry;
- motivate and reward executives whose knowledge, skills and performance ensure our continued success;

- encourage and inspire our executives to achieve key corporate performance objectives by linking base salary increases and incentive award opportunities to the achievement of individual and company-wide short and long term goals; and
- align the interests of our executives and stockholders by motivating executives to increase stockholder value, by providing a significant portion of total compensation opportunities for our executive officers in the form of direct ownership in our company through stock options and other equity awards.

Components of Our Executive Compensation Program

The components of our executive compensation program consist primarily of base salary, annual cash incentive bonus, equity awards and broad-based benefits programs. We combine short-term compensation components (such as base salaries and annual cash incentive bonuses) and long-term compensation components (such as equity incentive compensation) to provide an overall compensation structure that is designed to both attract and retain key executives as well as provide incentive for the achievement of short- and long-term corporate objectives.

The compensation committee of our board of directors is responsible for evaluating and administering our compensation programs and practices for our executive officers. Our compensation committee uses its judgment and experience and the recommendations of the Chief Executive Officer to determine the appropriate mix of short- and long-term compensation elements for each named executive officer. Short- and long-term compensation elements are balanced to encourage each executive officer to use his or her time and talents to accomplish both our short- and long-term corporate objectives. Our Chief Executive Officer, Chief Financial Officer, General Counsel and Vice President of Human Resources each attend our compensation committee meetings to provide input on factors that may influence our compensation committee members' considerations of compensation programs and individual compensation, including individual performance, financial, legal and compensation parity considerations. Each such executive officer is not present at the meetings at the time that his or her own compensation is being reviewed by the committee. Our compensation committee analyzes each of the primary elements of our compensation program to ensure that our executives' overall compensation is competitive with executive officers in similar positions at comparable companies in our labor market and to ensure internal compensation parity among our executive officers. Our compensation committee recommends and our board of directors approves equity incentive compensation for our employees, including our executive officers.

Our compensation committee determines compensation for our executive officers, including our named executive officers, in large part based upon our financial resources, as well as competitive market data. With regard to annual base salaries and annual cash incentive bonus opportunity targets for 2007, we referenced publicly available compensation data and comprehensive compensation data from the 2006 Radford Biotechnology Survey, focusing upon companies with between 50 and 149 employees. This Radford Biotechnology Peer Group includes the following companies:

- 454 Life Sciences
- Acadia Pharmaceuticals, Inc.
- Acorda Therapeutics, Inc.
- Acusphere, Inc.
- Adeza Biomedical Corp. (acquired by Cytyc Corp.)
- Affymax, Inc.
- Alexza Pharmaceuticals, Inc.
- Alk-Abello A/S
- Allen Institute for Brain Science
- Allos Therapeutics, Inc.
- Alnylam Pharmaceuticals, Inc.
- Alphavax, Inc.
- Altus Pharmaceuticals Inc.
- Ambit Biosciences
- Amicus Therapeutics Inc.
- Anadys Pharmaceuticals, Inc.
- Anesiva, Inc.
- Angiotech Pharmaceutical, Inc.
- Anika Therapeutics, Inc.
- Aradigm Corporation
- Archemix Corp.
- Ariad Pharmaceuticals, Inc.
- Artes Medical, Inc.
- ARYX Therapeutics, Inc.
- Aspen Medical Products, Inc.

- AtheroGenics, Inc.
- AVANIR Pharmaceuticals
- AVANT Immunotherapeutics, Inc.
- Avecia Biotechnology Inc.
- AVEO Pharmaceuticals, Inc.
- AVI Biopharma, Inc.
- Axcan Pharma
- Barrier Therapeutics, Inc.
- BattelleCRO
- BioCryst Pharmaceuticals, Inc.
- BioForm Medical, Inc.
- BioNumerik Pharmaceuticals, Inc.
- Cell Therapeutics, Inc.
- Cerus Corporation
- ChemoCentryx, Inc.
- Cirrus Pharmaceuticals, Inc.
- Coley Pharmaceutical Group, Inc.
- CollaGenex Pharmaceuticals, Inc.
- Columbia Laboratories, Inc.
- CombinatoRx
- Conceptus, Inc.
- Conor Medsystems, LLC
- Corus Pharma Inc.
- CoTherix, Inc.
- CTI Clinical Trial and Consulting Services
- Curis, Inc.
- Cytogen Corporation
- Cytokinetics, Incorporated
- Cytori Therapeutics, Inc.
- Depomed, Inc.
- diaDexus, Inc.
- Discovery Laboratories, Inc.
- DURECT Corporation
- Dusa Pharmaceuticals, Inc.
- Dyax Corp.
- Dynavax Technologies Corporation
- EPIX Pharmaceuticals
- Favrille, Inc.
- Fibrogen, Inc.
- FivePrime Therapeutics, Inc.
- Fluidigm Corporation
- Genelabs Technologies, Inc.
- Genomic Health, Inc.
- Genta Incorporated
- Genvec, Inc.
- Geron Corporation
- Globeimmune, Inc.
- GPC Biotech AG
- GTC Biotherapeutics, Inc.
- HemCon Medical Technologies, Inc.
- Hollis-Eden Pharmaceuticals, Inc.
- Icagen, Inc.
- Idaho Technology Inc.
- Immunicon Corporation
- In Vitro Technologies
- Infinity Pharmaceuticals, Inc.
- Ingenuity Systems, Inc.
- Inotek Pharmaceuticals Corporation
- Insmed Incorporated
- Introgen Therapeutics, Inc.
- Inverness Medical Innovations, Inc.
- Iomai Corporation
- IsoTis, Inc.
- JM Hyde Consulting, Inc.
- Johnson Matthey Pharma Services
- Kalypsys, Inc.
- Kirkegaard & Perry Laboratories, Inc. (KPL)
- Kosan Biosciences Incorporated
- Kyowa Pharmaceutical, Inc.
- La Jolla Pharmaceutical Company
- Laureate Pharma, Inc.
- Lineberry Research Associates (acquired by Constella Group)
- MacroGenics, Inc.
- Maxygen, Inc.
- Mayne Pharma (USA) (acquired by Hospira, Inc.)
- MiddleBrook Pharmaceuticals, Inc. (formerly Advances Pharmaceutical)
- Merrimack Pharmaceuticals, Inc.
- Metabasis Therapeutics, Inc.
- Metabolex, Inc.
- Momenta Pharmaceuticals, Inc.
- Myogen
- NEOPHARM, Inc.
- Neose Technologies, Inc.
- Neuropace, Inc.
- Northstar Neuroscience, Inc.
- Novacea, Inc.
- Novavax, Inc.
- Novozymes A/S
- Nuvelo, Inc.
- Onyx Pharmaceuticals, Inc.
- Organogenesis, Inc.
- Ovation Pharmaceuticals, Inc.
- Palatin Technologies, Inc.
- Paratek Pharmaceuticals, Inc.
- Penwest Pharmaceuticals Co.
- Peregrine Pharmaceuticals, Inc.
- Perlegen Sciences, Inc.
- Pharmacopeia, Inc.
- Pharmacyclics, Inc.
- Pharsight Corporation
- Plexxikon Inc.
- Portola Pharmaceuticals, Inc.
- PR Pharmaceuticals, Inc.
- Praecis Pharmaceutical Incorporated
- Prologue Research, International, Inc.
- PTC Therapeutics, Inc.
- Raven Biotechnologies, Inc.
- RenaMed Biologics, Inc.
- Renovis, Inc.
- Replidyne, Inc.
- Rinat Neuroscience Corporation
- Sangamo BioSciences, Inc.
- Sangart, Inc.
- Santen Pharmaceutical Co., Ltd.
- Savient Pharmaceuticals, Inc.
- Schering-Plough Biopharma
- SCYNEXIS, Inc.

- Seattle Genetics, Inc.
- Senomyx, Inc.
- Sequenom, Inc.
- SGX Pharmaceuticals, Inc.
- Sigma-Tau Pharmaceuticals, Inc.
- Sirna Therapeutics, Inc.
- Skyepharma PLC
- Solexa, Inc.
- Sunesis Pharmaceuticals, Inc.
- SuperGen, Inc.
- Synta Pharmaceuticals Corp.
- Targacept, Inc.
- TargeGen, Inc.
- Tercica, Inc.
- Therion Biologics Corporation
- Third Wave Technologies, Inc.
- Threshold Pharmaceuticals, Inc.
- Titan Pharmaceuticals, Inc.
- Transgenomic, Inc.
- Trimeris, Inc.
- Trubion Pharmaceuticals, Inc.
- Unigene Laboratories, Inc.
- U.S. Genomics, Inc.
- Vermillion, Inc. (formerly Ciphergen Biosystem)
- Virxsys Corporation
- Vitae Pharmaceuticals, Inc.
- Vivus, Inc.
- World Heart Corporation
- XDX Inc.
- Xencor, Inc.
- Xenogen Corporation
- Xenoport, Inc.
- ZARS Pharma, Inc.

With regard to annual base salaries and annual cash incentive bonus opportunity targets for 2008, we referenced publicly available compensation data and comprehensive compensation data from the 2007 Radford Global Life Sciences Survey, focusing upon the 48 biotechnology and pharmaceutical companies in Northern California with revenues of less than $100 million and fewer than 500 employees. The Radford Global Life Sciences Peer Group includes the following companies:

- Affymax, Inc.
- Agraquest, Inc.
- Alexza Pharmaceuticals, Inc.
- Amyris Biotechnologies, Inc.
- Anesiva, Inc.
- Aradigm Corporation
- ARYX Therapeutics, Inc.
- BioMarin Pharmaceutical, Inc.
- Cell Genesys, Inc.
- Cerus Corporation
- Cytokinetics, Inc.
- Depomed, Inc.
- diaDexus, Inc.
- Dow Pharmaceutical Sciences, Inc.
- DURECT Corporation
- Dynavax Technologies Corporation
- FivePrime Therapeutics, Inc.
- Genelabs Technologies, Inc.
- Genomic Health, Inc.
- Geron Corporation
- Ingenuity Systems, Inc.
- InterMune, Inc.
- Jazz Pharmaceuticals, Inc.
- Kosan Biosciences Incorporated
- Maxygen, Inc.
- Metabolex, Inc.
- Monterey Bay Aquarium Research Institute
- Novacea, Inc.
- Nuvelo, Inc.
- Onyx Pharmaceuticals, Inc.
- Perlegen Sciences, Inc.
- Pharmacyclics, Inc.
- Pharsight Corporation
- Plexxicon Inc.
- Questcor Pharmaceuticals, Inc.
- Raven Biotechnologies, Inc.
- Renovis, Inc.
- Rigel Pharmaceuticals, Inc.
- Sangamo BioSciences, Inc.
- Stem Cells, Inc.
- Sunesis Pharmaceuticals, Inc.
- SuperGen, Inc.
- Tercica, Inc.
- Theravance, Inc.
- Threshold Pharmaceuticals, Inc.
- VaxGen, Inc.
- Xenoport, Inc.
- XOMA(US) LLC

Our compensation committee also considered data from Compensia, Inc., an executive compensation advisory services firm with respect to our equity incentive compensation. From Compensia, we obtained data on recently public life science companies and we provided Compensia information on certain of our business peers. The Compensia Peer Group included the following companies:

- Accentia BioPharmaceuticals, Inc.
- Achillion Pharmaceuticals, Inc.
- Acorda Therapeutics, Inc.
- Adams Respiratory Therapeutics, Inc.
- Alexza Pharmaceuticals, Inc.
- Allion Healthcare, Inc.
- Altus Pharmaceuticals Inc.
- Amicus Therapeutics Inc.
- Biodel Inc.
- Coley Pharmaceutical Group, Inc.
- Cytokinetics, Inc.
- Dyadic International, Inc.
- Genomic Health, Inc.
- Hansen Medical, Inc.
- Helicos BioSciences Corporation
- Insulet Corporation
- Jazz Pharmaceuticals, Inc.
- Luna Innovations, Inc.
- Maxygen, Inc.
- Metabolix, Inc.
- NeurogesX, Inc.
- NUCRYST Pharmaceuticals Corp.
- Oculus Innovative Sciences, Inc.
- Optimer Pharmaceuticals, Inc.
- Orexigen Therapeutics, Inc.
- Pharmasset, Inc.
- Response Genetics, Inc.
- SGX Pharmaceuticals, Inc.
- Sirtris Pharmaceuticals, Inc.
- Sunesis Pharmaceuticals, Inc.
- Symyx Technologies, Inc.
- Thermage, Inc.
- Threshold Pharmaceuticals, Inc.
- TomoTherapy Incorporated (acquired by Indevsus Pharmaceuticals, Inc.)
- Valera Pharmaceuticals, Inc.
- Verenium Corporation
- ViaCell, Inc.
- Volcano Corporation
- XenoPort, Inc.

In 2007, we retained Compensia to conduct a review of our stock option grant competitiveness and practices, and to propose to our compensation committee an appropriate equity strategy for our company based on the Compensia Peer Group. Our compensation committee adopted Compensia's proposal for equity grants, as described further below in the section entitled "Equity Incentive Compensation."

We believe that the practices of the companies in the Radford Biotechnology Peer Group, the Radford Global Life Sciences Peer Group and the Compensia Peer Group provide us with appropriate compensation benchmarks because many of these companies have similar organizational structures and tend to compete with us for executives.

Our compensation committee has adopted a market-competitive compensation philosophy, which targets keeping the base salaries and annual cash incentive bonus opportunity approximately equal to the 50th percentile of such compensation at the companies within the Radford Biotechnology Peer Group with respect to 2007 annual base salary and individual target bonus percentages, the Radford Global Life Sciences Peer Group with respect to 2008 annual base salary and individual target bonus percentages, and the Compensia Peer Group with respect to equity incentive compensation. For employee benefits, we target compensation at the 75th percentile of such compensation at the companies within our peer group, comprised of technology and biotechnology companies in the 2007 Radford Benefits Exchange Report with between 200 and 749 employees. We target a higher percentile for employee benefits because we believe that superior benefits make us an attractive employer within all levels of the workforce. We work within the general framework of this market-competitive philosophy to determine each component of an executive's compensation package based on numerous factors, including:

- the demand for the particular skill sets we need within the marketplace;
- performance goals and other expectations for the position and the individual;
- the individual's background and relevant expertise, including training and prior relevant work experience;
- the individual's role with us and the compensation paid to similar persons in the peer group of companies that we review; and

- comparison to other executives within our company having similar levels of expertise and experience.

During 2007, our compensation committee reviewed all aspects of our executive compensation program, including base salaries, annual cash incentive bonus and equity compensation targets for each of our executive officers. To ensure that top talent could be retained and attracted, in 2007 the compensation committee approved adjustments to each aspect of our executive compensation program to reflect competitive pressures and ensure internal equity among executives with similar levels of responsibility and authority.

Each of the primary elements of our executive compensation program is discussed in more detail below. While we have identified particular compensation objectives that each element of executive compensation serves, our compensation programs are designed to be flexible and complementary and to collectively serve all of the executive compensation objectives described above. Accordingly, whether or not specifically mentioned below, we believe that, as a part of our overall executive compensation policy, each individual element of our executive compensation program, to a greater or lesser extent, serves each of our objectives as set forth above.

Annual Cash Compensation

Base Salary

For 2007, base salaries were set at levels which were intended to be competitive with similar positions at companies in the Radford Biotechnology Peer Group. The base salaries of all executive officers are reviewed annually and adjusted to reflect individual roles and performance, and the competitive market. Our compensation committee also reviews each executive's annual base salary in comparison with other executives who are at the same level at our company and seeks parity among executives with similar levels of responsibility and authority. Our compensation committee believes that a competitive base salary is a necessary element of any compensation program designed to attract and retain talented and experienced executives. We also believe that competitive base salaries can motivate and reward executives for their overall performance.

In December 2006, our compensation committee considered base salary market data at the 50th percentile for companies in the Radford Biotechnology Peer Group and approved an increase of between five and ten percent in the base salaries for 2007 for Dr. Shaw, Mr. Breuil, Dr. Grate and Mr. Walshaw, as set forth in the following table, based on market data and strong individual and corporate performance during 2006. Dr. Shaw and Mr. Walshaw received a larger salary increase than other executive officers based upon their extraordinary individual contributions to our company in 2006. Mr. Sheehy's base salary was approved by our compensation committee in April 2007, upon the commencement of his employment. The following table sets forth the base salaries for 2007 for each of our named executive officers and the amount such salary increased over 2006 for each of Dr. Shaw, Mr. Breuil, Dr. Grate and Mr. Walshaw:

Name of Executive Officer	Increase	2007 Base Salary Rate
Alan Shaw, Ph.D.	10%	$ 385,000
Robert S. Breuil	5	288,750
John Grate, Ph.D.	5	252,000
Douglas T. Sheehy	—	220,000
David Walshaw	10	220,000

In January 2008, our compensation committee considered base salary market data at the 50th percentile for companies in the Radford Global Life Sciences Peer Group to determine the market competitiveness of our executive officer base salary compensation. The analysis revealed that base salaries for all of our named executive officers, except Mr. Breuil, were significantly below the 50th percentile of companies in the Radford Global Life Sciences Peer Group. Therefore, our compensation committee approved an increase of between nine and eighteen percent in the base salaries for 2008 for each of our

named executive officers, as set forth in the table below. In 2008, all of our named executive officers except Mr. Breuil remain below the 50th percentile, ranging between $15,000 and $59,000 below the 50th percentile of companies in the Radford Global Life Sciences Peer Group. Our compensation committee determined these base salary amounts to be appropriate in light of the stage of our company and the total compensation of each of the named executive officers, including annual cash incentive bonus opportunity and equity incentive compensation. Our compensation committee approved a base salary for Mr. Breuil which is $18,000 above the 50th percentile of the companies in the Radford Global Life Sciences Peer Group, reflecting his significant individual contributions to our company during 2007 and the critical nature of his skills and expertise for our company at our stage of development. Other than Mr. Breuil, the differences in the base salary increases for our executive officers was attributable to the amount by which the executive's 2007 base salary was below the 50th percentile of the companies in the Radford Global Life Sciences Peer Group and the adjustments to the executive's annual cash incentive opportunities that is described below under the heading "Annual Cash Incentive Bonuses." Each named executive officer's 2008 base salary and the percentage salary increase in 2008 is listed in the table below.

Name of Executive Officer	Increase	2008 Base Salary Rate
Alan Shaw, Ph.D.	10%	$ 425,000
Robert S. Breuil	11	320,000
John Grate, Ph.D.	9	275,000
Douglas T. Sheehy	18	260,000
David Walshaw	14	250,000

Annual Cash Incentive Bonuses

Our compensation philosophy with respect to annual cash incentive bonuses is consistent with our overall compensation program philosophy. The annual cash incentive bonus is directed at tying individual compensation to both corporate and individual performance while maintaining market-competitive compensation. Performance, as measured against individual and corporate goals, affects the level of bonus payment.

Annual Cash Incentive Bonuses for 2007

In August 2007, our compensation committee ratified the 2007 Executive Incentive Compensation Plan under which each of our named executive officers was eligible to receive a cash bonus for performance in 2007. The amount of each executive's bonus was determined equally based on corporate performance and individual performance, in each case, as measured against targets set by our compensation committee. Our compensation committee equally weighted each component to encourage executives to strive for individual excellence while maintaining focus on the teamwork necessary for the company's financial success.

The corporate performance component of the bonus is measured based upon our company's achievement of financial goals established by our compensation committee. For 2007, our compensation committee established equally weighted goals related to net revenue, contribution margin (revenue less cost of goods) and year-end cash (book value of unrestricted cash and securities). The compensation committee set each goal at a level it believed would require substantial effort and significant growth to achieve.

The individual performance component of the bonus is measured by our Chief Executive Officer's, or in the case of our Chief Executive Officer's performance, our compensation committee's, assessment of the overall performance of each of our executives using individual goals established for each executive by our compensation committee. These individual goals, and the target bonus amounts, are established based on our Chief Executive Officer's and our compensation committee's evaluation of each executive's position within the company, the corporate goals over which that executive has control or influence and the market practices of the companies in the Radford Biotechnology Peer Group for 2007 annual cash incentive

bonuses. Individual performance goals are set to be difficult to achieve and require above what our compensation committee has determined to be average performance in order to meet the minimum standard. Examples of individual performance goals for 2007 for our named executive officers include designing and implementing corporate processes and controls in preparation for our initial public offering, delivering certain products for launch, supporting company financings, and securing strategic collaborators for pharmaceutical and biofuels projects. Since our Chief Executive Officer, or with respect to our Chief Executive Officer's performance, our compensation committee, assesses the overall performance of the executive, an executive's performance with respect to any one performance goal may not have a material impact on the individual's assessed achievement level. Instead, the achievement level is determined by assessing whether a majority of performance goals were met or exceeded and is subject to upward and downward discretion by the Chief Executive Officer or compensation committee.

Under the 2007 Executive Incentive Compensation Plan, no bonus was payable if our company achieved less than 90% of any single corporate performance goal. No bonus was payable with respect to the individual performance component if our Chief Executive Officer, or with respect to our Chief Executive Officer's performance, our compensation committee, determined that an executive did not achieve a majority of the executive's individual performance goals. For the corporate performance component, the percentage of each executive's target bonus paid directly correlates to the assessed performance at levels between 90% and 120%. For the individual performance component, the percentage of each executive's target bonus paid directly correlates to the individual's assessed performance at levels of at least 90%. Under the 2007 Executive Incentive Compensation Plan, our Chief Executive Officer, or with respect to our Chief Executive Officer's performance, our compensation committee, had the discretion to determine the individual performance level with no maximum limit. The formula for the bonus paid to each of our named executive officers, except our Chief Executive Officer, is as follows:

Bonus = (Base Salary x % target x corporate performance x 50%) +
(Base Salary x % target x individual performance x 50%)

With respect to the calculation of our Chief Executive Officer's bonus, our compensation committee determined that his bonus should be based solely upon his achievement of individual performance goals, which were the same as the three corporate performance goals relating to net revenue, contribution margin and year-end cash. Our compensation committee believes that our corporate performance is indicative of our CEO's overall performance. Our compensation committee may exercise its discretion to provide him with an individual performance factor that is greater than the corporate performance factor used in the calculation of the other named executive officers' bonus calculations since the corporate performance factor is capped at 120%. The formula for the bonus paid to our Chief Executive Officer is as follows:

Bonus = (Base Salary x % target x individual performance)

In April 2007, the compensation committee approved the individual bonus targets, as a percentage of 2007 base salary, set forth in the following table for each of our named executive officers using data from the Radford Biotechnology Peer Group and anecdotal evidence regarding executive compensation. Differences in the level of bonus opportunity were set to directly correlate to the named executive officer's role and responsibilities for our company. In January 2008, our Chief Executive Officer and with respect to our Chief Executive Officer's performance, our compensation committee, determined the individual performance factor for each of our named executive officers, ranging from 120% to 150%, with differences between executives caused by the amount by which individual performance exceeded expectations. The corporate performance factor for 2007 was 120% based on the company's overachievement of each of the net revenue, contribution margin and year-end cash goals. Based on his strong performance during 2007, our compensation committee waived the pro-ration of Mr. Sheehy's annual cash incentive bonus that otherwise would have applied based on his April 2, 2007 hire date. However, to reflect his start date in April 2007, our compensation committee reduced his individual performance factor to 120%. Our named executive officers received the following annual cash incentive bonus payments for 2007:

Name of Executive Officer	2007 Bonus Target (as % of 2007 Base Salary)	2007 Individual Performance Factor	2007 Annual Cash Incentive Bonus Payment
Alan Shaw, Ph.D.	45%	150%	$ 259,875
Robert S. Breuil	35	145	133,908
John Grate, Ph.D.	35	140	114,660
Douglas T. Sheehy	30	120	79,200
David Walshaw	30	150	89,100

Annual Cash Incentive Bonuses for 2008

In 2008, our compensation committee considered annual cash incentive bonus data for companies in the Radford Global Life Sciences Peer Group to evaluate the competitiveness of our annual cash incentive bonus compensation for our named executive officers. The analysis revealed that our 2007 annual cash incentive bonus compensation targets were below the 50th percentile of the companies in the Radford Global Life Sciences Peer Group for Dr. Shaw and Mr. Breuil. Our compensation committee approved the increase in bonus target percentages for 2008 to enable us to be at the 50th percentile of the Radford Global Life Sciences Peer Group with respect to annual cash incentive bonus targets for Dr. Shaw and Mr. Breuil, and increased Dr. Grate's annual cash incentive target to increase his total compensation opportunity to a more market-competitive level and to maintain internal compensation parity. Our compensation committee did not adjust the annual cash incentive bonus targets for Mr. Sheehy and Mr. Walshaw since each was already at the 50th percentile of the companies in the Radford Global Life Sciences Peer Group and each received significant base salary increases as described above under the heading "Annual Cash Compensation — Base Salary." The table below sets forth the annual cash incentive bonus target for each of our named executive officers.

Name of Executive Officer	2008 Bonus Target (as % of 2008 Base Salary)
Alan Shaw, Ph.D.	50%
Robert S. Breuil	40
John Grate, Ph.D.	40
Douglas T. Sheehy	30
David Walshaw	30

In March 2008, our compensation committee approved the 2008 Executive Incentive Compensation Plan under which each of our named executive officers is eligible to receive a cash bonus for performance in 2008. The amount of each executive's bonus is determined based upon corporate and individual performance, in each case, as measured against targets set by our compensation committee.

Under the 2008 Executive Incentive Compensation Plan, the corporate performance component of the bonus is measured based upon our company's achievement of three equally weighted financial goals established by our compensation committee, relating to net revenue, contribution margin (revenue less cost of goods) and year-end cash (book value of unrestricted cash and securities).

The individual performance component of the bonus is measured by our Chief Executive Officer's, or in the case of our Chief Executive Officer's performance, our compensation committee's, assessment of the overall performance of each of our executives using individual goals established for each executive by our compensation committee. These individual goals, and the target bonus amounts, are established based on our Chief Executive Officer's and our compensation committee's evaluation of each executive's position within the company, the corporate goals over which that executive has control or influence and the market practices of the companies in the Radford Global Life Sciences Peer Group. Individual performance goals are set to be difficult to achieve and require above what our compensation committee has determined to be average performance in order to meet the minimum standard. Achievement against the goals set by the compensation committee is determined by assessing whether a majority of performance targets were met or exceeded and is subject to upward and downward discretion by the Chief Executive Officer or compensation committee.

Under the 2008 Executive Incentive Compensation Plan, no bonus is payable if our company achieves less than 80% of any single corporate performance goal, or if the executive's achievement of his individual goals is less than 90%. The maximum corporate performance component achievement level is 120%, and there is a direct correlation between actual achievement and the corporate performance factor. Similarly, the maximum individual performance component achievement level is 150%, with a direct correlation between individual achievement and the individual performance factor. The formula for the bonus paid to each executive under the 2008 Executive Incentive Compensation Plan is as follows:

Bonus = (Base Salary x % target x corporate performance x 50%) +
(Base Salary x % target x individual performance x 50%)

Equity Incentive Compensation

We believe that our long-term performance is best facilitated through a culture of executive ownership that encourages long-term investment by our executive officers in our equity, thereby better aligning the executives' interests with the interests of our stockholders. To encourage this ownership culture, we typically make an initial equity award of stock options to new employees and periodic grants at other times, as approved by our board of directors. Our compensation committee recommends and our board of directors approves all equity grants to our employees including our executive officers. These grants have an exercise price that is at least equal to the fair market value of our common stock on the date of grant, as determined by our board of directors. Grants of options in 2007 were typically subject to a four-year vesting schedule with 1/4th of the grant vesting upon the first anniversary of the vesting commencement date and the remainder of the shares vesting at a rate of 1/48th of the total shares subject to the option on each monthly anniversary of the vesting commencement date, subject to the continued service of the executive officer. Vesting commencement dates generally correlate to the date of hire, date of promotion or date of grant.

The size of the initial stock option award is determined based on the executive's position with us and takes into account the executive's base salary and other compensation as well as an analysis of the grant and compensation practices of the peer companies that we review in connection with establishing our overall compensation policies. The initial stock option awards are intended to provide the executive with an incentive to build value in the organization over an extended period of time while remaining consistent with our overall compensation philosophy.

In 2007, we considered a number of factors in determining the amount of periodic equity incentive awards, if any, granted to our executives, including:

- the number of shares subject to, and exercise price of, outstanding options, both vested and unvested, held by our executives;
- the vesting schedule of the unvested stock options held by our executives;
- the amount and percentage of our total equity on a diluted basis held by our executives individually and as a group; and
- the periodic equity incentive award practices of peer companies that we review in connection with establishing our overall compensation policies.

In August 2006, our compensation committee approved the Executive Equity Performance Plan which provides members of our management team with the opportunity to attain proposed target equity ownership levels, over a three-year period, based upon corporate and individual performance. Our compensation committee approved target equity ownership levels for each of our executive officers based upon the experience and judgment of its members who are familiar with the compensation practices of companies in our industries.

In 2007, we retained Compensia to review the market competitiveness of our stock option grant practices, and to help our compensation committee develop an equity strategy for our company. Our compensation committee managed Compensia's review. Compensia recommended an equity strategy, adopted by our compensation committee in August 2007, that targets keeping our equity incentive compensation at the 50th percentile of the companies in the Compensia Peer Group.

In order to ensure that the stock options we granted in 2007 were issued with per share exercise prices no less than the fair market value of our common stock, our board of directors considered what it determined to be all relevant factors related to the fair market value of our common stock, including our financial condition, anticipated expenses, valuations of comparable companies, financing prospects, current and potential strategic relationships, competitive developments and related matters, the aggregate liquidation preference of the Company's preferred stock, and valuations of our common stock performed in August 2006, August 2007, October 2007 and December 2007.

As a privately owned company, there has been no market for our common stock. Accordingly, in 2007, we had no program, plan or practice pertaining to the timing of stock option grants to executive officers coinciding with the release of material non-public information. The compensation committee intends to adopt a formal policy regarding the timing of grants in connection with this offering.

Termination-Based Compensation

Our compensation committee provides our executives with termination protection when it determines that such protection is necessary to attract or retain an executive and to promote internal equity among executives with the same level of responsibility and authority within our company.

In connection with his offer letter agreement, we provided Mr. Breuil with severance benefits termination protection in the event he was terminated for any reason other than cause, as defined in his offer letter agreement, for a period of three months after the start of his employment and through the 12-month anniversary of an option grant he was entitled to receive after the company secured additional financing. Mr. Breuil was eligible for severance benefits in the amount of $137,500 payable over six months and continued health and insurance benefits for six months. Our compensation committee provided these benefits to Mr. Breuil to encourage him to accept a full-time position with our company and to compensate him for a similar benefit offered by his prior employer. The severance benefits provided for in Mr. Breuil's offer letter agreement terminated in August 2007. For a further description of these arrangements, see the section below entitled "Offer Letter Agreements."

We have entered into change in control agreements with Dr. Shaw, Mr. Breuil, Dr. Grate and Mr. Sheehy, which provide severance payments and benefits in the event the executive is terminated without cause or resigns with good reason within 12 months following certain transactions or changes in our control stockholders or, in certain circumstances, where the executive is terminated without cause or resigns with good reason within a short period prior to certain transactions or changes in our control stockholders.

The severance payments and benefits that are payable under the change in control agreements are further described below in the section entitled "Potential Payments Upon Termination and Change in Control — Change in Control Agreements."

Other Compensation

All of our executive officers are eligible to participate in certain benefit plans and arrangements offered to employees generally, including health, dental, life and disability insurance and our 401(k) plan. We currently pay in excess of 90% of the monthly premium, with respect to coverage for the employee only portion of coverage for all employees, including our named executive officers, for medical, dental, vision, life and long-term disability insurance. Should medical insurance premium rates increase, employees, including named executive officers, may be required to contribute to the cost of increased premiums to retain coverage. Consistent with our market-competitive compensation philosophy, we intend to continue to maintain these benefit plans and arrangements for our employees, including our executive officers. Our compensation committee in its discretion may revise, amend or add to any executive's benefits and perquisites if it deems it advisable. We currently do not believe it is necessary for the attraction or retention of management talent to provide the officers with a substantial amount of compensation in the form of perquisites.

Tax Considerations

Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code, generally disallows a tax deduction for compensation in excess of $1.0 million paid to our Chief Executive Officer and our four other most highly paid executive officers. Qualifying performance-based compensation is not subject to the deduction limitation if specified requirements are met. We generally intend to structure the performance-based portion of our executive compensation, when feasible, to comply with exemptions in Section 162(m) so that the compensation remains tax deductible to us. However, our board of directors may, in its judgment, authorize compensation payments that do not comply with the exemptions in Section 162(m) when it believes that such payments are appropriate to attract and retain executive talent.

2007 Summary Compensation Table

The following table summarizes the compensation that we paid to our Chief Executive Officer, Chief Financial Officer and each of our three other most highly compensated executive officers during the year ended December 31, 2007. We refer to these officers in this prospectus as our named executive officers.

Name and Principal Position	Year	Salary	Option Awards (1)	Non-Equity Incentive Plan Compensation (2)	All Other Compen-sation (3)	Total
Alan Shaw, Ph.D., President and Chief Executive Officer	2007	$ 385,000	$ 243,780	$ 259,875	$ 1,326	$ 889,981
Robert S. Breuil, Senior Vice President, Finance and Chief Financial Officer	2007	288,750	83,791	133,908	1,469	507,918
John Grate, Ph.D., Chief Technical Officer and Senior Vice President, Technology and Innovation	2007	252,000	48,498	114,660	3,643	418,801
Douglas T. Sheehy, Vice President, General Counsel and Secretary(4)	2007	164,522	32,826	79,200	549	277,097
David Walshaw, Vice President, Operations	2007	220,000	45,952	89,100	1,098	356,150

(1) The amounts included in the "Option Awards" column represent the compensation cost that was recognized by us in the year ended December 31, 2007 determined in accordance with Statement of Financial Accounting Standards No. 123(R), "Share Based Payment," or SFAS No. 123(R). The valuation assumptions used in determining such amounts are described in Note 11 to our consolidated financial statements included in this prospectus.

(2) Amounts reflect bonus payments made pursuant to the Executive Incentive Compensation Plan.

(3) Amounts reflect payments of group term life insurance premiums.

(4) Mr. Sheehy joined Codexis as Vice President, General Counsel and Secretary on April 2, 2007.

Grants of Plan-Based Awards in 2007 Table

All options granted to our named executive officers are incentive stock options, to the extent permissible under the Code. The exercise price per share of each option granted to our named executive officers was determined to be equal to the fair market value of our common stock by our board of directors on the date of the grant. All options were granted under our 2002 Stock Plan, as amended, as described below in the section entitled "Employee Benefit and Stock Plans — 2002 Stock Plan, as amended."

The following table shows information regarding grants of equity awards during the year ended December 31, 2007 to each of our named executive officers.

Name	Grant Date	Vesting Commence-ment Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards($)(1)		All Other Option Awards; Number of Securities Underlying Options (#)(3)	Exercise or Base Price of Option Awards ($/Share)	Grant Date Fair Value of Option Awards (4)
			Thres-hold	Target			
Alan Shaw, Ph.D.	1/26/2007	8/23/2006			217,125	1.63	$ 36,637
	1/26/2007	12/31/2006			217,125	1.63	136,637
	8/28/2007	8/28/2007			337,500	4.47	782,190
	10/25/2007	10/25/2007			174,000	4.57	376,292
			77,962	173,250			
Robert S. Breuil	1/26/2007	1/3/2006			62,250	1.63	39,174
	1/26/2007	12/31/2006			62,250	1.63	39,174
	8/28/2007	8/28/2007			108,000	4.47	250,301
	10/25/2007	10/25/2007			108,000	4.57	233,561
			45,478	101,062			
John Grate, Ph.D.	1/26/2007	8/23/2006			44,375	1.63	27,925
	1/26/2007	12/31/2006			44,375	1.63	27,925
	8/28/2007	8/28/2007			82,500	4.47	191,202
			39,690	88,200			
Douglas T. Sheehy	4/19/2007	4/2/2007			150,000	1.63	108,870
	8/28/2007	8/28/2007			33,000	4.47	76,481
	10/25/2007	10/25/2007			56,000	4.57	121,106
			22,275(2)	49,500			
David Walshaw	1/26/2007	8/23/2006			43,625	1.63	27,453
	1/26/2007	12/31/2006			43,625	1.63	27,453
	8/28/2007	8/28/2007			54,000	4.47	125,150
	10/25/2007	10/25/2007			33,750	4.57	72,988
			29,700	66,000			

(1) Amounts in the "Estimated Future Payouts Under Non-Equity Incentive Plan Awards" column relate to amounts payable under our 2007 Executive Incentive Compensation Plan. The threshold column assumes the achievement of the corporate goal at the threshold level and a failure to achieve any portion of the individual performance component. The maximum amount payable under the 2007 Executive Incentive Compensation Plan is indeterminable.

(2) Amounts listed for Mr. Sheehy are pro-rated based on his April 2, 2007 hire date with the company. As discussed above under "Annual Cash Compensation—Annual Cash Incentive Bonuses for 2007," our compensation committee waived Mr. Sheehy's pro-ration at the time of payment of his bonus in 2008.

(3) These options vest as to 1/4th of the total number of shares subject to the option on the first anniversary of the vesting commencement date, and 1/48th of the total number of shares subject to the option shall vest monthly thereafter until all shares are vested.

(4) The amounts set forth in the "Grant Date Fair Value of Option Awards" column are the full grant date fair value of the awards determined in accordance with SFAS No. 123(R). The valuation assumptions used in determining such amounts are described in Note 11 to our consolidated financial statements included in this prospectus.

Outstanding Equity Awards at 2007 Fiscal Year-End

The following table shows grants of stock options outstanding on December 31, 2007, the last day of our fiscal year, to each of our named executive officers. None of our named executive officers have received grants of unvested restricted stock awards.

	Option Awards(1)					
Name	Date of Grant	Vesting Commence-ment Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date
Alan Shaw, Ph.D.	5/16/2003	5/16/2003	500,000(2)	0	0.40	5/15/2013
	7/15/2003	7/15/2003	0(3)	50,000	0.40	7/14/2013
	12/11/2003	1/1/2004	137,083	2,917	0.40	12/10/2013
	1/5/2005	1/1/2005	58,333	21,667	0.60	1/4/2015
	1/5/2005	1/1/2005	20,000(4)	0	0.60	1/4/2015
	10/18/2005	10/18/2005	27,083	22,917	0.70	10/17/2015
	12/13/2005	1/1/2006	70,000(4)	0	0.70	12/12/2015
	1/26/2007	8/23/2006	72,375	144,750	1.63	1/25/2017
	1/26/2007	12/31/2006	54,281	162,844	1.63	1/25/2017
	8/28/2007	8/28/2007	0	337,500	4.47	8/27/2017
	10/25/2007	10/25/2007	0	174,000	4.57	10/24/2017
Robert S. Breuil	1/3/2006	1/3/2006	143,750	156,250	0.70	1/2/2016
	1/26/2007	1/3/2006	29,828	32,422	1.63	1/25/2017
	1/26/2007	12/31/2006	15,562	46,688	1.63	1/25/2017
	8/28/2007	8/28/2007	0	108,000	4.47	8/27/2017
	10/25/2007	10/25/2007	0	108,000	4.57	10/24/2017
John Grate, Ph.D.	11/19/2002	9/16/2002	60,000	0	0.40	11/18/2012
	12/11/2003	1/1/2004	20,000(4)	0	0.40	12/10/2013
	12/11/2003	1/1/2004	39,166	834	0.40	12/10/2013
	1/5/2005	1/1/2005	14,583	5,417	0.60	1/4/2015
	1/5/2005	1/1/2005	7,500(4)	0	0.60	1/4/2015
	6/16/2005	7/1/2005	36,250	23,750	0.70	6/15/2015
	12/13/2005	1/1/2006	35,000(4)	0	0.70	12/12/2015
	1/26/2007	8/23/2006	14,791	29,584	1.63	1/25/2017
	1/26/2007	12/31/2006	11,093	33,282	1.63	1/25/2017
	8/28/2007	8/28/2007	0	82,500	4.47	8/27/2017
Douglas T. Sheehy	4/19/2007	4/2/2007	0	150,000	1.63	4/18/2017
	8/28/2007	8/28/2007	0	33,000	4.47	8/27/2017
	10/25/2007	10/25/2007	0	56,000	4.57	10/24/2017
David Walshaw	7/15/2004	6/21/2004	24,062	3,438	0.45	7/14/2014
	1/5/2005	1/1/2005	16,406	6,094	0.60	1/4/2015
	12/13/2005	1/1/2006	23,958	26,042	0.70	12/12/2015
	12/13/2005	1/1/2006	25,000(4)	0	0.70	12/12/2015
	1/26/2007	8/23/2006	14,541	29,084	1.63	1/25/2017
	1/26/2007	12/31/2006	10,906	32,719	1.63	1/25/2017
	8/28/2007	8/28/2007	0	54,000	4.47	8/27/2017
	10/25/2007	10/25/2007	0	33,750	4.57	10/24/2017

(1) Unless otherwise noted, these options vest as to 1/4th of the total number of shares subject to the option on the first anniversary of the vesting commencement date, and 1/48th of the total number of shares subject to the option shall vest monthly thereafter until all shares are vested.

(2) These options vest as to 1/4th of the total number of shares subject to the option on the six-month anniversary of the vesting commencement date, and 1/48th of the total number of shares subject to the option shall vest monthly thereafter.

(3) These options vest as to 100% of the total number of shares subject to the option on the fifth anniversary of the vesting commencement date.

(4) These options were fully vested on the date of grant.

Option Exercises in 2007 Table

The following table shows information regarding the exercise of stock options during the year ended December 31, 2007. During the year ended December 31, 2007, no restricted stock awards granted to our named executive officers became vested.

	Option Awards	
Name	Number of Shares Acquired on Exercise	Value Realized on Exercise
John Grate, Ph.D.	100,000	$ 87,000

Pension Benefits

We do not maintain any defined benefit pension plans.

Nonqualified Deferred Compensation

We do not maintain any nonqualified deferred compensation plans.

Offer Letter Agreements

We have entered into the following offer letter agreements with each of our named executive officers.

Alan Shaw, Ph.D. On July 29, 2003, we entered into an offer letter agreement with Dr. Shaw, setting forth the terms and conditions of his employment as our Chief Executive Officer. The offer letter agreement provided for annual base salary of $285,000. Most recently, Dr. Shaw's base salary was increased to $425,000 for 2008, as approved by our compensation committee in January 2008. The offer letter agreement also provided that for 2003, Dr. Shaw would be eligible to participate in our Executive Bonus Plan, a performance-based program that allows for a bonus stock option award based upon achievement of our objectives. In connection with his offer letter agreement, Dr. Shaw was granted an option to purchase shares of common stock of our company in exchange for cancellation of his options to purchase shares of Maxygen, Inc.

Robert S. Breuil. On December 22, 2005, we entered into an offer letter agreement with Mr. Breuil, setting forth the terms and conditions of his employment as our Senior Vice President, Finance and Chief Financial Officer. The offer letter agreement provided for annual base salary of $275,000. Most recently, Mr. Breuil's base salary was increased to $320,000 for 2008, as approved by our compensation committee in January 2008. Mr. Breuil's offer letter agreement provided that for 2006, he would be eligible to participate in our Executive Bonus Plan, and that the bonus would be paid out in the form of stock options or cash, or a combination of cash and stock options at the discretion of our compensation committee, based

upon the achievement of corporate and individual objectives as defined by our Chief Executive Officer and our board of directors, and subject to the final approval of our compensation committee. The offer letter agreement provided that the dollar value of the bonus payout for the Senior Vice President level is 30% of annual base salary.

In connection with the offer letter agreement, Mr. Breuil received an option to purchase 300,000 shares of our common stock at an exercise price equal to the fair market value of the shares on the date the option was granted as determined by our board of directors, which option vests as to 1/4th of the total number of shares subject to the option on the first anniversary of his employment start date, and 1/48th of the total number of shares subject to the option vesting monthly thereafter until all shares are vested. In addition, the offer letter provides for an additional grant of an option to purchase shares, following the closing of our company's next financing following the date of the offer letter agreement, in a total share amount equal to the amount necessary to make Mr. Breuil's then-total ownership of our company equal to 1.25% of our then fully diluted shares (the "Supplemental Hire Grant"). The offer letter provides that Mr. Breuil will be eligible for periodic stock option grants based upon our company's and his individual performance, with his target total stock and option ownership, including vested and unvested shares, but excluding any option shares granted pursuant to our Executive Bonus Plan, expected to be approximately 1.25% of our fully diluted shares outstanding immediately prior to our filing to complete an initial public offering. However, this target ownership may be reduced or increased based on our company policy, and additional stock option grants, if any, are subject to approval by our compensation committee and board of directors.

Under the offer letter agreement, if Mr. Breuil was terminated for any reason other than cause, as defined in the offer letter agreement, at any time following the three-month anniversary of his employment starting date and prior to the 12-month anniversary of his Supplemental Hire Grant, he would receive $137,500 payable over a period of six months, and continued healthcare and insurance coverage for six months following his termination.

Subsequent to his offer letter agreement and prior to the company's financing following his hire, our compensation committee increased Mr. Breuil's target ownership percentage share from 1.25% to 1.5%, in consideration of waiver of his right to the Supplemental Hire Grant in August 2006 and reflecting the compensation committee's evaluation of publicly available target percentage ownership data for chief financial officers at life sciences companies in the San Francisco Bay Area. Therefore, the severance benefits provided for in Mr. Breuil's offer letter agreement as set forth above terminated in August 2007.

John Grate, Ph.D. On August 30, 2002, we entered into an offer letter agreement with Dr. Grate, setting forth the terms and conditions of his employment as our Vice President, Research and Development and Chief Technical Officer. The offer letter agreement provided an annual base salary of $180,000. Most recently, Dr. Grate's base salary was increased to $275,000 for 2008, as approved by our compensation committee in January 2008. The offer letter provided that he was eligible to receive a performance-based discretionary cash bonus for 2002, awarded at the discretion of our board of directors. In connection with the offer letter agreement, Dr. Grate received an option to purchase the number of shares equivalent to no less than one percent of our total shares following the closing of an investment in our company by third party investors of at least $15 million, which option was to vest as to 1/4th of the total number of shares subject to the option on the first anniversary of Dr. Grate's employment start date, and 1/48th of the total number of shares subject to the option vesting monthly thereafter until all shares are vested. In September and October 2002, we issued an aggregate of 8,101,101 shares of our Series B convertible preferred stock at a price per share of $3.086 for an aggregate purchase price of approximately $25 million. Subsequently, onNovember 19, 2002, as provided by his offer letter agreement, Dr. Grate was granted an option to purchase 160,000 shares of our common stock at an exercise price of $0.40.

Douglas T. Sheehy. On February 26, 2007, we entered into an offer letter agreement with Mr. Sheehy, setting forth the terms and conditions of his employment as our Vice President, General

Counsel and Secretary. The offer letter agreement provided an annual base salary of $220,000. Most recently, Mr. Sheehy's base salary was increased to $260,000 for 2008, as approved by our compensation committee in January 2008. The offer letter also provided that he is eligible to participate in our Executive Cash Compensation Incentive Plan, with a target of 30% of his annualized base salary (prorated to his start date) for 2007, and which will be awarded at the discretion of our board of directors based on the company's performance. Mr. Sheehy also was eligible to receive a signing bonus of up to $40,000, which was to be offset by any 2006 year-end bonus that he received from his previous employer. Because Mr. Sheehy received his full year-end bonus from his previous employer, he did not receive any signing bonus from us. In connection with the offer letter agreement, Mr. Sheehy received an option to purchase 150,000 shares of our common stock at an exercise price equal to the fair market value of the shares on the date the option was granted as determined by our board of directors, which option vests as to 1/4th of the total number of shares subject to the option on the first anniversary of the vesting commencement date, and 1/48th of the total number of shares subject to the option vesting monthly thereafter until all shares are vested. The offer letter also provided that at the time of the company wide compensation review following December 31, 2007, Mr. Sheehy would receive an option to purchase a minimum of 33,000 shares of our common stock, contingent upon Mr. Sheehy's performance and subject to the approval of our board of directors. In lieu of this option grant, Mr. Sheehy received options to purchase 33,000 and 56,000 shares of our common stock on August 28, 2007 and October 25, 2007, respectively. The offer letter provides for certain benefits payable to Mr. Sheehy in the event of termination following a change in control of our company, as described below in the section entitled "Potential Payments Upon Termination and Change in Control—Change in Control Agreements."

David Walshaw. On December 22, 2004, we entered into an offer letter agreement with Mr. Walshaw, setting forth the terms and conditions of his employment as our Director of Operations. The offer letter agreement provided for an annual base salary of $160,000. Most recently, Mr. Walshaw's base salary was increased to $250,000 for 2008, as approved by our compensation committee in January 2008. The offer letter agreement provided that he was eligible to receive a performance-based discretionary cash bonus of up to 15% of his annualized base salary for 2005, based upon the Company's performance relative to its corporate objectives for the year. In connection with the offer letter agreement, Mr. Walshaw received an option to purchase 22,500 shares of our common stock at an exercise price equal to the fair market value of the shares on the date the option was granted as determined by our board of directors, which option vests as to 1/4th of the total number of shares subject to the option on the first anniversary of his start date as Director of Operations, and 1/48th of the total number of shares subject to the option vesting monthly thereafter until all shares are vested. The offer letter provided for the reimbursement of up to $45,000 for relocation expenses and transportation at the time of actual relocation for him and his immediate family.

Potential Payments Upon Termination and Change in Control

Change in Control Agreements

During 2007, we were party to change in control agreements with Dr. Shaw, Mr. Breuil, Dr. Grate and Mr. Sheehy. The change in control agreements provide that in the event a named executive officer is terminated without cause or resigns for good reason, each as defined in the agreements, within twelve months following the change in control of our company, the terminated executive officer is entitled, subject to our receipt of a release of claims and a confidential information, secrecy and invention agreement, to the following payments and benefits:

Base salary, payable in a cash lump sum	12 months
Equity award vesting acceleration	100%
Continued health, disability, accident and/or life insurance benefits coverage(1)	12 months

(1) Executive is eligible for continued coverage for such benefits in effect on the date of termination. If an executive and his dependents become eligible for any such coverage under a subsequent employer's plans, continued benefits coverage payments cease for the benefit for which the executive and his dependents are eligible under the subsequent employer's plan.

The following table sets forth quantitative estimates of the benefits that would have accrued to each of our named executive officers if his employment had been terminated on December 31, 2007 by us without cause or for good reason by the named executive officers upon a change in control, assuming that such termination occurred within the period beginning on the effective date of a change in control as specified in the agreement and ending on the last day of the twelfth calendar month following the calendar month in which the effective date of a change in control occurs. Amounts below reflect potential payments pursuant to the change in control agreements for such named executive officers.

Name of Executive Officer	Salary Continuation	Value of Accelerated Equity Awards(1)	Value of Continued Benefits Premiums	Total
Alan Shaw, Ph.D.	$ 385,000	$ 2,451,697	$ 18,640	$ 2,855,337
Robert S. Breuil	288,750	1,398,735	18,640	1,706,125
John Grate, Ph.D.	252,000	523,925	12,398	788,323
Douglas T. Sheehy	220,000	735,880	18,640	974,520

(1) Amounts calculated based on the aggregate amount by which the fair market value of the common stock subject to unvested equity awards exceeded the aggregate exercise price of the awards as of December 31, 2007.

Potential Payments Upon Termination Without Cause

The following table sets forth quantitative estimates of the benefits that would have accrued to Mr. Breuil if his employment had been terminated by us without cause prior to August 2007, as described above in the section entitled "Offer Letter Agreements." This benefit terminated in August 2007, pursuant to the terms of Mr. Breuil's offer letter agreement described above. No other named executive officer was eligible for benefits in the event of termination by us without cause during 2007.

Name of Executive Officer	Salary Continuation	Value of Continued Health and Insurance Benefits Premiums(1)	Total
Robert S. Breuil	$ 137,500	$ 9,320	$146,820

(1) Mr. Breuil was eligible for continued coverage for such benefits in effect on the date of termination.

Confidentiality Information, Secrecy and Invention Agreements

Each of our named executive officers has entered into a standard form agreement with respect to confidential information, secrecy and inventions. Among other things, this agreement obligates each named executive officer to refrain from disclosing any of our proprietary information received during the course of employment and, with some exceptions, to assign to us any inventions conceived or developed during the course of employment.

Employee Benefit and Stock Plans

2008 Incentive Award Plan

We have adopted a 2008 Incentive Award Plan, or the 2008 Plan, which will take effect upon completion of this offering. The principal purpose of the 2008 Plan is to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards

and cash-based performance bonus awards. The 2008 Plan is also designed to permit us to make cash-based awards and equity-based awards intended to qualify as "performance-based compensation" under Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code.

The principal features of the 2008 Plan are summarized below. This summary is qualified in its entirety by reference to the text of the 2008 Plan, which is filed as an exhibit to the registration statement of which this prospectus is a part.

Share Reserve. Under the 2008 Plan, shares of our common stock plus the number of shares remaining available for future awards under our 2002 Stock Plan, as amended, as of the completion of this offering will be initially reserved for issuance pursuant to a variety of stock-based compensation awards. These awards include stock options, restricted stock awards, restricted stock unit awards, performance awards, dividend equivalent awards, deferred stock awards, stock payment awards, stock appreciation rights, or SARs, and other stock-based awards. The number of shares initially reserved for issuance pursuant to awards under the 2008 Plan will be increased by (i) the number of shares represented by awards outstanding under our 2002 Stock Plan that are forfeited or lapse unexercised following the effective date and (ii) an annual increase on the first day of each calendar year beginning in 2009 and ending in 2018, equal to the lesser of (A) shares and (B) percent (%) of the shares of stock outstanding (on an as converted basis) on the last day of the immediately preceding calendar year; provided, however, no more than shares of stock may be issued upon the exercise of incentive stock options.

The following provisions will be in effect for the share reserve under the 2008 Plan:

- to the extent that an award terminates, expires or lapses for any reason, or an award is settled in cash without the delivery of shares to the holder, any shares subject to the award at such time will be available for future grants under the 2008 Plan;
- to the extent shares are tendered or withheld to satisfy exercise price or tax withholding obligation with respect to any award under the 2008 Plan, such tendered or withheld shares will be available for future grants under the 2008 Plan;
- any shares repurchased by us from a holder who purchased shares pursuant to grants awarded under the 2008 Plan at the same price paid by the holder will be available for future grants under the 2008 Plan;
- the payment of dividend equivalents in cash in conjunction with any outstanding awards will not be counted against the shares available for issuance under the 2008 Plan; and
- to the extent permitted by applicable law or any exchange rule, shares issued in assumption of, or in substitution for, any outstanding awards of any entity acquired in any form of combination by us or any of our subsidiaries will not be counted against the shares available for issuance under the 2008 Plan.

Initially, there will be no limit on the number of shares that may be covered by stock-based awards or the maximum aggregate dollar amount subject to cash-based performance awards granted to any individual during any calendar year. However, after a limited transition period, no individual may be granted stock-based awards under the 2008 Plan covering more than shares in any calendar year. The limited transition period will expire on the earliest of:

- the first material modification of the 2008 Plan;
- the issuance of all of the shares of our common stock reserved for issuance under the 2008 Plan;
- the expiration of the 2008 Plan;
- the first meeting of our stockholders at which members of our board of directors are to be elected that occurs after the close of the third calendar year following the calendar year in which our initial public offering occurs; or

- such earlier date as may be required by Section 162(m) of the Code.

Administration. The compensation committee of our board of directors, or another committee or a subcommittee of our board of directors assuming the functions of the Committee, as defined in the 2008 Plan, will administer the 2008 Plan. The compensation committee must consist of at least two members of our board of directors, each of whom is intended to qualify as an "outside director," within the meaning of Section 162(m) of the Code, a "non-employee director" for purposes of Rule 16b-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and an "independent director" within the meaning of the rules of The Nasdaq Stock Market, or other principal securities market on which shares of our common stock are traded.

Subject to the terms and conditions of the 2008 Plan, the administrator has the authority to select the persons to whom awards are to be made, to determine the number of shares to be subject to awards and the terms and conditions of awards, and to make all other determinations and to take all other actions necessary or advisable for the administration of the 2008 Plan. The administrator is also authorized to establish, adopt or revise any rules and regulations relating to administration of the 2008 Plan. The full board of directors will administer the 2008 Plan with respect to awards to non-employee directors.

Eligibility. Stock options, SARs, restricted stock and all other stock-based and cash-based awards under the 2008 Plan may be granted to individuals who are then our officers, directors, employees or consultants or are the officers, directors, employees or consultants of certain of our subsidiaries. Only employees may be granted incentive stock options, or ISOs.

Awards. The 2008 Plan provides that the administrator may grant or issue stock options, SARs, restricted stock, restricted stock units, performance awards, dividend equivalents, deferred stock, stock payments and other stock-based and cash-based awards, or any combination thereof. Each award will be set forth in a separate agreement with the person receiving the award and will indicate the type, terms and conditions of the award.

- *Nonqualified Stock Options*, or NQSOs, provide for the right to purchase shares of our common stock at a specified price which may not be less than the fair market value of our common stock on the date of grant, and usually will become exercisable (at the discretion of the administrator) in one or more installments after the grant date, subject to the participant's continued employment or service with us and/or subject to the satisfaction of corporate performance targets and individual performance targets established by the administrator. NQSOs may be granted for any term specified by the administrator, but may not exceed ten years.
- *Incentive Stock Options* are intended to comply with the provisions of Section 422 of the Code and will be subject to specified restrictions contained in the Code. Among such restrictions, ISOs must have an exercise price of not less than the fair market value of a share of our common stock on the date of grant, may only be granted to employees, and must not be exercisable after a period of ten years measured from the date of grant. In the case of an ISO granted to an individual who owns (or is deemed to own) at least 10% of the total combined voting power of all classes of our capital stock, the 2008 Plan provides that the exercise price must be at least 110% of the fair market value of a share of common stock on the date of grant and the ISO must not be exercisable after a period of five years measured from the date of grant.
- *Restricted Stock* may be granted to any eligible individual and made subject to such restrictions as may be determined by the administrator. Restricted stock, typically, may be forfeited for no consideration or repurchased by us at the original purchase price if the conditions or restrictions on vesting are not met. In general, restricted stock may not be sold, or otherwise transferred, until restrictions are removed or expire. Purchasers of restricted stock, unlike recipients of options, will have voting rights and will have the right to receive dividends, if any, prior to the time when the restrictions lapse, however, extraordinary dividends will generally be placed in escrow, and will not be released until restrictions are removed or expire.

- *Performance Awards* may be granted to any eligible individual by the administrator in the form of cash, stock or a combination of both. The administrator is authorized to determine whether such performance awards shall be "performance-based compensation" as described in Section 162(m)(4)(C) of the Code. The value of the performance awards may be linked to any one or more of the performance criteria or other specific criteria determined by the administrator, in each case on a specified date or dates or over any period or periods determined by the administrator.
- *Dividend Equivalents* represent the value of the dividends, if any, per share paid by us, calculated with reference to the number of shares covered by the awards held by the participant. Dividend equivalents may be settled in cash or shares and at such times as determined by the compensation committee or other committee, as applicable. No dividend equivalents shall be payable with respect to stock options or SARs.
- *Stock Payments* may be authorized by the administrator to any eligible individual in the form of common stock or an option or other right to purchase common stock as part of a bonus, deferred compensation or other arrangement. Stock payments may be made in lieu of base salary, bonus fees or other cash compensation otherwise payable to eligible individuals.
- *Deferred Stock* represents the right to receive shares of our common stock on a future date. Deferred stock may not be sold or otherwise hypothecated or transferred until issued. Deferred stock will not be issued until the deferred stock award has vested, and recipients of deferred stock generally will have no voting or dividend rights prior to the time when the vesting conditions are satisfied and the shares are issued. Deferred stock awards generally will be forfeited, and the underlying shares of deferred stock will not be issued, if the applicable vesting conditions and other restrictions are not met.
- *Restricted Stock Units* may be awarded to any eligible individual, subject to vesting conditions based on continued employment or service or on performance criteria established by the administrator. Like restricted stock, restricted stock units may not be sold, or otherwise transferred or hypothecated, until vesting conditions are removed or expire. Unlike restricted stock, stock underlying restricted stock units will not be issued until the restricted stock units have vested, and recipients of restricted stock units generally will have no voting or dividend rights prior to the time when vesting conditions are satisfied.
- *Stock Appreciation Rights* may be granted in connection with stock options or other awards, or separately. SARs granted in connection with stock options or other awards typically will provide for payments to the holder based upon increases in the price of our common stock over a set exercise price. The exercise price of any SAR granted under the 2008 Plan must be at least 100% of the fair market value of a share of our common stock on the date of grant, with certain exceptions where the SAR is an award granted by us in connection with the assumption of, or in substitution for, outstanding equity awards previously granted by a company or other entity in connection with an acquisition similar corporate transaction. Except as required by Section 162(m) of the Code with respect to a SAR intended to qualify as performance-based compensation as described in Section 162(m) of the Code, there are no restrictions specified in the 2008 Plan on the exercise of SARs or the amount of gain realizable therefrom, although restrictions may be imposed by the administrator in the SAR agreements. SARs under the 2008 Plan will be settled in cash or shares of our common stock, or in a combination of both, at the election of the administrator.
- *Awards Intending to Qualify as Performance-Based Compensation.* The administrator may grant to eligible individuals who are or may be "covered employees," as defined in Section 162(m) of the Code any of the forms of awards described above, or any combination thereof. These awards are intended to be qualified "performance-based compensation" within the meaning of Section 162(m) of the Code in order to preserve the deductibility of these awards for federal income tax purposes. Participants are only entitled to receive performance-based compensation for any

given performance period to the extent that pre-established performance goals set by our compensation committee for the period are satisfied. With regard to a particular performance period, our compensation committee will have the discretion to select the length of the performance period, the type of performance-based awards to be granted, and the goals that will be used to measure the performance for the period. In determining the actual size of the individual performance-based compensation for a performance period, the administrator may reduce or eliminate (but not increase) the amount payable. Generally, an employee will have to be employed by our company or any qualifying subsidiaries on the date the performance-based compensation is paid to be eligible for the performance-based compensation for any period.

Pre-established performance goals for awards intended to be qualified performance-based compensation within the meaning of Section 162(m) of the Code must be based on one or more of the following performance criteria: net earnings (either before or after interest, taxes, depreciation and amortization), economic value-added, sales or revenue, net income (either before or after taxes), operating earnings, cash flow (including, but not limited to, operating cash flow and free cash flow), cash flow return on capital, return on net assets, return on stockholders' equity, return on assets, return on capital, stockholder returns, return on sales, gross or net profit margin, productivity, expense, margins, operating efficiency, customer satisfaction, working capital, earnings per share, price per share of our common stock and market share, any of which may be measured either in absolute terms or as compared to any incremental increase or as compared to results of a peer group.

Change in Control. In the event of a change in control, each outstanding awards shall be assumed or an equivalent award substituted by the successor corporation or a parent or subsidiary of the successor corporation. If the holder of such assumed or substituted award is terminated upon or within 12 months following the change in control, then such holder shall be fully vested in such assumed or substituted award. In the event of a change in control where the acquiror does not assume or replace awards granted under the 2008 Plan, the administrator may cause any or all such awards issued under the 2008 Plan to accelerate and become fully exercisable immediately prior to the consummation of such transaction and all forfeiture restrictions on any or all such awards shall lapse.

In addition, the administrator will also have complete discretion to structure one or more awards under the 2008 Plan to provide that such awards will become vested and exercisable or payable on an accelerated basis in the event such awards are assumed or replaced with equivalent awards but the individual's service with us or the acquiring entity is subsequently terminated within a designated period following the change in control event. At this time, it is anticipated that a participant's awards under the 2008 Plan will become vested and exercisable (if applicable) in full in the event the participant's employment or service with us or the acquiring entity is subsequently terminated without cause within 18 months following the change in control event. The administrator may also make appropriate adjustments to awards under the 2008 Plan and is authorized to provide for the acceleration, cash-out, termination, assumption, substitution or conversion of such awards in the event of a change in control or certain other unusual or nonrecurring events or transactions. Under the 2008 Plan, a change in control is generally defined as:

- the transfer or exchange in a single or series of related transactions by our stockholders of more than 50% of our voting stock to a person or group;
- a change in the composition of our board of directors over a two-year period such that fifty percent or more of the members of the board of directors were elected through one or more contested elections;
- a merger, consolidation, reorganization or business combination in which we are involved, directly or indirectly, other than a merger, consolidation, reorganization or business combination which results in our outstanding voting securities immediately before the transaction continuing to represent a majority of the voting power of the acquiring company's outstanding voting securities and after which no person or group beneficially owns 50% or more of the outstanding voting securities of the surviving entity immediately after the transaction;

- the sale, exchange, or transfer of all or substantially all of our assets; or
- stockholder approval of our liquidation or dissolution.

Adjustments of Awards. If there is a nonreciprocal transaction between our company and its stockholders, such as a stock dividend, stock split, spin-off, rights offering or recapitalization through a large, nonrecurring cash dividend, that affects the shares of our common stock (or other securities of our company) or the share price of our common stock (or other securities of our company), then the administrator shall make equitable adjustments to the aggregate number and kind of shares that may be issued under the 2008 Plan, the number and type of securities subject to each outstanding award under the 2008 Plan, the number and kind of shares of common stock (or other securities or property) for which automatic grants are subsequently to be made to new and continuing non-employee directors, the terms and conditions of any outstanding awards and the exercise price or grant price of any outstanding awards.

If there is any other combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of our company assets to stockholders, or other change affecting the shares of our common stock or the share price of our common stock (other than an event described in the preceding paragraph), the administrator may, in its discretion:

- provide for the termination of any award in exchange for an amount of cash (if any) and/or other property equal to the amount that would have been attained upon the exercise of such award or realization of the participant's rights;
- provide for the replacement of any award with other rights or property selected by the Committee in its sole discretion;
- provide that any surviving corporation (or its parent or subsidiary) shall assume awards outstanding under the 2008 Plan or shall substitute similar awards for those outstanding under the 2008 Plan, with appropriate adjustment of the number and kind of shares and the prices of such awards; or
- make adjustments (i) in the number and type of shares of our common stock (or other securities or property) subject to outstanding awards and in the number and type of shares of restricted stock or deferred stock or (ii) to the terms and conditions of (including the grant or exercise price) and the criteria included in, outstanding rights, options, and awards or future rights, options and awards.
- provide that all awards shall be exercisable, payable or fully vested as to all shares of our common stock covered thereby; and
- provide that any outstanding award cannot vest, be exercised, or become payable after such event.

Amendment and Termination. Our board of directors may terminate, suspend, amend, or modify the 2008 Plan at any time and from time to time. However, without stockholder approval given within twelve (12) months before or after the action by the administrator, the administrator generally may not:

- increase the number of shares available under the 2008 Plan (other than in connection with certain corporate events, as described above); or
- decrease the exercise price of any outstanding option or SAR granted under the 2008 Plan.

In addition, the Company shall obtain stockholder approval of any 2008 Plan amendment that would enable the Administrator:

- to grant options with an exercise price that is below 100% of the fair market value of shares of our common stock on the grant date;
- to extend the exercise period for an option beyond ten years from the date of grant; or

- to the extent required by applicable law, rule or regulation (including any applicable stock exchange rule).

Expiration Date. The 2008 Plan will expire on, and no option or other award may be granted pursuant to the 2008 Plan after ten years after the effective date of the 2008 Plan. Any award that is outstanding on the expiration date of the 2008 Plan will remain in force according to the terms of the 2008 Plan and the applicable award agreement.

Securities Laws and Federal Income Taxes. The 2008 Plan is designed to comply with various securities and federal tax laws as follows:

- *Securities Laws.* The 2008 Plan is intended to conform to all provisions of the Securities Act of 1933, as amended, or the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the SEC thereunder, including without limitation, Rule 16b-3. The 2008 Plan will be administered, and options will be granted and may be exercised, only in such a manner as to conform to such laws, rules and regulations. We intend to file with the SEC a registration statement on Form S-8 covering the shares of our common stock issuable under the 2008 Plan.
- *Section 409A of the Code.* Certain awards under the 2008 Plan may be considered "nonqualified deferred compensation" for purposes of Section 409A of the Code, which imposes certain additional requirements regarding the payment of deferred compensation. Generally, if at any time during a taxable year a nonqualified deferred compensation plan fails to meet the requirements of Section 409A, or is not operated in accordance with those requirements, all amounts deferred under the 2008 Plan and all other equity incentive plans for the taxable year and all preceding taxable years, by any participant with respect to whom the failure relates, are includible in gross income for the taxable year to the extent not subject to a substantial risk of forfeiture and not previously included in gross income. If a deferred amount is required to be included in income under Section 409A, the amount also is subject to interest and an additional income tax. The interest imposed is equal to the interest at the underpayment rate plus one percentage point, imposed on the underpayments that would have occurred had the compensation been includible in income for the taxable year when first deferred, or if later, when not subject to a substantial risk of forfeiture. The additional federal income tax is equal to 20% of the compensation required to be included in gross income. In addition, certain states, including California, have laws similar to Section 409A, which impose additional state penalty taxes on such compensation.
- *Section 162(m) of the Code.* In general, under Section 162(m) of the Code, income tax deductions of publicly held corporations may be limited to the extent total compensation (including, but not limited to, base salary, annual bonus, and income attributable to stock option exercises and other non-qualified benefits) for certain executive officers exceeds $1,000,000 (less the amount of any "excess parachute payments" as defined in Section 280G of the Code) in any taxable year of the corporation. However, under Section 162(m), the deduction limit does not apply to certain "performance-based compensation" established by an independent compensation committee that is adequately disclosed to, and approved by, stockholders. In particular, stock options and SARs will satisfy the "performance-based compensation" exception if the awards are made by a qualifying compensation committee. The 2008 Plan sets the maximum number of shares that can be granted to any person within a specified period and the compensation is based solely on an increase in the stock price after the grant date. Specifically, the option exercise price must be equal to or greater than the fair market value of the stock subject to the award on the grant date. Under a Section 162(m) transition rule for compensation plans of corporations which are privately held and which become publicly held in an initial public offering, the 2008 Plan will not be subject to Section 162(m) until a specified transition date, which is the earlier of:
  - the material modification of the 2008 Plan;

- the issuance of all of the shares of our common stock reserved for issuance under the 2008 Plan;
- the expiration of the 2008 Plan; or
- the first meeting of our stockholders at which members of our board of directors are to be elected that occurs after the close of the third calendar year following the calendar year in which our initial public offering occurs.

After the transition date, rights or awards granted under the 2008 Plan, other than options and SARs, will not qualify as "performance-based compensation" for purposes of Section 162(m) unless such rights or awards are granted or vest upon pre-established objective performance goals, the material terms of which are disclosed to and approved by our stockholders. Thus, we expect that such other rights or awards under the plan will not constitute performance-based compensation for purposes of Section 162(m).

We have attempted to structure the 2008 Plan in such a manner that, after the transition date the compensation attributable to stock options, SARs and other performance-based awards which meet the other requirements of Section 162(m) will not be subject to the $1,000,000 limitation. We have not, however, requested a ruling from the IRS or an opinion of counsel regarding this issue.

2002 Stock Plan, as amended

Our board of directors adopted, and our stockholders approved, the 2002 Stock Plan in November 2002. An aggregate of 12,457,642 shares of our common stock is reserved for issuance under the 2002 Stock Plan. The 2002 Stock Plan provides for the grant of ISOs, NQSOs and stock purchase rights. As of December 31, 2007, options to purchase 8,967,074 shares of our common stock at a weighted average exercise price per share of $1.95 remained outstanding under the 2002 Stock Plan. No stock purchase rights have been granted under the 2002 Stock Plan. As of December 31, 2007, options to purchase 2,446,190 shares of our common stock remained available for future issuance pursuant to awards granted under the 2002 Stock Plan.

Our board of directors, or a committee thereof appointed by our board of directors, has the authority to administer the 2002 Stock Plan and the awards granted under it. Following the completion of this offering, no further awards will be granted under the 2002 Stock Plan; all outstanding awards will continue to be governed by their existing terms.

Stock Options. The 2002 Stock Plan provides for the grant of ISOs under the federal tax laws or NQSOs. ISOs may be granted only to employees. NQSOs and stock purchase rights may be granted to employees, directors or consultants. The exercise price of ISOs granted to employees who at the time of grant own stock representing more than 10% of the voting power of all classes of our common stock may not be less than 110% of the fair market value of our common stock on the date of grant, and the exercise price of ISOs granted to any other employees may not be less than 100% of the fair market value of our common stock on the date of grant. The exercise price of NQSOs to employees, directors or consultants who at the time of grant own stock representing more than 10% of the voting power of all classes of our common stock may not be less than 110% of the fair market value of our common stock on the date of grant, and the exercise price of nonstatutory stock options to all other employees, directors or consultants may not be less than 85% of the fair market value of our common stock on the date of grant. Shares subject to options under the 2002 Stock Plan generally vest in a series of installments over an optionee's period of service, with a minimum vesting rate of at least 20% per year over five years from the date of grant, except with respect to options granted to officers, directors and consultants. This minimum vesting rate does not apply to recipients of options who are tax residents of Germany.

In general, the maximum term of options granted is ten years. The maximum term of options granted to an optionee who owns stock representing more than 10% of the voting power of all classes of our common stock is five years. If an optionee's service relationship with us terminates other than by disability

or death, the optionee may exercise the vested portion of any option in such period of time as specified in the optionee's option agreement, but in no event will such period be less than 30 days following the termination of service. If an optionee's service relationship with us terminates by disability or death, the optionee, or the optionee's designated beneficiary, as applicable, may exercise the vested portion of any option in such period of time as specified in the optionee's option agreement, but in no event will such period be less than six months following the termination of service. Shares of common stock representing any unvested portion of the option on the date of termination shall immediately cease to be issuable and shall become available for issuance under the 2002 Stock Plan. If, after termination, the optionee does not exercise the option within the time period specified, the option shall terminate and the shares of common stock covered by such option will become available for issuance under the 2002 Stock Plan.

Stock Purchase Rights. The 2002 Stock Plan provides that we may issue stock purchase rights alone, in addition to or in tandem with options granted under the 2002 Stock Plan and/or cash awards made outside of the 2002 Stock Plan. Any stock purchase rights will be governed by a restricted stock purchase agreement. We will have the right to repurchase shares of common stock acquired by the purchaser upon exercise of a stock purchase right upon the termination of the purchaser's status as an employee, director or consultant for any reason. The repurchase price for shares acquired by the purchaser upon exercise of a stock purchase right shall be the original price paid by the purchaser. Except with respect to shares purchased by officers, directors and consultants, the repurchase option shall lapse at a rate of at least 20% per year over five years from the date of purchase; this term does not apply to stock purchase rights granted to individuals who are tax residents of Germany. Once the stock purchase right is exercised, the purchaser shall have rights equivalent to those of our other stockholders.

Corporate Transactions. In the event of a proposed dissolution or liquidation, the administrator of the 2002 Stock Plan has the discretion to take one or more of the following actions: (a) provide that any option or stock purchase right be made exercisable until 10 days prior to such transaction; and (b) provide that the Company repurchase option applicable to any shares purchased upon exercise of an option or stock purchase right shall lapse as to all such shares. To the extent options and stock purchase rights have not been previously exercised, all such options and stock purchase rights will terminate immediately prior to the consummation of the proposed transaction.

In the event of certain corporate transactions, the administrator of the 2002 Stock Plan shall adjust the number of shares of common stock that may be delivered under the 2002 Stock Plan and/or the number class and price of shares of common stock covered by each outstanding option or stock purchase right.

Change in Control. In the event we undergo a change in control, and any surviving corporation does not assume options or stock purchase rights under the 2002 Stock Plan, or substitute an equivalent option of the successor corporation or a parent or subsidiary of the successor corporation, the vesting of options or stock purchase rights held by participants in the 2002 Stock Plan, shall be accelerated and made fully exercisable. The holder of such options or stock purchase rights not assumed or substituted shall be notified by the 2002 Stock Plan administrator that the option or stock purchase right is fully exercisable for a period of 15 days from the date of such notice, and shall be terminated if not exercised within such 15 day period.

401(k) Plan

In January 2005, we implemented a 401(k) Plan covering certain employees. Currently, all of our U.S.-based employees over the age of 18 are eligible to participate in the 401(k) Plan. Under the 401(k) Plan, eligible employees may elect to reduce their current compensation by up to the lesser of 75% of their base salary and cash compensation or the prescribed annual limit and contribute these amounts to the 401(k) Plan. The annual limit in 2007 was $15,500. We may make matching or other contributions to the 401(k) Plan on behalf of eligible employees. In 2007, we did not make any contributions to the 401(k) Plan on behalf of eligible employees. The 401(k) Plan is intended to qualify under Section 401 of the Code so that contributions by employees to the 401(k) Plan, and income earned on the 401(k) Plan contributions,

are not taxable to employees until withdrawn from the 401(k) Plan. The trustees under the 401(k) Plan, at the direction of each participant, invest the 401(k) Plan employee salary deferrals in selected investment options.

Limitation on Liability and Indemnification Matters

Our amended and restated certificate of incorporation and amended and restated bylaws, each to be effective upon the completion of this offering, will provide that we will indemnify our directors, officers, employees and agents to the fullest extent permitted by the Delaware General Corporation Law, which prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of the director's duty of loyalty to us or to our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated certificate of incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under our amended and restated bylaws, we will also be empowered to enter into indemnification agreements with our directors, officers, employees and other agents and to purchase insurance on behalf of any person whom we are required or permitted to indemnify.

In addition to the indemnification required in our amended and restated certificate of incorporation and amended and restated bylaws, we will enter into indemnification agreements with each of our current directors, officers, and some employees before the completion of this offering. These agreements provide for the indemnification of our directors, officers, and some employees for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were our agents. We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. Furthermore, we have obtained director and officer liability insurance to cover liabilities our directors and officers may incur in connection with their services to us. This description of the indemnification provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and our indemnification agreements is qualified in its entirety by reference to these documents, each of which is attached as an exhibit to this registration statement.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act,

and is, therefore, unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend or terminate the plan in some circumstances. Our directors and executive officers may also buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material, nonpublic information.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

We describe below transactions, since our inception, to which we were a party or will be a party, in which:

- The amounts involved exceeded or will exceed $120,000; and
- A director, executive officer, holder of more than 5% of our common stock or any member of their immediate family had or will have a direct or indirect material interest.

Preferred Stock Issuances

Issuance of Series E Preferred Stock

During November and December 2007, we sold 6,100,305 shares of Series E preferred stock at a price of $8.50 per share for gross proceeds of $51.9 million, and issued an additional 56,470 shares of Series E preferred stock valued at $480,000 to a professional consulting services firm in exchange for their services. The table below sets forth the number of shares of Series E preferred stock sold to our directors, executive officers and 5% stockholders and their affiliates.

Name	Number of Shares of Series E Preferred Stock	Aggregate Purchase Price
Equilon Enterprises LLC dba Shell Oil Products US(1)	3,584,428	$ 30,467,638.00
CMEA Ventures Life Sciences 2000, L.P.(2) (3)	588,236	5,000,006.00
Pequot Private Equity Fund III, L.P.(4)	588,235	4,999,997.50
CTTV Investments LLC	88,236	750,006.00

(1) William Rothwell is one of our directors and a Vice President of Innovation and Chemicals Technology for Shell Global Solutions (US) Inc., an affiliate of Royal Dutch Shell plc.

(2) Thomas Baruch is one of our directors and a managing director of CMEA Ventures.

(3) Includes 36,471 shares held by CMEA Ventures Life Sciences 2000, Civil Law Partnership, an affiliate of CMEA Ventures Life Sciences 2000, L.P.

(4) Includes 72,677 shares held by Pequot Offshore Private Equity Partners III, L.P., an affiliate of Pequot Private Equity Fund III, L.P.

Issuance of Series D Preferred Stock

In August and October 2006, we issued an aggregate of 10,068,402 shares of our Series D preferred stock at a price per share of approximately $3.97 for an aggregate purchase price of approximately $40.0 million, including cancellation of indebtedness. The table below sets forth the number of shares of Series D preferred stock sold to our directors, executive officers and 5% stockholders and their affiliates.

Name	Number of Shares of Series D Preferred Stock	Aggregate Purchase Price
Biomedical Sciences Investment Fund Pte. Ltd.	5,037,783	$ 19,999,998.51
CMEA Ventures Life Sciences 2000, L.P.(1) (3)	1,520,180	6,035,114.60
Equilon Enterprises LLC dba Shell Oil Products US(2) (6)	1,184,239	5,999,998.96
Pequot Offshore Private Equity Partners III, L.P.(3) (4)	736,375	2,923,408.75
Maxygen, Inc.(5)	254,838	1,011,706.86
CTTV Investments LLC	755,668	3,000,001.96

(1) Thomas Baruch is one of our directors and a managing director of CMEA Ventures.

(2) William Rothwell is one of our directors and a Vice President of Innovation and Chemicals Technology for Shell Global Solutions (US) Inc., an affiliate of Royal Dutch Shell plc.

(3) Includes 94,223 shares held by CMEA Ventures Life Sciences 2000, Civil Law Partnership, an affiliate of CMEA Ventures Life Sciences 2000, L.P.

(4) Includes 645,395 shares held by Pequot Private Equity Fund III, LP, an affiliate of Pequot Offshore Private Equity Partners III, L.P.

(5) Russell J. Howard is one of our directors and the Chief Executive Officer and a director of Maxygen, Inc.

(6) Includes 428,571 shares acquired in November 2007 pursuant to the exercise of a warrant at a price per share of $7.00 per share for an aggregate purchase price of $2,999,997.00.

Registration Rights Agreement

We have entered into an investors' rights agreement with the purchasers of our outstanding preferred stock and certain holders of common stock and warrants to purchase our common stock and preferred stock, including entities with which certain of our directors are affiliated. Additionally, in connection with our acquisition of Jülich Fine Chemicals GmbH we entered into a registration rights agreement with certain stockholders of Jülich who acquired shares of our common stock in connection with the acquisition. As of December 31, 2007, the holders of 33,124,426 shares of our common stock, including the shares of common stock issuable upon the automatic conversion of our preferred stock and shares of common stock issued upon exercise of warrants, are entitled to rights with respect to the registration of their shares under the Securities Act. For a more detailed description of these registration rights, see "Description of Capital Stock — Registration Rights."

Other Transactions

In March 2002, we licensed our core enabling technology from Maxygen and commenced operations.
The license agreement was amended in September 2002, October 2002 and August 2006. See "Business — License Agreement with Maxygen."

In November 2006, we entered into a research agreement and license agreement with Shell. In November 2007, we entered into a new collaboration under an amended and restated collaborative research agreement and an amended and restated license agreement. See "Strategic Collaborations — Shell."

We have entered into change of control agreements with certain of our executive officers that, among other things, provide for certain severance and change of control benefits. For a description of these agreements, see "Management — Change in Control Agreements."

We have granted stock options to our executive officers and certain of our directors. For a description of these options, see "Management — Grants of Plan-Based Awards in 2007 Table."

We will enter into indemnification agreements with each of our current directors, officers, and some employees before the completion of this offering. See "Management — Limitation on Liability and Indemnification Matters."

Policies and Procedures for Related Party Transactions

Our board of directors intends to adopt a written related person transaction policy to set forth the policies and procedures for the review and approval or ratification of related person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, the amount involved exceeds $120,000, and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness, and employment by us of a related person.

PRINCIPAL STOCKHOLDERS

The following table sets forth information about the beneficial ownership of our common stock at December 31, 2007 (based on the number of shares of common stock outstanding on December 31, 2007, as adjusted to reflect the conversion of all shares of our outstanding preferred stock and assuming the sale of shares of our common stock in this offering) as adjusted to reflect the sale of the shares of common stock in this offering for:

- each person known to us to be the beneficial owner of more than 5% of our common stock;
- each named executive officer and each director; and
- all of our executive officers and directors as a group.

Unless otherwise noted below, the address of each beneficial owner listed on the table is c/o Codexis, Inc., 200 Penobscot Drive, Redwood City, CA 94063. We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the tables below have sole voting and investment power with respect to all shares of common stock that they beneficially own, subject to applicable community property laws.

In computing the number of shares of common stock beneficially owned by a person after the offering, we have assumed the issuance of 32,330,100 shares of common stock to holders of our preferred stock upon the closing of this offering as a cumulative dividend, pursuant to the terms of our certificate of incorporation.

In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed outstanding shares of common stock subject to options or warrants held by that person that are currently exercisable or exercisable within 60 days of December 31, 2007. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

We have based our calculation of the percentage of beneficial ownership prior to the offering on 35,716,889 shares of common stock outstanding on December 31, 2007 (as adjusted to reflect at that date the conversion of all shares of our preferred stock outstanding into 32,330,100 shares of common stock). We have based our calculation of the percentage of beneficial ownership after the offering on shares of our common stock outstanding immediately after the completion of this offering.

	Number of Shares Beneficially Owned		Percentage of Shares Beneficially Owned	
Name and Address of Beneficial Owner	Prior to the Offering	After the Offering	Prior to the Offering	After the Offering
5% Stockholders:				
Maxygen, Inc.(1)	8,981,888		25.11%	
Biomedical Sciences Investment Fund Pte Ltd(2)	5,037,783		14.10%	
Equilon Enterprises LLC dba Shell Oil Products US	4,768,667		13.35%	
Entities affiliated with CMEA Ventures(3)	4,515,397		12.59%	
Entities affiliated with Pequot Capital Management(4)	4,009,411		11.20%	
CTTV Investments LLC(5)	2,510,348		7.02%	
Executive Officers and Directors:				
Alan Shaw(6)	1,103,081		3.01%	
Robert S. Breuil(7)	206,827		*	
John Grate(8)	346,248		*	
Douglas T. Sheehy	—		*	
David Walshaw(9)	122,674		*	
Thomas R. Baruch(10)	4,515,397		12.59%	
Russell J. Howard(11)	8,981,888		25.11%	
Bernard J. Kelley(12)	95,000		*	
Bruce Pasternack(13)	25,000		*	
William Rothwell	—		*	
Dennis P. Wolf(14)	25,000		*	
All executive officers and directors as a group (11 persons)	15,421,115		41.07%	

* Represents beneficial ownership of less than one percent (1%) of the outstanding shares of our common stock.

(1) Includes 46,224 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by Maxygen, Inc.

(2) EDB Investments Pte Ltd, or EDB Investments, the parent entity of Biomedical Sciences Investment Fund Pte Ltd, and the Economic Development Board of Singapore, or EDB, the ultimate parent entity of EDB Investments, may be deemed to have voting and dispositive power over the shares owned beneficially and of record by Biomedical Sciences Investment Fund Pte Ltd.

(3) Includes (i) 4,105,438 shares and 130,078 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by CMEA Ventures Life Sciences 2000, L.P. and (ii) 271,286 shares and 8,595 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by CMEA Ventures Life Sciences 2000, Civil Law Partnership. CMEA Ventures LS Management 2000, L.P. is the general partner to CMEA Ventures Life Sciences 2000, L.P. and the managing limited partner of CMEA Ventures Life Sciences 2000, Civil Law Partnership. David Collier, Karl Handelsman and Thomas Baruch are the general partners of CMEA Ventures LS Management 2000, L.P. and as such, have voting and dispositive power over these shares. Each disclaims beneficial ownership of the shares and warrants held by these entities except to the extent of any pecuniary interest therein.

(4) Includes (i) 3,433,018 shares and 81,026 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by Pequot Private Equity Fund III, LP and (ii) 483,945 shares and 11,422 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by Pequot Offshore Private Equity Partners III, LP. Pequot Capital Management, Inc. is the investment manager/advisor of, and exercises sole investment discretion over, Pequot Private Equity Fund III, LP and Pequot Offshore Private Equity Partners III, LP, and as such, has voting and dispositive power over these shares. Arthur J. Samberg is the executive officer, director and controlling stockholder of Pequot Capital Management, Inc. Mr. Samberg disclaims beneficial ownership of the shares and shares underlying warrants held by these entities, except to the extent of his pecuniary interest therein.

(5) Includes 46,224 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by CTTV Investments LLC.

(6) Includes 965,581 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2007.

(7) Includes 206,827 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2007.

(8) Includes 246,248 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2007.

(9) Includes 122,674 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2007.

(10) Includes (i) 4,105,438 shares and 130,078 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by CMEA Ventures Life Sciences 2000, L.P. and (ii) 271,286 shares and 8,595 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by CMEA Ventures Life Sciences 2000, Civil Law Partnership. CMEA Ventures LS Management 2000, L.P. is the general partner to CMEA Ventures Life Sciences 2000, L.P. and the managing limited partner of CMEA Ventures Life Sciences 2000, Civil Law Partnership. Mr. Baruch is a general partner of CMEA Ventures LS Management 2000, L.P. and as such, has voting and dispositive power over these shares. Mr. Baruch disclaims beneficial ownership of the shares and warrants held by these entities except to the extent of his pecuniary interest therein.

(11) Includes 8,935,664 shares and 46,224 shares that may be acquired pursuant to the exercise of a warrant held prior to this offering by Maxygen, Inc. Dr. Howard is the chief executive officer and a member of the board of directors of Maxygen and may be deemed to be the beneficial owner of our securities held by Maxygen. Dr. Howard disclaims beneficial ownership of all our securities held by Maxygen, except to the extent of his pecuniary interest therein.

(12) Includes 57,500 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2007, and 28,647 shares of which are subject to a right of repurchase within 60 days of December 31, 2007, at the original option exercise price, in the event the holder ceases to provide services to us. The option exercise prices range from $0.70 to $1.63 per share.

(13) Includes 25,000 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2007, all of which are subject to a right of repurchase within 60 days of December 31, 2007, at the original option exercise price, in the event the holder ceases to provide services to us. The option exercise price is $4.47 per share.

(14) Includes 25,000 shares issuable pursuant to stock options exercisable within 60 days of December 31, 2007, all of which are subject to a right of repurchase within 60 days of December 31, 2007, at the original option exercise price, in the event the holder ceases to provide services to us. The option exercise price is $5.79 per share.

DESCRIPTION OF CAPITAL STOCK

General

Upon the completion of this offering, we will have authorized under our amended and restated certificate of incorporation shares of common stock, $0.0001 par value per share, and shares of preferred stock, $ par value per share. The following information assumes the filing of our amended and restated certificate of incorporation and the conversion of all outstanding shares of our preferred stock into shares of common stock upon the completion of this offering.

As of December 31, 2007, there were outstanding:

- 35,716,889 shares of our common stock held by approximately 81 stockholders; and
- 9,032,075 shares issuable upon exercise of outstanding stock options.

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated bylaws to be in effect upon the completion of this offering are summaries and are qualified by reference to the amended restated certificate of incorporation and the amended and restated bylaws. Copies of these documents have been filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part. The descriptions of the common stock and preferred stock reflect changes to our capital structure that will occur upon the closing of this offering. Currently, there is no established public trading market for our common stock.

Common Stock

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

Preferred Stock

Upon the completion of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series and to fix

the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control of our company or other corporate action. Upon completion of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Warrants

The following table sets forth information about outstanding warrants to purchase shares of our stock as of December 31, 2007. Upon completion of this offering, the warrants to purchase shares of our Series D preferred stock will automatically convert into warrants to purchase our common stock.

Class of Stock	Number of Shares	Exercise Price/Share	Expiration Date
Common	46,176	$ 0.40	02/12/2011
Common	9,100	0.70	10/25/2012
Common	3,577	8.30	02/09/2016
Series D preferred stock	323,569	3.97	05/25/2013
Series D preferred stock	109,091	5.50	09/28/2017

Registration Rights

We are party to an investor's agreement which provides that holders of our preferred stock and our founding stockholder, Maxygen, have the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we are otherwise filing. In the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, these holders are entitled to notice of such registration and are entitled to certain "piggyback" registration rights allowing the holder to include their common stock in such registration, subject to certain marketing and other limitations. Pursuant to the investor's rights agreement, the holders of common stock issuable upon conversion of our preferred stock have the right upon the earlier of 180 days after the completion of this offering and November 13, 2010 to require us, on not more than 2 occasions, to file a registration statement under the Securities Act in order to register the resale of their shares of common stock with an anticipated aggregate offering price, net of underwriting discounts and commissions, of at least ten million dollars. We may, in certain circumstances, defer such registrations and any underwriters will have the right, subject to certain limitations, to limit the number of shares included in such registrations. Further, these holders may require us to register the resale of all or a portion of their shares on a registration statement on Form S-3 once we are eligible to use Form S-3, subject to certain conditions and limitations. In an underwritten offering, the underwriter, has the right, subject to specified conditions, to limit the number of registrable securities such holders may include. Additionally, the holders of registration rights have waived their rights to include any of their shares in this offering prior to the completion of this offering.

In connection with our acquisition of Jülich Fine Chemicals GmbH in February 2005, we entered into a registration rights agreement with certain stockholders of Jülich who acquired shares of our common stock in connection with the acquisition. If we propose to register any of our securities under the Securities Act, these stockholders are entitled to notice of such registration and are entitled to certain "piggyback" registration rights allowing the holder to include their common stock in such registration, subject to certain marketing and other limitations. In an underwritten offering, the underwriter, has the right, subject to specified conditions, to limit the number of registrable securities such holders may include. The holders of these registration rights have waived their rights to include any of their shares in this offering prior to the completion of this offering.

Anti-Takeover Provisions

Certificate of Incorporation and Bylaws to be in Effect Upon the Completion of this Offering

Our amended and restated certificate of incorporation to be in effect upon the completion of this offering will provide for our board of directors to be divided into three classes, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors. Our amended and restated certificate of incorporation and amended and restated bylaws to be effective upon the completion of this offering will provide that all stockholder action must be effected at a duly called meeting of stockholders and not by a consent in writing, and that only our board of directors, chairman of the board, chief executive officer, or president (in the absence of a chief executive officer) may call a special meeting of stockholders.

Our amended and restated certificate of incorporation will require a $66^{2}/_{3}$% stockholder vote for the amendment, repeal or modification of certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws relating to the classification of our board of directors, the requirement that stockholder actions be effected at a duly called meeting, and the designated parties entitled to call a special meeting of the stockholders. The combination of the classification of our board of directors, the lack of cumulative voting and the $66^{2}/_{3}$% stockholder voting requirements will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Because our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions may have the effect of deterring hostile takeovers or delaying changes in our control or management. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of us. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts. Such provisions may also have the effect of preventing changes in our management.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested holder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or is an affiliate or associate of the corporation and within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Limitations of Liability and Indemnification Matters

For an in depth discussion of liability and indemnification, please see "Management — Limitation on Liability and Indemnification Matters."

The Nasdaq Global Market Listing

We intend to apply to have our common stock approved for listing on The Nasdaq Global Market under the symbol "CDXS."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is .

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock. Future sales of our common stock in the public market, or the availability of such shares for sale in the public market, could adversely affect market prices prevailing from time to time. As described below, only a limited number of shares will be available for sale shortly after this offering due to contractual and legal restrictions on resale. Nevertheless, sales of our common stock in the public market after such restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price at such time and our ability to raise equity capital in the future.

Based on the number of shares of common stock outstanding as of December 31, 2007, upon completion of this offering, shares of common stock will be outstanding, assuming no exercise of the underwriters' over-allotment option and no exercise of options or warrants. All of the shares sold in this offering will be freely tradable unless purchased by our affiliates. The remaining 35,716,889 shares of common stock outstanding after this offering will be restricted as a result of securities laws or lock-up agreements as described below. Following the expiration of the lock-up period, all shares will be eligible for resale in compliance with Rule 144 or Rule 701 to the extent such shares have been released from any repurchase option that we may hold. "Restricted securities" as defined under Rule 144 were issued and sold by us in reliance on exemptions from the registration requirements of the Securities Act. These shares may be sold in the public market only if registered pursuant to an exemption from registration, such as Rule 144 or Rule 701 under the Securities Act.

Rule 144

In general, under Rule 144 of the Securities Act, as in effect on the date of this prospectus, a person (or persons whose shares are aggregated) who has beneficially owned restricted stock for at least six months, will be entitled to sell in any three-month period a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding (shares immediately after this offering or shares if the underwriters' over-allotment is exercised in full); or
- the average weekly trading volume of our common stock on The Nasdaq Global Market during the four calendar weeks immediately preceding the date on which the notice of sale is filed with the SEC.

Sales pursuant to Rule 144 are subject to requirements relating to manner of sale, notice and availability of current public information about us. A person (or persons whose shares are aggregated) who is not deemed to be an affiliate of ours for 90 days preceding a sale, and who has beneficially owned restricted stock for at least one year is entitled to sell such shares without complying with the manner of sale, public information, volume limitation or notice provisions of Rule 144. Rule 144 will not be available to any stockholders until we have been subject to the reporting requirements of the Exchange Act for 90 days.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares. However, substantially all Rule 701 shares are subject to lock-up agreements as described below and under "Underwriting" included elsewhere in this prospectus and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Lock-up Agreements

We, along with our directors, executive officers and substantially all of our other security holders have agreed with the underwriters that for a period of 180 days following the date of this prospectus, we or they will not offer, sell, contract to sell, pledge, or otherwise dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock, or enter into any swap, hedge or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock whether any of these transactions are to be settled by delivery of our common stock or other securities, in cash or otherwise, or publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge or other arrangement, subject to specified exceptions. Credit Suisse Securities (USA) LLC and Goldman, Sachs & Co. may, in their sole discretion, at any time without prior notice, release all or any portion of the shares from the restrictions in any such agreement.

The 180-day restricted period described in the preceding paragraph will be extended if:

- during the last 17 days of the 180-day restricted period we issue an earnings release or material news or a material event relating to us occurs; or
- prior to the expiration of the 180-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day period,

in which case the restrictions described in the preceding paragraph will continue to apply until the expiration of the 18-day period beginning on the issuance of the release or the occurrence of the material news or material event, unless such extension is waived, in writing, by Credit Suisse Securities (USA) LLC and Goldman, Sachs & Co. on behalf of the underwriters.

Registration Rights

We are party to an investor rights agreement which provides that holders of our preferred stock and our founding stockholders have the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we are otherwise filing. We are also party to a registration rights agreement with certain former stockholders of Jülich Fine Chemicals GmbH, which we acquired in February 2005, who are entitled to certain "piggyback" registration rights. See "Description of Capital Stock—Registration Rights." Except for shares purchased by affiliates, registration of their shares under the Securities Act would result in these shares becoming freely tradable without restriction under the Securities Act immediately upon effectiveness of the registration, subject to the expiration of the lock-up period and to the extent such shares have been released from any repurchase option that we may hold.

Stock Plans

As soon as practicable after the completion of this offering, we intend to file a Form S-8 registration statement under the Securities Act to register shares of our common stock subject to options outstanding or reserved for issuance under our 2002 Stock Plan and our 2008 Incentive Award Plan. This registration statement will become effective immediately upon filing, and shares covered by this registration statement will thereupon be eligible for sale in the public markets, subject to Rule 144 limitations applicable to affiliates and any lock-up agreements. For a more complete discussion of our stock plans, see "Management—Employee Benefit and Stock Plans."

CERTAIN MATERIAL UNITED STATES FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a summary of certain material United States federal income tax consequences to non-U.S. holders (as defined below) of the acquisition, ownership and disposition of our common stock issued pursuant to this offering. This discussion is not a complete analysis of all of the potential United States federal income tax consequences relating thereto, nor does it address any estate and gift tax consequences or any tax consequences arising under any state, local or foreign tax laws, or any other United States federal tax laws. This discussion is based on the Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the Internal Revenue Service, or IRS, all as in effect as of the date of this offering. These authorities may change, possibly retroactively, resulting in United States federal income tax consequences different from those discussed below. No ruling has been or will be sought from the IRS with respect to the matters discussed below, and there can be no assurance that the IRS will not take a contrary position regarding the tax consequences of the acquisition, ownership or disposition of our common stock, or that any such contrary position would not be sustained by a court.

This discussion is limited to non-U.S. holders who purchase our common stock issued pursuant to this offering and who hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all of the United States federal income tax consequences that may be relevant to a particular holder in light of such holder's particular circumstances. This discussion also does not consider any specific facts or circumstances that may be relevant to holders subject to special rules under the United States federal income tax laws, including, without limitation:

- U.S. expatriates or former long-term residents of the United States;
- partnerships or other pass-through entities;
- real estate investment trusts;
- regulated investment companies;
- "controlled foreign corporations," "passive foreign investment companies" corporations that accumulate earnings to avoid United States federal income tax;
- banks, insurance companies, or other financial institutions;
- brokers, dealers, or traders in securities, commodities or currencies;
- tax-exempt organizations;
- tax-qualified retirement plans;
- persons subject to the alternative minimum tax; or
- persons holding our common stock as part of a hedging or conversion transaction or straddle, or a constructive sale, or other risk reduction strategy.

PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR UNITED STATES FEDERAL INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL OR FOREIGN TAX LAWS AND ANY OTHER UNITED STATES FEDERAL TAX LAWS.

Definition of Non-U.S. Holder

For purposes of this discussion, a non-U.S. holder is any beneficial owner of our common stock that is not a "U.S. person" or a partnership (or other entity treated as a partnership) for United States federal income tax purposes. A U.S. person is any of the following:

- an individual citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for United States federal income tax purposes) created or organized under the laws of the United States, any state therein or the District of Columbia;
- an estate the income of which is subject to United States federal income tax regardless of its source; or
- a trust (1) the administration of which is subject to the primary supervision of a United States court and all substantial decisions of which are controlled by one or more United States persons who have the authority, or (2) that has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

Distributions on Our Common Stock

If we make cash or other property distributions on our common stock, such distributions will constitute dividends for United States federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under United States federal income tax principles. Amounts not treated as dividends for United States federal income tax purposes will constitute a return of capital and will first be applied against and reduce a holder's adjusted tax basis in the common stock, but not below zero. Any excess will be treated as gain realized on the sale or other disposition of the common stock and will be treated as described under "Gain on Disposition of Our Common Stock" below.

Dividends paid to a non-U.S. holder of our common stock generally will be subject to United States federal withholding tax at a rate of 30% of the gross amount of the dividends, or such lower rate specified by an applicable income tax treaty. To receive the benefit of a reduced treaty rate, a non-U.S. holder must furnish to us or our paying agent a valid IRS Form W-8BEN (or applicable successor form) certifying such holder's qualification for the reduced rate. This certification must be provided to us or our paying agent prior to the payment of dividends and must be updated periodically. Non-U.S. holders that do not timely provide us or our paying agent with the required certification, but which qualify for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

If a non-U.S. holder holds our common stock in connection with the conduct of a trade or business in the United States, and dividends paid on the common stock are effectively connected with such holder's United States trade or business, and, if required by an applicable income tax treaty, attributable to a permanent establishment maintained by the non-U.S. holder in the United States, the non-U.S. holder will be exempt from United States federal withholding tax. To claim the exemption, the non-U.S. holder must furnish to us or our paying agent a properly executed IRS Form W-8ECI (or applicable successor form).

Any dividends paid on our common stock that are effectively connected with a non-U.S. holder's United States trade or business (and if required by an applicable income tax treaty, attributable to a permanent establishment maintained by the non-U.S. holder in the United States) generally will be subject to United States federal income tax on a net income basis at the regular graduated United States federal income tax rates in much the same manner as if such holder were a resident of the United States, unless an applicable income tax treaty provides otherwise. A non-U.S. holder that is a foreign corporation also may be subject to a branch profits tax equal to 30% (or such lower rate specified by an applicable income tax

treaty) of a portion of its effectively connected earnings and profits for the taxable year. Non-U.S. holders are urged to consult any applicable income tax treaties that may provide for different rules.

A non-U.S. holder who claims the benefit of an applicable income tax treaty generally will be required to satisfy applicable certification and other requirements prior to the distribution date. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

Gain on Disposition of Our Common Stock

A non-U.S. holder generally will not be subject to United States federal income tax on any gain realized upon the sale or other disposition of our common stock, unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States, and if required by an applicable income tax treaty, attributable to a permanent establishment maintained by the non-U.S. holder in the United States;
- the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the calendar year of the disposition, and certain other requirements are met; or
- our common stock constitutes a "United States real property interest" by reason of our status as a United States real property holding corporation, or USRPHC, for United States federal income tax purposes at any time within the shorter of the five-year period preceding the disposition or the non-U.S. holder's holding period for our common stock. The determination of whether we are a USRPHC depends on the fair market value of our United States real property interests relative to the fair market value of our other trade or business assets and our foreign real property interests.

We believe we are not currently and do not anticipate becoming a USRPHC for United States federal income tax purposes. Even if we become a USRPHC, however, so long as our common stock is regularly traded on an established securities market, such common stock will be treated as U.S. real property interests only if the non-U.S. holder actually or constructively holds more than 5% of our common stock.

Unless an applicable income tax treaty provides otherwise, gain described in the first bullet point above will be subject to United States federal income tax on a net income basis at the regular graduated United States federal income tax rates in much the same manner as if such holder were a resident of the United States. Non-U.S. holders that are foreign corporations also may be subject to a branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of a portion of its effectively connected earnings and profits for the taxable year.

Gain described in the second bullet point above will be subject to United States federal income tax at a flat 30% rate (or such lower rate specified by an applicable income tax treaty), but may be offset by United States source capital losses (even though the individual is not considered a resident of the United States).

Non-U.S. holders are urged to consult any applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each non-U.S. holder the amount of distributions on our common stock paid to such holder and the amount of tax withheld with respect to those distributions, if any. These information reporting requirements apply even if no withholding was required because the distributions were effectively connected with the holder's conduct of a United States trade or business, or withholding was reduced or eliminated by an applicable income tax treaty. This information also may be made available under a specific treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established. Backup withholding, currently at a 28% rate, however, generally will not apply to payments made to a non-U.S. holder of our common stock provided the non-U.S. holder

furnishes to us or our paying agent the required certification as to its non-U.S. status, such as by providing a valid IRS Form W-8BEN or IRS Form W-8ECI, or certain other requirements are met. Notwithstanding the foregoing, backup withholding may apply if either we have or our paying agent has actual knowledge, or reason to know, that the holder is a U.S. person that is not an exempt recipient.

Payments of the proceeds from a disposition by a non-U.S. holder of our common stock made by or through a foreign office of a broker generally will not be subject to information reporting or backup withholding. However, information reporting (but not backup withholding) will apply to those payments if the broker does not have documentary evidence that the beneficial owner is a non-U.S. holder or an exemption is not otherwise established, and the broker is:

- a U.S. person;
- a controlled foreign corporation for United States federal income tax purposes;
- a foreign person 50% or more of whose gross income is effectively connected with a United States trade or business for a specified three-year period; or
- a foreign partnership if at any time during its tax year (1) one or more of its partners are U.S. persons who hold in the aggregate more than 50% of the income or capital interest in such partnership, or (2) it is engaged in the conduct of a United States trade or business.

Payment of the proceeds from a non-U.S. holder's disposition of our common stock made by or through the United States office of a broker generally will be subject to information reporting and backup withholding unless the non-U.S. holder certifies as to its non-U.S. holder status under penalties of perjury, such as by providing a valid IRS Form W-8BEN or IRS Form W-8ECI, or otherwise establishes an exemption from information reporting and backup withholding.

Backup withholding is not an additional tax. Rather, the U.S. income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. Any overpayment of taxes as a result of backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's United States federal income tax liability, provided the required information is timely furnished to the IRS.

UNDERWRITING

Under the terms and subject to the conditions contained in an underwriting agreement dated , 2008 we have agreed to sell to the underwriters named below, for whom Credit Suisse Securities (USA) LLC, Goldman, Sachs & Co., Piper Jaffray & Co., RBC Capital Markets Corporation and Thomas Weisel Partners LLC are acting as representatives, the following respective numbers of shares of common stock:

Underwriter	Number of Shares
Credit Suisse Securities (USA) LLC	
Goldman, Sachs & Co.	
Piper Jaffray & Co.	
RBC Capital Markets Corporation	
Thomas Weisel Partners LLC	
Total	

The underwriting agreement provides that the underwriters are obligated to purchase all the shares of common stock in the offering if any are purchased, other than those shares covered by the over-allotment option described below. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may be increased or the offering may be terminated.

We have granted to the underwriters a 30-day option to purchase on a pro rata basis up to additional shares of common stock at the initial public offering price less the underwriting discounts and commissions. The option may be exercised only to cover any over-allotments of common stock.

The underwriters propose to offer the shares of common stock initially at the public offering price on the cover page of this prospectus and to selling group members at that price less a selling concession of $ per share. The underwriters and selling group members may allow a discount of $ per share on sales to other broker/dealers. After the initial public offering the representatives may change the public offering price and concession and discount to broker/dealers.

The following table summarizes the compensation and estimated expenses we will pay:

	Per Share		Total	
	Without Over-allotment	With Over-allotment	Without Over-allotment	With Over-allotment
Underwriting Discounts and Commissions paid by us	$	$	$	$
Expenses payable by us	$	$	$	$

The representatives have informed us that they do not expect sales to accounts over which the underwriters have discretionary authority to exceed 5% of the shares of common stock being offered.

We have agreed that we will not offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, without the prior written consent of Credit Suisse Securities (USA) LLC and Goldman, Sachs & Co., or the Lead Representatives, for a period of 180 days after the date of this prospectus, except issuances pursuant to the exercise of warrants or employee stock options outstanding on the date hereof or grants of employee stock options pursuant to the terms of a plan in effect on the date hereof. However, in the event that either (1) during the last 17 days of the “lock-up” period, we release earnings results or material news or a material event relating to us occurs or (2) prior to the expiration of the “lock-up” period, we announce that we will release earnings results during the 16-day period beginning on the last day of the “lock-up” period, then in either case the expiration of the “lock-up” will be extended until the expiration of the 18-day period

beginning on the date of the release of the earnings results or the occurrence of the material news or event, as applicable, unless the Lead Representatives waive, in writing, such an extension.

Our officers and directors and holders of all of our outstanding securities have agreed that they will not offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, enter into a transaction that would have the same effect, or enter into any swap, hedge or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock, whether any of these transactions are to be settled by delivery of our common stock or other securities, in cash or otherwise, or publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge or other arrangement, without, in each case, the prior written consent of the Lead Representatives for a period of 180 days after the date of this prospectus, except transfers of shares of our common stock or securities convertible into or exchangeable or exercisable for shares of our common stock by will or intestate succession, in connection with a bona fide gift or in distributions to limited partners, members or stockholders of a security holder. However, in the event that either (1) during the last 17 days of the "lock-up" period, we release earnings results or material news or a material event relating to us occurs or (2) prior to the expiration of the "lock-up" period, we announce that we will release earnings results during the 16-day period beginning on the last day of the "lock-up" period, then in either case the expiration of the "lock-up" will be extended until the expiration of the 18-day period beginning on the date of the release of the earnings results or the occurrence of the material news or event, as applicable, unless the Lead Representatives waive, in writing, such an extension. Notwithstanding the foregoing, our officers and directors may enter into a written trading plan established pursuant to Rule 10b5-1 of the Exchange Act during the "lock-up" period, and we may announce the establishment of such a plan, provided that no direct or indirect offers, pledges, sales, contracts to sell, sales of any option or contract to purchase, purchases of any option or contract to sell, grants of any option, right or warrant to purchase, loans, or other transfers or disposals of any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock may be effected pursuant to such plan during the "lock-up" period.

We have agreed to indemnify the underwriters against liabilities under the Securities Act, or contribute to payments that the underwriters may be required to make in that respect.

Prior to this offering, there has been no public market for our common stock. The initial public offering price has been negotiated among us and the representatives. Among the factors to be considered in determining the initial public offering price of the shares of our common stock, in addition to prevailing market conditions, will be our historical performance, estimates of our business potential and earnings prospects, an assessment of our management and the consideration of the above factors in relation to market valuation of companies in related businesses. We intend to apply to list the shares of our common stock on The Nasdaq Global Market, under the symbol "CDXS."

Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for the company, for which they received or will receive customary fees and expenses.

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' over-allotment option to purchase additional shares from us in the offering. The underwriters may close out any covered short position by either exercising their over-allotment option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may

purchase additional shares pursuant to the over-allotment option granted to them. "Naked" short sales are any sales in excess of such over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of the company's stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued at any time. These transactions may be effected on The Nasdaq Global Market, in the over-the-counter market or otherwise.

A prospectus in electronic format may be made available on the web sites maintained by one or more of the underwriters, or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representatives may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations.

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), each underwriter has represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) it has not made and will not make an offer of shares to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of shares to the public in that Relevant Member State at any time:

(a) to legal entities which are authorised or regulated to operate in the financial markets or, if not so authorised or regulated, whose corporate purpose is solely to invest in securities;

(b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;

(c) to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the representatives for any such offer; or

(d) in any other circumstances which do not require the publication by the company of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer of shares to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to

decide to purchase or subscribe the shares, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression Prospectus Directive means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

Each underwriter has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Market Act 2000 (as amended), or the FSMA) received by it in connection with the issue or sale of the shares in circumstances in which Section 21(1) of the FSMA would not apply to the company; and
- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares in, from or otherwise involving the United Kingdom.

The shares may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), or (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 by a relevant person which is: (a) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for 6 months after that corporation or that trust has acquired the shares under Section 275 except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA; (2) where no consideration is given for the transfer; or (3) by operation of law.

The securities have not been and will not be registered under the Securities and Exchange Law of Japan (the Securities and Exchange Law) and each underwriter has agreed that it will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under

the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Securities and Exchange Law and any other applicable laws, regulations and ministerial guidelines of Japan.

NOTICE TO CANADIAN RESIDENTS

Resale Restrictions

The distribution of our common stock in Canada is being made only on a private placement basis exempt from the requirement that we prepare and file a prospectus with the securities regulatory authorities in each province where trades of common stock are made. Any resale of our common stock in Canada must be made under applicable securities laws which will vary depending on the relevant jurisdiction, and which may require resales to be made under available statutory exemptions or under a discretionary exemption granted by the applicable Canadian securities regulatory authority. Purchasers are advised to seek legal advice prior to any resale of our common stock.

Representations of Purchasers

By purchasing our common stock in Canada and accepting a purchase confirmation a purchaser is representing to us and the dealer from whom the purchase confirmation is received that:

- the purchaser is entitled under applicable provincial securities laws to purchase our common stock without the benefit of a prospectus qualified under those securities laws,
- where required by law, that the purchaser is purchasing as principal and not as agent,
- the purchaser has reviewed the text above under the heading “Resale Restrictions,” and
- the purchaser acknowledges and consents to the provision of specified information concerning its purchase of our common stock to the regulatory authority that by law is entitled to collect the information.

Further details concerning the legal authority for this information is available on request.

Rights of Action — Ontario Purchasers Only

Under Ontario securities legislation, certain purchasers who purchase a security offered by this prospectus during the period of distribution will have a statutory right of action for damages, or while still the owner of the common stock, for rescission against us in the event that this prospectus contains a misrepresentation without regard to whether the purchaser relied on the misrepresentation. The right of action for damages is exercisable not later than the earlier of 180 days from the date the purchaser first had knowledge of the facts giving rise to the cause of action and three years from the date on which payment is made for the common stock. The right of action for rescission is exercisable not later than 180 days from the date on which payment is made for the common stock. If a purchaser elects to exercise the right of action for rescission, the purchaser will have no right of action for damages against us. In no case will the amount recoverable in any action exceed the price at which the common stock was offered to the purchaser and if the purchaser is shown to have purchased the securities with knowledge of the misrepresentation, we will have no liability. In the case of an action for damages, we will not be liable for all or any portion of the damages that are proven to not represent the depreciation in value of the common stock as a result of the misrepresentation relied upon. These rights are in addition to, and without derogation from, any other rights or remedies available at law to an Ontario purchaser. The foregoing is a summary of the rights available to an Ontario purchaser. Ontario purchasers should refer to the complete text of the relevant statutory provisions.

Enforcement of Legal Rights

All of our directors and officers as well as the experts named herein may be located outside of Canada and, as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon us or those persons. All or a substantial portion of our assets and the assets of those persons may be

located outside of Canada and, as a result, it may not be possible to satisfy a judgment against us or those persons in Canada or to enforce a judgment obtained in Canadian courts against us or those persons outside of Canada.

Taxation and Eligibility for Investment

Canadian purchasers of our common stock should consult their own legal and tax advisors with respect to the tax consequences of an investment in our common stock in their particular circumstances and about the eligibility of our common stock for investment by the purchaser under relevant Canadian legislation.

LEGAL MATTERS

The validity of our common stock offered by this prospectus will be passed upon for us by Latham & Watkins LLP, Menlo Park, California. Certain attorneys and investment funds affiliated with the firm collectively own less than 1% of our shares of preferred stock, which will convert into an aggregate of less than 1% of our shares of common stock upon the completion of this offering. Certain legal matters in connection with this offering will be passed upon for the underwriters by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California.

EXPERTS

The consolidated financial statements of Codexis, Inc. as of December 31, 2006 and 2007, and for each of the three years in the period ended December 31, 2007, included in this Prospectus have been so included in reliance on the report of Ernst & Young LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the Securities and Exchange Commission a registration statement on Form S-1 under the Securities Act, with respect to the shares of our common stock offered hereby. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. Some items are omitted in accordance with the rules and regulations of the SEC. For further information with respect to us and the common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed therewith. Statements contained in this prospectus as to the contents of any contract, agreement or any other document are summaries of the material terms of this contract, agreement or other document. With respect to each of these contracts, agreements or other documents filed as an exhibit to the registration statement, reference is made to the exhibits for a more complete description of the matter involved. A copy of the registration statement, and the exhibits and schedules thereto, may be inspected without charge at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. Copies of these materials may be obtained by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facility. The SEC maintains a web site that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the SEC's website is http://www.sec.gov.

Upon completion of this offering, we will become subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, will file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information will be available for inspection and copying at the public reference room and web site of the SEC referred to above. We maintain a website at www.codexis.com. You may access our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website address does not constitute incorporation by reference of the information contained on our website.

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Codexis, Inc.

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Codexis, Inc.

We have audited the accompanying consolidated balance sheets of Codexis, Inc. at December 31, 2006 and 2007, and the related consolidated statements of operations, redeemable convertible preferred stock and stockholders' deficit, and cash flows for each of the three years in the period ended December 31, 2007. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Codexis, Inc. at December 31, 2006 and 2007, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2007, in conformity with U.S. generally accepted accounting principles.

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for stock-based compensation as of January 1, 2006 and changed its method of accounting for uncertain tax positions as of January 1, 2007.

/s/ Ernst & Young LLP

Palo Alto, California
April 10, 2008

Codexis, Inc.

Consolidated Balance Sheets
(In thousands, except share data)

	December 31,		Pro Forma as of December 31, 2007 (Note 2)
	2006	2007	(unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 32,246	$ 55,075	$ 55,075
Marketable securities	—	28,995	28,995
Accounts receivable, net of allowances of $250 at December 31, 2006 and 2007	2,653	4,752	4,752
Related party accounts receivable	101	1,680	1,680
Inventories	675	1,195	1,195
Prepaid expenses and other current assets	674	1,209	1,209
Total current assets	36,349	92,906	92,906
Restricted cash	894	2,195	2,195
Property and equipment, net	4,501	11,099	11,099
Intangible assets, net	2,324	2,783	2,783
Goodwill	1,926	3,099	3,099
Other non-current assets	370	1,019	1,019
Total assets	$ 46,364	$113,101	$ 113,101
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)			
Current liabilities:			
Accounts payable	$ 2,491	$ 4,225	$ 4,225
Accrued compensation	1,518	3,182	3,182
Related party payable	560	7,788	7,788
Other accrued liabilities	2,548	7,290	7,290
Preferred stock warrant liability	623	1,485	—
Deferred revenues	1,306	654	654
Related party deferred revenues	3,021	4,856	4,856
Financing obligations	1,560	4,507	4,507
Total current liabilities	13,627	33,987	32,502
Deferred revenues, net of current portion	2,989	2,233	2,233
Related party deferred revenues, net of current portion	156	16,632	16,632
Financing obligations, net of current portion	2,513	12,900	12,900
Other long-term liabilities	2,332	2,071	2,071
Commitments and contingencies (Note 8)			
Redeemable convertible preferred stock issuable in series (Notes 2 and 10), $0.0001 par value per share; 26,770,548 and 33,204,886 shares authorized at December 31, 2006 and 2007, respectively; 25,684,148 and 32,269,494 shares issued and outstanding at December 31, 2006 and 2007, respectively; aggregate liquidation value of $104,972 and $160,304 at December 31, 2006 and 2007 respectively; no shares authorized, issued or outstanding pro forma (unaudited)	77,513	132,746	—
Stockholders' equity (deficit):			
Common stock, $0.0001 par value per share; 40,000,000 and 62,000,000 shares authorized at December 31, 2006 and 2007, respectively; 1,797,682 and 3,386,789 shares issued and outstanding at December 31, 2006 and 2007, respectively; shares authorized, 35,716,889 shares issued and outstanding pro forma (unaudited)	—	—	4
Additional paid-in capital	2,501	6,187	140,414
Accumulated other comprehensive income (loss)	(52)	537	537
Accumulated deficit	(55,215)	(94,192)	(94,192)
Total stockholders' equity (deficit)	(52,766)	(87,468)	46,763
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	$ 46,364	$113,101	$ 113,101

The accompanying notes are an integral part of these consolidated financial statements.

Codexis, Inc.

Consolidated Statements of Operations
(In thousands, except per share data)

	Years Ended December 31,		
	2005	2006	2007
Revenues:			
Product	$ 2,265	$ 2,544	$ 11,418
Related party collaborative research and development	—	863	8,481
Collaborative research and development	9,363	8,403	4,733
Government grants	156	317	701
Total revenues	11,784	12,127	25,333
Cost and operating expenses:			
Cost of product revenues	2,233	1,806	8,319
Research and development	13,454	17,939	36,870
Selling, general and administrative	7,276	11,198	18,487
Total cost and operating expenses	22,963	30,943	63,676
Loss from operations	(11,179)	(18,816)	(38,343)
Interest income	245	742	1,491
Interest expense and other	(413)	(724)	(2,533)
Loss before provision (benefit) for income taxes	(11,347)	(18,798)	(39,385)
Provision (benefit) for income taxes	243	(127)	(408)
Net loss	$ (11,590)	$ (18,671)	$ (38,977)
Net loss per share of common stock, basic and diluted	$ (7.69)	$ (10.99)	$ (15.53)
Shares used in computing net loss per share of common stock, basic and diluted	1,508	1,699	2,510
Pro forma net loss per share of common stock, basic and diluted (unaudited)			$ (1.29)
Shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)			29,116

The accompanying notes are an integral part of these consolidated financial statements.

Codexis, Inc.

Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit
Years Ended December 31, 2005, 2006 and 2007
(In thousands)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Compre-hensive Income (Loss)	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
December 31, 2004	15,616	$ 37,749	1,147	$ —	$ 2,027	$ (28)	$ (24,954)	$ (22,955)
Exercise of stock options	—	—	177	—	63	—	—	63
Issuance of common stock for acquisition of JFC	—	—	313	—	188	—	—	188
Issuance of warrants to purchase common stock in connection with financing arrangement	—	—	—	—	4	—	—	4
Employee stock-based compensation	—	—	—	—	1	—	—	1
Nonemployee stock-based compensation	—	—	—	—	69	—	—	69
Comprehensive loss:								
Net loss	—	—	—	—	—	—	(11,590)	(11,590)
Currency translation adjustments	—	—	—	—	—	(580)	—	(580)
Unrealized gain on marketable securities	—	—	—	—	—	27	—	27
Total comprehensive loss								(12,143)
December 31, 2005	15,616	37,749	1,637	—	2,352	(581)	(36,544)	(34,773)
Exercise of stock options	—	—	125	—	55	—	—	55
Issuance of common stock related to acquisition of JFC	—	—	36	—	25	—	—	25
Issuance of Series D redeemable convertible preferred stock, net of issuance costs of $208	8,989	35,482	—	—	—	—	—	—
Beneficial conversion feature on issuance of preferred stock warrants in connection with convertible debt	—	—	—	—	5	—	—	5
Issuance of Series D redeemable convertible preferred stock upon conversion of convertible debt and accrued interest	1,079	4,282	—	—	—	—	—	—
Employee stock-based compensation	—	—	—	—	32	—	—	32
Nonemployee stock-based compensation	—	—	—	—	32	—	—	32
Comprehensive loss:								
Net loss	—	—	—	—	—	—	(18,671)	(18,671)
Currency translation adjustments	—	—	—	—	—	528	—	528
Unrealized gain on marketable securities	—	—	—	—	—	1	—	1
Total comprehensive loss								(18,142)
December 31, 2006	25,684	77,513	1,798	—	2,501	(52)	(55,215)	(52,766)
Exercise of stock options	—	—	596	—	265	—	—	265
Vesting of shares exercised early	—	—	—	—	38	—	—	38
Employee stock-based compensation	—	—	—	—	1,043	—	—	1,043
Nonemployee stock-based compensation	—	—	—	—	213	—	—	213
Issuance of common stock for acquisition of BioCatalytics	—	—	963	—	1,228	—	—	1,228
Issuance of common stock in connection with a license agreement	—	—	30	—	134	—	—	134
Issuance of Series D redeemable convertible preferred stock upon exercise of warrants	429	3,000	—	—	765	—	—	765
Issuance of Series E redeemable convertible preferred stock, net of issuance costs of $100	6,101	51,753	—	—	—	—	—	—
Issuance of Series E redeemable convertible preferred stock for consulting services	56	480	—	—	—	—	—	—
Comprehensive loss:								—
Net loss	—	—	—	—	—	—	(38,977)	(38,977)
Currency translation adjustments	—	—	—	—	—	457	—	457
Unrealized gain on marketable securities	—	—	—	—	—	132	—	132
Total comprehensive loss								(38,388)
December 31, 2007	32,270	$132,746	3,387	$ —	$ 6,187	$ 537	$ (94,192)	$ (87,468)

The accompanying notes are an integral part of these consolidated financial statements.

Codexis, Inc

Consolidated Statements of Cash Flows
(In thousands)

	Years Ended December 31,		
	2005	2006	2007
Operating activities			
Net loss	$ (11,590)	$ (18,671)	$ (38,977)
Adjustments to reconcile net loss to net cash used in operating activities:			
Amortization of purchased intangible assets	744	633	781
Depreciation and amortization	1,712	1,754	2,103
Revaluation of preferred stock warrant liability	—	156	1,328
Loss on disposal of property and equipment	6	6	86
Stock-based compensation	70	64	1,256
Amortization of debt discount	—	5	67
Amortization of deferred costs associated with a license agreement	—	62	400
Beneficial conversion feature on issuance of redeemable convertible preferred stock	—	5	—
Issuance of redeemable convertible preferred stock for consulting services	—	—	480
Issuance of common stock in connection with a license agreement	—	—	134
Changes in operating assets and liabilities, net of acquisitions:			
Accounts receivable	(2,457)	369	(3,146)
Inventories	240	(309)	(139)
Prepaid expenses and other current assets	(88)	(211)	(285)
Other assets	680	(191)	(590)
Accounts payable	(593)	1,969	8,397
Accrued compensation	251	552	1,664
Deferred revenues	4,050	775	16,385
Other accrued liabilities	2,591	(255)	3,954
Net cash used in operating activities	(4,384)	(13,287)	(6,102)
Investing activities			
Increase in restricted cash	(239)	(193)	(1,301)
Purchase of property and equipment	(2,013)	(1,102)	(8,245)
Purchase of marketable securities	(1,262)	—	(42,267)
Proceeds from maturities of marketable securities	11,026	1,500	13,404
Acquisitions, net of cash acquired	(4,090)	—	(1,168)
Net cash provided by (used in) investing activities	3,422	205	(39,577)
Financing activities			
Proceeds from financing obligations	1,786	1,067	14,805
Principal payments on financing obligations	(886)	(1,090)	(1,485)
Proceeds from convertible debt	—	4,200	—
Proceeds from the exercise of warrants to purchase preferred stock	—	—	3,000
Proceeds from issuance of preferred stock, net of issuance costs	—	35,482	51,753
Proceeds from exercises of stock options	63	55	303
Net cash provided by financing activities	963	39,714	68,376
Effect of exchange rate changes on cash and cash equivalents	7	109	132
Net increase in cash and cash equivalents	8	26,741	22,829
Cash and cash equivalents at beginning of year	5,497	5,505	32,246
Cash and cash equivalents at end of year	$ 5,505	$ 32,246	$ 55,075
Supplemental disclosures of cash flow information:			
Cash paid for interest	$ 339	$ 383	$ 686
Cash paid for income taxes	$ 222	$ 132	$ 99
Supplemental schedule of noncash investing and financing activities:			
Conversion of convertible debt to redeemable convertible preferred stock	$ —	$ 4,282	$ —
Issuance of preferred stock warrants in connection with financing arrangement	$ 4	$ 736	$ 463
Issuance of common stock for acquisitions	$ 188	$ 25	$ 1,228

The accompanying notes are an integral part of these consolidated financial statements.

Codexis, Inc.

Notes to Consolidated Financial Statements

1. Description of Business

Codexis, Inc. ("we" or "Codexis") is a leading developer of proprietary biocatalysts that we believe have the potential to revolutionize chemistry-based manufacturing processes across a variety of industries. Biocatalysts are enzymes or microbes that catalyze chemical reactions that can enable the production of products used in everyday life. Our proprietary technology platform allows us to rapidly evolve and optimize biocatalysts to perform specific and desired chemical reactions for commercial scale industrial applications. We believe we can use our technology platform to improve industrially relevant characteristics of any biocatalyst, enabling manufacturing processes that are faster, less complex, less capital intensive and lower cost than conventional chemistry-based processes.

Codexis was incorporated in Delaware in January 2002 as a wholly-owned subsidiary of Maxygen, Inc. ("Maxygen"). In March 2002, we licensed our core enabling technology from Maxygen and commenced operations.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The consolidated financial statements of Codexis have been prepared in conformity with U.S. generally accepted accounting principles and include the accounts of Codexis and its wholly owned subsidiaries. The results of operations of Jülich Fine Chemicals GmbH ("JFC") in Germany and BioCatalytics, Inc. ("BioCatalytics") in the U.S. are included in the consolidated statements of operations subsequent to their acquisitions on February 21, 2005 and July 17, 2007, respectively. We also have subsidiaries in Singapore, India, Austria and Mauritius, and in January 2008 we formed a new subsidiary in Hungary. All significant intercompany balances and transactions have been eliminated in consolidation.

Redeemable Convertible Preferred Stock

The holders of at least a majority of the then-outstanding shares of Series B, D and E redeemable convertible preferred stock, voting or consenting together as separate series, may require us to redeem each of these series of redeemable convertible preferred stock on or after December 31, 2011. The holders of Series A and C convertible preferred stock do not have redemption rights, however, the securities are classified outside of stockholders' equity (deficit) due to their liquidation rights. The holders of our Series A, B, C, D and E preferred stock control the vote of our stockholders and Board of Directors through their appointed representation. As a result, the holders of Series A, B, C, D and E preferred stock can force a change in control that would trigger liquidation. As redemption of the preferred stock through liquidation is outside of our control, all shares of preferred stock have been presented outside of permanent equity in accordance with Emerging Issues Task Force ("EITF") Topic D-98, *Classification and Measurement of Redeemable Securities* ("EITF Topic D-98"). Series A, B, C, D and E preferred stock are collectively referred to in the consolidated financial statements and notes to the consolidated financial statements as redeemable convertible preferred stock.

Unaudited Pro Forma Balance Sheet

In the event that an initial public offering that results in the automatic conversion of our redeemable convertible preferred stock, as described in Note 10, is consummated, all of the redeemable convertible preferred stock outstanding will automatically convert into 32,330,100 shares of common stock based on the shares of redeemable convertible preferred stock outstanding at December 31, 2007. In addition, all

preferred stock warrants will automatically convert to common stock warrants and the related redeemable convertible preferred stock warrant liability of $1.5 million at December 31, 2007 would be reclassified to additional paid-in capital. The unaudited pro forma balance sheet information at December 31, 2007 gives effect to the automatic conversion of all outstanding shares of the redeemable convertible preferred stock to common stock and the conversion of all preferred stock warrants to common stock warrants.

Significant Risks and Uncertainties

In 2007, we incurred a net loss of $39.0 million and used $6.1 million of cash in operating activities. At December 31, 2007, we had an accumulated deficit of $94.2 million and unrestricted cash and cash equivalents and marketable securities of $84.1 million. Our failure to generate sufficient revenues, achieve planned gross margins, control operating costs or raise sufficient additional funds may require us to modify, delay or abandon some of our planned future expansion or expenditures, which could have a material adverse effect on our business, operating results, financial condition and ability to achieve our intended business objectives. We may be required to seek additional funds through collaborations or public or private debt or equity financings, and may also seek to reduce expenses related to our operations. There can be no assurance that any financings will be available or will be at terms acceptable to Codexis.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. Codexis' management regularly assesses these estimates which primarily affect revenue recognition, the valuation of accounts receivable, the valuation of acquired intangible assets, the valuation of inventories, the valuation of accrued liabilities, the fair value of redeemable convertible preferred stock and common stock, redeemable convertible preferred stock warrants, stock options and the valuation of allowances associated with deferred tax assets. Actual results could differ from those estimates, and such differences may be material to the consolidated financial statements.

Foreign Currency Translation

The assets and liabilities of foreign subsidiaries, where the local currency is the functional currency, are translated from their respective functional currencies into U.S. dollars at the exchange rates in effect at the balance sheet date, with resulting foreign currency translation adjustments recorded in accumulated other comprehensive income (loss) in the consolidated statements of stockholders' equity (deficit). Revenue and expense amounts are translated at average rates during the period. Where the U.S. dollar is the functional currency, translation adjustments are recorded in interest expense and other in the accompanying consolidated statements of operations. Gains and losses realized from transactions, including intercompany balances not considered as permanent investments, denominated in currencies other than an entity's functional currency, are included in interest expense and other in the accompanying consolidated statements of operations. We had foreign currency transaction losses of $96,000, $46,000 and $173,000 in 2005, 2006 and 2007, respectively.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Concentrations of Credit Risk

Financial instruments that potentially subject us to significant concentrations of credit risk consist primarily of cash and cash equivalents, marketable securities, accounts receivable, and restricted cash. Cash and cash equivalents, marketable securities and restricted cash are invested through banks and other financial institutions in the United States. Such deposits in the United States may be in excess of insured limits.

Credit risk with respect to accounts receivable exists to the full extent of amounts presented in the consolidated financial statements. We periodically require collateral to support credit sales. We estimate an allowance for doubtful accounts through specific identification of potentially uncollectible accounts receivable based on an analysis of our accounts receivable aging. Uncollectible accounts receivable are written off against the allowance for doubtful accounts when all efforts to collect them have been exhausted. Recoveries are recognized when they are received. Actual collection losses may differ from our estimates and could be material to the consolidated financial position, results of operations, and cash flows.

One customer accounted for 62% and 47% of accounts receivable at December 31, 2006 and 2007, respectively. At December 31, 2007, a second customer accounted for 26% of accounts receivable. We do not believe the accounts receivable from these customers represent a significant credit risk based on past collection experiences and the general credit worthiness of these customers.

Fair Value of Financial Instruments

The carrying amounts of certain of our financial instruments, including cash and cash equivalents, marketable securities, restricted cash, accounts receivable and accounts payable, approximate fair value due to their short maturities. Based on borrowing rates currently available to Codexis for loans with similar terms, the carrying values of our financing obligations approximate their fair values.

Cash, Cash Equivalents and Marketable Securities

We consider all highly liquid investments with maturity dates of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents consist of cash on deposit with banks and money market funds.

Marketable securities are primarily comprised of corporate debt obligations. Management determines the appropriate classification of debt securities at the time of purchase and reevaluates such designation at each balance sheet date. Our debt securities are classified as available-for-sale and are carried at estimated fair value, as determined by quoted market rates, on the consolidated balance sheets. Unrealized gains and losses are reported as a component of accumulated other comprehensive income (loss). The amortized cost of debt securities in this category is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion are included in interest income. Realized gains and losses and declines in value deemed to be other-than-temporary, if any, are included in interest income and expense. The cost of securities sold is based on the specific-identification method. Interest earned on securities is included in interest income. There were no significant realized gains or losses from sales of marketable securities in the periods presented. At December 31, 2007, we have not had any other-than-temporary declines in the fair value of our marketable securities. At December 31, 2006 and 2007, the contractual maturities of investments were all due within one year.

Accounts Receivable

Accounts receivable represent amounts owed to us under our collaborative research and development agreements and government grants. We establish collectibility reserves on a specific identification basis.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

We established a reserve of $391,000 in 2005 and increased that reserve by $250,000 in 2006. Specific accounts written off against the reserve were $0, $391,000 and $0 in 2005, 2006 and 2007, respectively.

Inventories

Inventories consist of biocatalysts, which are enzymes or microbes that facilitate chemical reactions, and pharmaceutical intermediates. Inventories are held in our facilities in the United States and Europe and at contract manufacturers in Europe and Asia. Internally produced biocatalysts only qualify as commercial inventory after they have achieved specifications that are required for selling the materials. Inventories held at our contract manufacturers are accepted as finished goods after achieving specifications stated in our purchase orders. Inventories are carried at the lower of cost or market and are removed from inventory using the first-in first-out method. Inventories are written down for excess and obsolete materials, if necessary.

Property and Equipment

Property and equipment, including the cost of purchased software, are stated at cost, less accumulated depreciation and amortization. Depreciation is calculated using the straight-line method over the following estimated ranges of useful lives:

Laboratory equipment	5 years
Computer equipment and software	3 to 5 years
Office equipment and furniture	5 years
Leasehold improvements	Estimated useful life of asset or term of lease, whichever is shorter

Goodwill

Goodwill represents the excess of the purchase price over the fair value of assets acquired and liabilities assumed in accordance with Statement of Financial Accounting Standard ("SFAS") No. 141, *Business Combinations* ("SFAS 141"). In accordance with SFAS No. 142, *Goodwill and Other Intangible Assets* ("SFAS 142"), goodwill is presumed to have an indefinite life and is not subject to annual amortization. We review our long-lived intangible assets, including goodwill, for impairment on at least an annual basis and at any interim date whenever events or changes in circumstances indicate that the carrying value may not be recoverable.

The annual test for goodwill impairment is a two-step process. The first step is a comparison of the fair value of the reporting unit with its carrying amount, including goodwill. If this step indicates an impairment, then the loss is measured as the excess of recorded goodwill over its implied fair value. Implied fair value is the excess of the fair value of the reporting unit over the fair value of all identified assets and liabilities. For the years ended December 31, 2005, 2006 and 2007, no impairment charges have been recorded.

Intangible Assets and Impairment of Long-Lived Assets

Intangible assets consist of customer relationships, developed core technology, customer backlog and trade name all arising out of the JFC and BioCatalytics acquisitions. Intangible assets are recorded at their fair value at the date of the acquisition and, for those assets having finite useful lives, are amortized using the straight-line method over their estimated useful lives which range from one to seven years.

We periodically review our intangible and other long-lived assets for possible impairment, whenever events or changes in circumstances indicate that such assets are impaired or the estimated useful lives are

no longer appropriate. If indicators of impairment exist and the undiscounted projected cash flows associated with such assets are less than the carrying amounts of the assets, an impairment loss is recorded to write the assets down to their estimated fair values. Fair value is estimated based on discounted future cash flows. For 2005, 2006 and 2007, no impairment charges have been recorded.

Restricted Cash

Restricted cash was $894,000 and $2.2 million at December 31, 2006 and 2007, respectively. The restricted cash was invested in money market accounts for the purpose of securing a standby letter of credit as collateral for our Redwood City, California facility lease agreement, future payment obligations to the shareholder of BioCatalytics related to the acquisition and for the purpose of securing a working capital line of credit for JFC.

Redeemable Convertible Preferred Stock Warrant Liability

We apply the provisions of Financial Accounting Standards Board ("FASB") Staff Position ("FSP") No. 150-5,*Issuer's Accounting under Statement No. 150 for Freestanding Warrants and Other Similar Instruments on Shares that are Redeemable* ("FSP 150-5"), to outstanding warrants to purchase shares of our Series D redeemable convertible preferred stock. FSP 150-5 affirms that freestanding warrants are subject to the requirements under SFAS No. 150, *Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity*, regardless of the timing of the redemption feature or the redemption price or the likelihood of redemption. Pursuant to FSP 150-5, freestanding warrants issued by us for shares of our redeemable convertible preferred stock that are subject to redemption are classified as liabilities on the consolidated balance sheet at fair value. The initial liability recorded is adjusted for changes in fair value at each reporting date with an offsetting entry recorded as a component of interest expense and other in the accompanying consolidated statements of operations. The liability will continue to be adjusted for changes in fair value until the earlier of the exercise date or the conversion of the underlying redeemable convertible preferred stock into common stock, at which time the redeemable convertible preferred stock warrants will convert to common stock warrants and the liability will be reclassified to stockholders' equity.

Revenue Recognition

We follow the revenue recognition criteria outlined in the SEC Staff Accounting Bulletin ("SAB") No. 104,*Revenue Recognition in Financial Statements*, and EITF Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables* (EITF 00-21). When evaluating multiple element arrangements, we consider whether the components of each arrangement represent separate units of accounting as defined in EITF 00-21. Revenue arrangements with multiple components are divided into separate units of accounting if certain criteria are met, including whether the delivered component has stand-alone value to the customer, and whether there is objective and reliable evidence of the fair value of the undelivered items. Consideration received is allocated among the separate units of accounting based on their respective fair values. Applicable revenue recognition criteria are then applied to each of the units.

Revenue is recognized when the four basic revenue recognition criteria are met: (1) persuasive evidence of an arrangement exists; (2) products have been delivered, transfer of technology has been completed or services have been rendered; (3) the fee is fixed or determinable; and (4) collectibility is reasonably assured.

Our primary sources of revenues consist of collaborative research and development agreements, product revenues and government grants. Collaborative research and development agreements typically

provide us with multiple revenue streams, including up-front fees for licensing, exclusivity and technology access, fees for full-time employee equivalent ("FTE") services and the potential to earn milestone payments upon achievement of contractual criteria and royalty fees based on future product sales or cost savings by our customers. Our collaborative research and development revenue consist of revenues from related parties and revenues from our other collaborative research and development agreements. We consider related parties to be parties who own more than 10% of our outstanding capital stock. Related party collaborative research and development revenue for 2006 and 2007 presented on the consolidated statements of operations comprises collaborative research and development revenue from Equilon Enterprises LLC dba Shell Oil Products US ("Shell"). Accordingly, collaborative research and development revenue from our other collaborative research and development agreements includes revenue from parties that were not considered to be related during any of the years presented.

Related party collaborative research and development revenues consist of the following (in thousands):

	For the Years Ended December 31,		
	2005	2006	2007
License, access and exclusivity fees	$ —	$ 373	$ 2,665
Services	—	365	4,909
Milestones	—	125	907
Royalties	—	—	—
Total related party collaborative research and development revenues	$ —	$ 863	$ 8,481

Revenues from our other collaborative research and development agreements consist of the following (in thousands):

	For the Years Ended December 31,		
	2005	2006	2007
License, access and exclusivity fees	$ 1,633	$ 894	$ 1,340
Services	6,168	6,084	2,584
Milestones	800	724	300
Royalties	762	701	509
Total collaborative research and development revenues	$ 9,363	$ 8,403	$ 4,733

For each source of collaborative research and development revenues, product revenues and grant revenues, we apply the above revenue recognition criteria in the following manner:

- Up-front payments received in connection with collaborative research and development agreements, including license fees and exclusivity fees, are deferred upon receipt and recognized as revenue over the periods specified in the agreement.
- Revenues related to FTE services are recognized as research services are performed over the related performance periods for each contract. Under these agreements, we are required to perform research and development activities as specified in each respective agreement. The payments received under each respective agreement are not refundable and are based on a contractual reimbursement rate per FTE working on the project. When up-front payments are combined with FTE services in a single unit of accounting, we recognize the up-front payments using the proportionate performance method of revenue recognition based upon the actual amount of research and development labor hours incurred relative to the amount of the total expected labor hours to be

incurred by us, up to the amount of cash received. In cases where the planned levels of research services fluctuate substantially over the research term, we are required to make estimates of the total hours required to perform our obligations. Research and development expenses related to FTE services under the collaborative research and development agreements approximate the research funding over the term of the respective agreements.

- Revenues related to milestones that are determined to be substantive and at risk are generally recognized upon achievement of the milestone event and when collectibility is reasonably assured. Milestone payments are triggered either by the results of our research efforts or by events external to Codexis, such as our collaboration partner achieving a revenue target. Fees associated with milestones for which performance was not at risk at the inception of the arrangement or that are determined not to be substantive are included in a separate unit of accounting within the arrangement, or if the EITF 00-21 criteria to separately account for each element have not been met, to the single unit of accounting within the arrangement.
- Revenues related to royalties on product sales or cost savings of our customers are recorded as revenue as reported to us by the customer and when collectible. Royalties are generally reported in the quarter following the underlying sales or cost savings realized.
- Product revenues are recognized once passage of title and risk of loss has occurred and contractually specified acceptance criteria has been met, provided all other revenue recognition criteria have been met. Product revenues consist of sales of enzymes, intermediates and Codex Biocatalyst Panels. Cost of product revenues includes both internal and third party fixed and variable costs including amortization of purchased technology, materials and supplies, labor, facilities and other overhead costs associated with our product revenues.
- We receive payments from government entities in the form of government grants. Government grants are agreements that generally provide us with cost reimbursement for certain types of expenditures in return for research and development activities over a contractually defined period. Revenues from government grants are recognized in the period during which the related costs are incurred, provided that the conditions under which the government grants were provided have been met and we have only perfunctory obligations outstanding. Costs of government grant revenues approximate the revenues.
- Shipping and handling charged to customers are recorded as revenue. Shipping costs are included in our cost of product revenues. Such charges were not significant in any of the periods presented.

Customer Concentration

Customers with revenues of 10% or greater of total revenues for the years ended December 31, 2005, 2006 and 2007.

	Percentage of Total Revenues		
Customers	2005	2006	2007
A	*	*	33%
B	34%	36%	13%
C	*	11%	*
D	17%	*	*

* Represents less than 10% of net or total revenues, as applicable

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Concentrations of Supply Risk

We rely on a limited number of suppliers for our products. We believe that other vendors would be able to provide similar products; however, the qualification of such vendors may require substantial start-up time. In order to mitigate any adverse impacts from a disruption of supply, we attempt to maintain an adequate supply of critical single-sourced materials. For certain materials, our vendors maintain a supply for us.

Research and Development Expenses

Research and development expenses consist of costs incurred for internal projects as well as partner-funded collaborative research and development activities. These costs include direct and research-related overhead expenses, which include salaries and other personnel-related expenses, facility costs, supplies, depreciation of facilities, and laboratory equipment, as well as research consultants and the cost of funding research at universities and other research institutions, and are expensed as incurred. Costs to acquire technologies that are utilized in research and development and that have no alternative future use are expensed when incurred.

We do not track fully burdened research and development costs by project. However, we do estimate, based on FTE efforts, the percentage of research and development efforts (as measured in hours incurred, which approximates costs) undertaken for projects funded by our collaborative partners and government grants and projects funded by us. To approximate research and development expenses by funded category, the number of hours expended in each category has been divided by the total number of hours expended on all categories of research and development with the resulting fractions then multiplied by the total cost of research and development effort, with the products then added to project-specific external costs. In the case where a collaborative partner is sharing the research and development costs, the expenses for that project are allocated proportionately between the collaborative projects funded by third parties and internal projects. We believe that presenting our research and development expenses in these categories will provide our investors with meaningful information on how our resources are being used.

The following table presents our approximate research and development expenses by funding category (in thousands):

	Years Ended December 31,		
	2005	2006	2007
Collaborative research and development(1)	$ 5,878	$ 4,313	$ 11,053
Grants	88	25	384
Internal projects	7,488	13,601	25,433
Total research and development expenses	$ 13,454	$ 17,939	$ 36,870

(1) Research and development expenses related to collaborative projects funded by third parties are less than the reported revenues due to the amortization of non-refundable up-front payments.

In connection with the acquisition of JFC (see Note 4), we recorded a charge to research and development for acquired in-process research and development in the amount of $260,000 for the year ended December 31, 2005. The charge represented the estimated fair value of certain development projects for which, at the time of the acquisition, technological feasibility had not been established and there was no alternative future use.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Net Loss per Share of Common Stock

Basic net loss per common share is computed by dividing net loss by the weighted-average number of shares of common stock outstanding during the period, less the weighted-average unvested common stock subject to repurchase. Diluted net loss per share of common stock is computed by giving effect to all potential common share equivalents, including stock options, warrants and redeemable convertible preferred stock, less the weighted-average unvested common stock subject to repurchase. Basic and diluted net loss per share of common stock was the same for all periods presented, as the inclusion of all potential common share equivalents outstanding was anti-dilutive.

The calculations for the unaudited 2007 pro forma basic and diluted net loss per share of common stock assume the conversion of all outstanding shares of redeemable convertible preferred stock into shares of common stock and the conversion of redeemable convertible preferred stock warrants to common stock warrants as if the conversions had occurred at the beginning of 2007, or for Series E redeemable convertible preferred stock issued in 2007, the issue date for each share, using the as-if-converted method. Also, the numerator in the pro forma basic and diluted net loss per share calculation has been adjusted to remove gains and losses resulting from re-measurements of the redeemable convertible preferred stock warrant liability as these measurements would no longer be required when the warrants become warrants to purchase shares of our common stock at that time and will, therefore, no longer be subject to FSP 150-5.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

The following table presents the calculation of historical and pro forma basic and diluted net loss per share of common stock (in thousands, except per share amounts):

	For the Years Ended December 31,		
	2005	2006	2007
Actual:			
Numerator:			
Net loss	$ (11,590)	$ (18,671)	$ (38,977)
Denominator:			
Weighted-average shares of common stock outstanding	1,508	1,699	2,530
Less: Weighted-average shares of common stock subject to repurchase	—	—	(20)
Weighted-average shares of common stock used in computing net loss per share of common stock, basic and diluted	1,508	1,699	2,510
Net loss per share of common stock, basic and diluted	$ (7.69)	$ (10.99)	$ (15.53)
Pro Forma:			
Numerator:			
Net loss			$ (38,977)
Less: change in fair value of preferred stock warrant liability			1,328
Net loss used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)			$ (37,649)
Denominator:			
Weighted-average shares of common stock used in computing net loss per share of common stock, basic and diluted, as used above			2,510
Add: Pro forma adjustments to reflect weighted-average effect of assumed conversion of redeemable convertible preferred stock (unaudited)			26,606
Weighted-average shares of common stock used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)			29,116
Pro forma net loss per share of common stock, basic and diluted (unaudited)			$ (1.29)

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

The following redeemable convertible preferred stock, common stock subject to repurchase, options to purchase common stock, and warrants to purchase redeemable convertible preferred and common stock were excluded from the computation of diluted net loss per share of common stock for the periods presented because including them would have had an antidilutive effect (in thousands):

	For the Years Ended December 31,		
	2005	2006	2007
Redeemable convertible preferred stock	15,616	25,745	32,330
Common stock subject to repurchase	—	—	58
Options to purchase common stock	4,573	4,188	9,032
Warrants to purchase redeemable convertible preferred stock	—	752	433
Warrants to purchase common stock	55	55	59
Total	20,244	30,740	41,912

Income Taxes

We use the asset and liability method of accounting for income taxes in accordance with SFAS No. 109,*Accounting for Income Taxes*. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets are recognized for deductible temporary differences, along with net operating loss carryforwards, if it is more likely than not that the tax benefits will be realized. To the extent a deferred tax asset cannot be recognized under the preceding criteria, a valuation allowance is established. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled.

Effective January 1, 2007, we adopted FASB Interpretation ("FIN") No. 48,*Accounting for Uncertainty in Income Taxes, an interpretation of FASB Statement No. 109* ("FIN 48").

Stock-Based Compensation

Prior to January 1, 2006, we accounted for stock-based employee compensation arrangements using the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* ("APB 25"), and related interpretations, and complied with the disclosure-only provisions of SFAS No. 123, *Accounting for Stock-Based Compensation* ("SFAS 123"), as amended by SFAS No. 148, *Accounting for Stock-Based Compensation, Transition and Disclosure, an amendment to SFAS Statement No. 123* ("SFAS 148"). Under APB 25, compensation expense for employees is based on the intrinsic value of the option, determined as the excess, if any, of the fair value of the common stock over the exercise price of the option on the date of grant. Historically, our stock options have been granted with exercise prices at or above the estimated fair value of our common stock on the date of grant. Accordingly, no stock-based employee compensation expense was recorded under APB 25 during 2005.

Effective January 1, 2006, we adopted SFAS No. 123(R),*Share-Based Payment* ("SFAS 123(R)"), which requires compensation expense related to share-based transactions, including the awarding of employee stock options, to be measured and recognized in the financial statements based on the estimated fair value of the awards granted. SFAS 123(R) revises SFAS 123, as amended, and supersedes APB 25. We adopted SFAS 123(R) using the prospective transition method, as options granted prior to January 1, 2006 were measured using the minimum value method for the pro forma disclosures previously required by SFAS 123. In accordance with the prospective transition method, we continued to account for non-vested

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

employee share-based awards outstanding at the date of adoption using the intrinsic value method in accordance with APB 25. All awards granted, modified or settled after the SFAS 123(R) adoption date have been accounted for using the measurement, recognition and attribution provisions of SFAS 123(R).

The adoption of SFAS 123(R) increased loss before provision for income taxes and net loss for the year ended December 31, 2006 by approximately $32,000 each, and increased net loss per common share by $0.02. We are using the straight-line method to allocate stock-based compensation expense to reporting periods subsequent to the adoption of SFAS 123(R).

We account for stock options issued to nonemployees in accordance with the provisions of SFAS 123(R) and EITF Issue No. 96-18*Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services* ("EITF 96-18"). In accordance with SFAS 123(R) and EITF 96-18, stock options issued to nonemployees are accounted for at their estimated fair value determined using the Black-Scholes option-pricing model. The fair value of the options granted to nonemployees is remeasured as they vest, and the resulting increase in value, if any, is recognized as expense during the period the related services are rendered.

At December 31, 2007, we had one share-based compensation plan (see Note 11).

Advertising

Advertising costs are expensed as incurred and included in general and administrative expenses in the consolidated statements of operations. Advertising costs were $154,000, $191,000 and $244,000 for the years ended December 31, 2005, 2006 and 2007, respectively.

Comprehensive Loss

We report our comprehensive loss, and its components, on the consolidated statements of stockholders' equity (deficit). Comprehensive loss consists of net loss, unrealized gains (losses) on marketable securities and foreign currency translation adjustments. Accumulated other comprehensive loss comprised $0 and $132,000 of currency translation adjustments and $52,000 and $405,000 of unrealized gain on marketable securities at December 31, 2006 and 2007, respectively.

Recent Accounting Pronouncements

In September 2006, the FASB issued SFAS No. 157,*Fair Value Measurements* ("SFAS 157"). SFAS 157 defines fair value, establishes a framework for measuring fair value and expands disclosure of fair value measurements. SFAS 157 applies under other accounting pronouncements that require or permit fair value measurements and accordingly, does not require any new fair value measurements. SFAS 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007. We currently do not expect our adoption of SFAS 157 to have a significant impact on our consolidated results of operations or financial position.

In February 2007, the FASB issued SFAS No. 159,*The Fair Value Option for Financial Assets and Financial Liabilities including an amendment of FASB Statement No. 115* ("SFAS 159"). This statement permits entities to choose to measure many financial instruments and certain other items at fair value that are not currently required to be measured at fair value. This statement also establishes presentation and disclosure requirements designed to facilitate comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. This statement does not affect any existing accounting literature that requires certain assets and liabilities to be carried at fair value. This statement

does not establish requirements for recognizing and measuring dividend income, interest income or interest expense. SFAS 159 is effective for periods beginning after November 15, 2008. We are currently reviewing this new standard to determine the effects, if any, on our consolidated results of operations or financial position.

In December 2007, the FASB ratified EITF Issue No. 07-1, *Accounting for Collaborative Agreements* ("EITF 07-1"), which defines collaborative agreements as contractual arrangements that involve a joint operating activity. These arrangements involve two or more parties who are both active participants in the activity and that are exposed to significant risks and rewards dependent on the commercial success of the activity. EITF 07-1 provides that a company should report the effects of adoption as a change in accounting principle through retrospective application to all periods. Furthermore, it requires the parties to determine who is the principal party of the arrangement, and therefore which party must report the revenues and expenses under the collaboration, as well as specific additional disclosures in the parties' financial statements. EITF 07-1 is effective for periods beginning after December 15, 2008. We are currently evaluating the impact the adoption of EITF 07-1 will have on our consolidated financial statements.

In June 2007, the FASB ratified EITF Issue No. 07-3, *Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities* ("EITF 07-3"). EITF 07-3 provides clarification surrounding the accounting for nonrefundable research and development advance payments, whereby such payments should be recorded as an asset when the advance payment is made and recognized as an expense when the research and development activities are performed. EITF 07-3 is effective for interim and annual reporting periods beginning after December 15, 2007. EITF 07-3 is effective for periods beginning after December 15, 2007. We currently do not expect the impact the adoption of EITF 07-3 to have a significant impact on our consolidated financial statements.

In December 2007, the FASB issued SFAS No. 141 (revised 2007), *Business Combinations* ("SFAS 141(R)"). SFAS 141R establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any noncontrolling interest in the acquiree and the goodwill acquired. SFAS 141(R) also establishes disclosure requirements to enable the evaluation of the nature and financial effects of the business combination. This statement is effective for periods beginning after December 15, 2008. We are currently evaluating the potential impact of the adoption of SFAS 141(R) on our consolidated financial position, results of operations or cash flows.

In December 2007, the FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements* ("SFAS 160"). SFAS 160 establishes accounting and reporting standards for ownership interests in subsidiaries held by parties other than the parent, the amount of consolidated net income attributable to the parent and to the noncontrolling interest, changes in a parent's ownership interest, and the valuation of retained noncontrolling equity investments when a subsidiary is deconsolidated. SFAS 160 also establishes disclosure requirements that clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners. This statement is effective for periods beginning after December 15, 2008. As we currently only have wholly-owned subsidiaries, we expect that the adoption of SFAS 160 will not have an impact on our consolidated financial statements.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

3. Collaborative Research and Development Agreements

The following table represents the percentage of our total revenues that have been recognized from our significant collaborative research and development agreements:

	Years Ended December 31,		
	2005	2006	2007
Shell	*	*	33%
Pfizer	34%	33%	*
Schering-Plough	*	11%	*
Cargill	17%	*	*

* Represents less than 10% of total revenues

No other collaborators comprised 10% or more of total revenues in the periods presented. Our existing significant collaboration agreements are summarized below.

Shell

In November 2006, we entered into a collaborative research agreement and a license agreement with Shell to develop biocatalysts, and associated processes that use such biocatalysts. In November 2007, we entered into a new and expanded five-year collaborative research agreement and a license agreement with Shell.

Shell owned approximately 3% and 13% of our outstanding capital stock, on an as converted basis, at December 31, 2006 and 2007, respectively. In connection with the collaborative research and license agreements discussed below, we recorded $863,000 and $8.5 million of collaborative research and development revenue for the years ended December 31, 2006 and 2007, respectively. At December 31, 2006 and 2007, we had accounts receivable due from Shell of $101,000 and $1.7 million, respectively. At December 31, 2006 and 2007, we recorded deferred revenue related to the research collaboration with Shell of $3.2 million and $21.5 million, respectively, on our consolidated balance sheets.

November 2006 Research Collaboration with Shell

In connection with the November 2006 research collaboration, Shell paid us a $2.8 million nonrefundable, up-front technology access fee, purchased 755,668 shares of our Series D redeemable convertible preferred stock at $3.97 per share for gross proceeds and an aggregate value of approximately $3.0 million, and agreed to pay us (1) research funding at specified rates per FTE working on the project during the 12-month research term, (2) a $1.0 million milestone fee upon the delivery of a research report six months after the research commenced, and (3) royalties on future product sales, should such products using our technology be developed. Under this agreement, we had a right of first negotiation to manufacture for Shell any biocatalysts developed under the collaborative research agreement if Shell decided to out-source the manufacture of such biocatalysts. In conjunction with the collaborative research agreement, Shell was issued a warrant to purchase $3.0 million of additional Series D redeemable convertible preferred stock at a price of $7.00 per share. The fair value of the warrant at issuance was determined to be $462,000 and was amortized against revenue over the term of the collaborative research agreement, which ended in November 2007. The fair value was measured using the probability-weighted expected return method. Shell exercised this warrant in full in November 2007 in connection with the new and expanded collaborative research and license agreement discussed below (see Note 9).

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

In accordance with our revenue recognition policy, the $2.8 million up-front technology access fee, the $4.1 million of research funding fees and the $1.0 million milestone payment were recognized over the 12-month performance period. The $1.0 million milestone fee was concluded to not be at risk and therefore was determined to not be a substantive milestone. For the years ended December 31, 2006 and 2007, we recognized $863,000 and $6.6 million, respectively, as related party collaborative research and development revenue under this agreement.

November 2007 Research Collaboration with Shell

In November 2007, we entered into a new, five-year expanded collaborative research agreement and a license agreement with Shell. In connection with the new and expanded collaborative research agreements, Shell paid us a $20.0 million up-front exclusivity fee, purchased 3,584,428 shares of our Series E redeemable convertible preferred stock at $8.50 per share for gross proceeds of $30.5 million, and agreed to pay us (1) research funding at specified rates per FTE working on the project during the research term, (2) milestone funding upon the achievement of milestones, and (3) royalties on future product sales. This up-front exclusivity fee is refundable under certain conditions, such as a change in control in which the Company is acquired by a competitor of Shell. This refundability lapses ratably over a five-year period beginning on November 1, 2007, on a straight-line basis. The agreement also specifies certain minimum levels of FTE services that we must allocate to the collaboration efforts that increase over the term of the agreement. After August 2008, Shell has the right to reduce the total number of FTEs assigned to perform our obligations under the program upon advance notice, with certain limitations. Shell has the right to terminate the agreement upon six months written notice, subject to certain restrictions, at any time after November 2009. The term of the new and expanded agreement extends through November 2012. During the term of the agreement, we are required to act exclusively with Shell as it relates to the rights and research described in the arrangement and may not conduct research, or contract to conduct research, for another party in the field of use. Under this agreement, we also have a right of first negotiation but not an obligation to manufacture any biocatalysts developed under the collaborative research agreement if Shell decides to out-source the manufacture of such biocatalysts.

In accordance with our revenue recognition policy, the $20.0 million up-front exclusivity fee and the research funding fees to be received for FTE services are being recognized in proportion to the actual research efforts incurred relative to the amount of total expected effort to be incurred by us over the five-year research period commencing November 2007. Milestones to be earned under this agreement have been determined to be at risk and substantive at the inception of the arrangement and are expected to be recognized upon achievement of the milestone and when collectability is reasonably assured. For the year ended December 31, 2007, $241,000 of the $20.0 million up-front payment and $1.6 million of research funding was recognized as related party collaborative research and development revenue under this agreement. No milestone payments have been received as of December 31, 2007 under the new and expanded agreement.

Pfizer

In July 2004, we entered into a multi-year collaborative research agreement and a license agreement with Pfizer to discover and develop biocatalysts, and associated processes that use such biocatalysts, in the manufacture of pharmaceutical products for Pfizer. Under the terms of these agreements, Pfizer provided us an up-front technology access fee of $2.0 million and agreed to provide research funding of approximately $8.6 million over a multi-year period. We were also eligible to receive milestone payments, a license fee if Pfizer exercised its option to acquire a non-exclusive worldwide license to our gene

shuffling technology, and royalty payments based upon sales by Pfizer of products that are manufactured using our biocatalysts. The agreement, which was initially scheduled to expire in July 2008, was terminated in May 2007 following Pfizer's six-month notice of termination provided to us in November 2006. Consistent with the terms of the agreement, Pfizer's option to acquire a license to our gene shuffling technology does not expire until July 2008. As of December 31, 2007, Pfizer had not exercised this option. Through December 31, 2007, we had received three $200,000 milestone payments in connection with the discovery and development of new biocatalysts on behalf of Pfizer.

In accordance with our revenue recognition policy, the $2.0 million up-front technology access fee and the research funding at specified rates per FTE working on the project were recognized over the research period under the agreement. In November 2006 following Pfizer's six-month notice of termination of the research term, we changed our estimate of the research term from 48 to 34 months and recognized the remaining unamortized portion of the up-front payment over the reduced expected life of the research term. Research milestones were determined to be substantive and at risk at the inception of the arrangement and, as such, were recognized in the period when each milestone was achieved. Total revenue recognized under this agreement was $3.7 million, $3.7 million and $1.8 million in 2005, 2006 and 2007, respectively.

Concurrent with the execution of the multi-year collaborative research agreement and the license agreement, Codexis and Pfizer also entered into a stock purchase agreement in which Pfizer purchased 1,514,645 shares of our Series C redeemable convertible preferred stock at $6.60 per share for gross proceeds of $10.0 million.

In September 2000, Maxygen extended a May 1998 agreement with Pfizer for the development of a biochemical manufacturing process for a specific pharmaceutical product. This agreement was assigned to Codexis in connection with our initial capitalization in March 2002. The extended agreement entitled us to earn research and commercial milestones and a percentage of all manufacturing cost savings once the optimized commercial process was scaled up at Pfizer. During the years ended December 31, 2005, 2006 and 2007, we recognized revenue related to commercial payments under this agreement in the amounts of $280,000, $313,000 and $323,000, respectively.

Pfizer owned approximately 5% and 4% of our outstanding capital stock, on an as converted basis, at December 31, 2006 and 2007, respectively. In connection with the license and collaborative research agreements discussed above, we recorded $4.0 million, $4.0 million and $2.1 million of collaborative research and development revenue for 2005, 2006 and 2007, respectively. At December 31, 2006 and 2007, we had accounts receivable due from Pfizer of $162,000 and $91,000, respectively. At December 31, 2006 and 2007, we had deferred revenue from Pfizer of $1.1 million and $200,000, respectively, recorded on our consolidated balance sheets.

Schering-Plough

In March 2006, we entered into a multi-year collaborative research agreement with Schering-Plough to jointly develop biocatalytic processes to synthesize one or more intermediates for use in the manufacturing of certain proprietary pharmaceutical products owned by Schering-Plough. Under the terms of the agreement, Schering-Plough provided us access to Schering-Plough's technology and entitled us to receive research funding over a multi-year period as well as milestone payments and payments for the purchase of research compounds. In accordance with our revenue recognition policy, the research funding at specified rates per FTE working on the project were recognized over the research period under the agreement. Research milestones were determined to be substantive and at risk at the inception of the arrangement and, as such, an aggregate value of $700,000 was recognized in the periods in which each

milestone was achieved. During 2006 and 2007, we recorded $1.4 million and $1.3 million of collaborative research and development revenue, respectively, under this agreement. The agreement expired in September 2007.

Cargill

In April 2003, we entered into a multi-year collaboration agreement with Cargill to develop a novel biochemical platform to enable production of a broad range of specialty chemicals and polymers. Building on metabolic pathways developed by Cargill, we agreed to use its proprietary technologies to enhance the production of acid from carbohydrate raw material. Under the agreement, Cargill and the U.S. Department of Energy were to each contribute to our research and development funding for three years and we were eligible for milestone and royalty payments from products derived from the collaboration and commercialized by Cargill. In accordance with our revenue recognition policy, the research funding at specified rates per FTE working on the project were recognized over the research period under the agreement. The initial research milestone of $50,000 was determined not to be substantive and at risk at the inception of the arrangement and, as such, was deferred upon receipt and recognized over the term that the research services were provided. Subsequent research milestones of $50,000 were determined to be substantive and at risk at the inception of the arrangement and, as such, were recognized in the periods achieved. During the years ended December 31, 2005, 2006 and 2007, we recorded $1.0 million, $844,000 and $0 of collaborative research and development revenue, respectively, under this agreement. The funded research term of the collaboration agreement ended in May 2006.

In January 2005, we entered into an agreement with Cargill to license the Codexis gene shuffling technology on a non-exclusive basis for use by Cargill in researching biocatalysts for production of organic chemicals for certain food applications. In addition to the research license, Cargill has a right of negotiation for a commercial license and an option for a non-exclusive license to use the Codexis gene shuffling technology for applications in the field of starch processing. Our obligations under the agreement include providing scientific and technical support to enable Cargill to practice the Codexis gene shuffling technology. Our obligations related to the transfer of the license and provision of services necessary for Cargill to utilize the license were complete within the first three months of the agreement. In accordance with our revenue recognition policy, license fees are recorded following the completion of our obligations and as the payments become due. During the years ended December 31, 2005, 2006 and 2007, we recorded $1.0 million, $151,000 and $306,000, respectively, of collaborative research and development revenue under this agreement.

Manufacturing Collaboration

In October 2005, we entered into a technology transfer and supply agreement, which we refer to as the 2005 Agreement, with Arch Pharmalabs Ltd. (“Arch”), a company based in India engaged in the manufacturing and sale of APIs and intermediates to pharmaceutical companies worldwide. In exchange for a $500,000 up-front payment, we granted to Arch certain of our patent rights and technology, a non-exclusive, royalty-free license, with no right to grant sublicense rights, solely to manufacture an intermediate called ATS-8 for us and on our behalf. We also agreed to transfer technology that is necessary or useful for the manufacture of ATS-8. We recognized the fee upon delivery of the technology and the performance certain other obligations. In exchange for a $1.5 million up-front payment, we agreed to purchase from Arch certain intermediate production quantities. The $1.5 million up-front payment was repayable by us to Arch if the specified purchases of production quantities were not met. Arch also agreed to purchase exclusively from us quantities of certain of our enzymes and an earlier intermediate, used in the

production of ATS-8, known as ATS-5, sufficient to enable Arch to fulfill our orders for ATS-8. Subsequently, we have transferred our ATS-5 related technology to Arch for the sole purposes of manufacturing ATS-5 for our resale to Pfizer and others and for Arch's use in the manufacture of ATS-8 manufactured for and on our behalf.

In August 2006, we broadened our relationship with Arch by entering into an enzyme and supply agreement, a supply agreement and a master services agreement, which we call the 2006 Agreements. The 2006 Agreements, among other things, provided biocatalytic supply specifications from us to Arch, intermediate supply from Arch to us, and services to be performed by Arch over the four year term of the agreements.

Due to the ongoing negotiations of our agreements with Arch in 2005 and 2006, we viewed the 2006 Agreements to be linked to the 2005 Agreement. We did not purchase the production volumes to earn the $1.5 million up-front payment under the 2005 Agreement so that payment was applied as consideration to the 2006 Agreements.

Under the 2006 Agreements, we agreed to pay Arch up to $1.5 million for certain chemical process and manufacturing method development services as Arch delivers them over the course of the master services agreement. Through December 31, 2007, we had paid Arch $250,000 for their services under the 2006 Agreements and, as of December 31, 2007, we had a remaining liability of $1.3 million due to Arch. We have recognized expense for these services of $156,000 and $375,000 during the years ended December 31, 2006 and 2007, respectively, on a proportional basis based on quarterly reports from Arch.

The terms of the license prohibit Arch from using the licensed process or biocatalysts for any purpose other than manufacturing ATS-8, for sale to or by us or our affiliates. We sell the biocatalysts to Arch at cost, and Arch manufactures ATS-8 on our behalf. Arch sells ATS-8 to us at a formula-based price, which results in a fixed percentage profit share. We then directly market and sell ATS-8 to the generic pharmaceutical industry, including to Arch. Sales to Arch of ATS-8 are recognized net of the manufacturing costs charged by Arch. Sales to Arch, net of the Arch manufacturing costs of ATS-8, were $219,000 and $387,000 during the years ended December 31, 2006 and 2007, respectively.

4. Acquisitions

Jülich Fine Chemicals GmbH

On February 21, 2005, we acquired 100% of the outstanding stock of JFC for total consideration of $4.3 million. JFC is a supplier of enzymes and fine chemicals to pharmaceutical and chemical companies worldwide. We acquired JFC in order to extend our presence in international markets, in particular Europe. In addition, JFC is a distributor for several of our proprietary biocatalysts.

The JFC acquisition was accounted for as a business combination using the purchase method in accordance with SFAS 141. Accordingly, the results of JFC are included in our consolidated financial statements as of the date of acquisition.

The aggregate purchase price was $4.3 million and consisted of the following (in thousands):

Cash consideration	$ 3,917
Fair value of common stock issued	213
Direct transaction costs	173
Total purchase price	$ 4,303

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

The allocation of the total purchase price to the assets acquired and liabilities assumed based on their respective fair values at the acquisition date is as follows (in thousands):

Total current assets	$ 881
Property and equipment, net and other non-current assets	410
Total current liabilities assumed	(2,006)
Financing obligation, net of current portion	(777)
Customer relationships	2,360
Developed and core technology	990
Customer backlog	140
Tradename	90
In-process research and development	260
Goodwill	1,955
Total purchase price	$ 4,303

These allocated fair values required management to make significant estimates and assumptions, especially with respect to the fair value of intangible assets.

Customer relationships and developed technology are being amortized over an expected useful life of five years.

Customer backlog was amortized over the period of time necessary for JFC to fulfill the outstanding purchase orders, and was fully amortized at December 31, 2005. Tradename is being amortized over its expected useful life of four years. In-process research and development was written off in its entirety during 2005 and is included as a component of research and development expense in the accompanying consolidated statement of operations.

BioCatalytics

On July 17, 2007, we acquired 100% of the outstanding stock of BioCatalytics for total consideration of $2.4 million. BioCatalytics offers a range of enzymes for chemical synthesis. It also provides synthesis services of metabolites and other compounds. We acquired BioCatalytics to expand our product offerings and customer relationships.

The BioCatalytics acquisition was accounted for as a business combination using the purchase method in accordance with SFAS 141. Accordingly, the results of BioCatalytics are included in our consolidated financial statements as of the date of acquisition.

The aggregate purchase price was $2.4 million and consisted of the following (in thousands):

Cash consideration	$ 1,000
Fair value of common stock issued	1,228
Direct transaction costs	219
Total purchase price	$ 2,447

The cash consideration noted in the table above includes $775,000 of restricted cash held in escrow that is scheduled to be paid to the shareholder of BioCatalytics in 2008.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

The allocation of the total purchase price to the assets acquired and liabilities assumed based on their respective fair values at the acquisition date is as follows (in thousands):

Total current assets	$ 1,041
Property and equipment, net and other non-current assets	601
Total liabilities assumed	(1,227)
Core technology	440
Customer relationships	490
Non-compete agreement	90
Goodwill	1,012
Total purchase price	$ 2,447

These allocated fair values required management to make significant estimates and assumptions, especially with respect to the fair value of intangible assets.

Customer relationships are being amortized over an expected useful life of five years. Core technology is being amortized over an expected useful life of five years. The non-compete agreement is being amortized over its expected useful life of three years.

The following unaudited pro forma information presents the total revenues, net loss and the net loss per share of common stock of Codexis and BioCatalytics for the years ended December 31, 2006 and 2007, as if the acquisition had been consummated as of January 1 of each respective year. The unaudited pro forma financial information does not reflect any incremental direct costs, including any restructuring charges to be recorded in connection with the acquisition, or any potential cost savings that may result from the consolidation of certain operations of Codexis and BioCatalytics. Accordingly, the unaudited pro forma financial information is presented below for illustrative purposes and not necessarily indicative of the results of operations of the combined company that would have occurred had the acquisition occurred at the beginning of the years presented, nor is it necessarily indicative of future operating results. The unaudited pro forma information for the years ended December 31, 2006 and 2007 is as follows (in thousands, except per share data):

	2006	2007
	(unaudited)	
Total revenues	$ 17,074	$ 27,615
Net loss	(18,082)	(40,456)
Net loss per share of common stock, basic and diluted	(10.64)	(16.12)

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

5. Balance Sheets and Statements of Operations Details

Cash Equivalents and Marketable Securities

At December 31, 2006, cash equivalents consisted only of money market funds. At December 31, 2007, cash equivalents and marketable securities consisted of the following (in thousands):

	December 31, 2007			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Money market funds	$ 52,125	$ —	$ —	$ 52,125
Corporate debt obligations	28,863	133	(1)	28,995
Total	80,988	133	(1)	81,120
Less amounts classified as cash equivalents	(52,125)	—	—	(52,125)
Total marketable securities	$ 28,863	$ 133	$ (1)	$ 28,995

Inventories

At December 31, 2006 and 2007, inventories consisted of the following (in thousands):

	December 31,	
	2006	2007
Raw materials	$ 146	$ 372
Work in process	—	43
Finished goods	529	780
Total inventories	$ 675	$ 1,195

Property and Equipment

At December 31, 2006 and 2007, property and equipment consisted of the following (in thousands):

	December 31,	
	2006	2007
Laboratory equipment	$ 7,809	$11,875
Leaseholds improvements	3,408	6,295
Computer equipment and software	743	1,105
Office equipment and furniture	189	429
Construction in progress	—	502
	12,149	20,206
Less: Accumulated depreciation and amortization	(7,648)	(9,107)
Property and equipment, net	$ 4,501	$11,099

Included in property and equipment, net is $81,000 and $155,000 of equipment relating to capital lease obligations at December 31, 2006 and 2007, respectively. Included in accumulated depreciation and amortization is $49,000 and $121,000 of amortization relating to capital lease obligations at December 31, 2006 and 2007, respectively. Depreciation and amortization expense for the years ended December 31, 2005, 2006 and 2007 was $1.7 million, $1.8 million and $2.1 million, respectively.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Intangible Assets

At December 31, 2006 and 2007, intangible assets consisted of the following (in thousands):

	December 31, 2006			December 31, 2007		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
Customer relationships	$ 2,360	$ (779)	$ 1,581	$ 2,850	$ (1,323)	$ 1,527
Developed and core technology	990	(260)	730	990	(401)	589
Customer backlog	140	(140)	—	140	(140)	—
Tradename	90	(41)	49	90	(64)	26
Purchased technology	—	—	—	440	(40)	400
Non-compete agreements	—	—	—	90	(14)	76
Foreign exchange adjustments	(148)	112	(36)	72	93	165
	$ 3,432	$ (1,108)	$ 2,324	$ 4,672	$ (1,889)	$ 2,783

The weighted-average amortization period of our intangible assets is 5.0 years. Amortization expense for the years ended December 31, 2005, 2006 and 2007 was $744,000, $633,000 and $781,000, respectively. The estimated amortization expense for the next five years is as follows (in thousands):

Years Ending December 31,	Cost of Product Revenues	Selling, General and Administrative	Total
2008	$ 230	$ 649	$ 879
2009	230	631	861
2010	230	197	427
2011	230	98	328
2012	70	53	123
	$ 990	$ 1,628	$2,618

Goodwill

The changes in the carrying value of goodwill for the years ended December 31, 2006 and 2007 are as follows (in thousands):

	2006	2007
Balance at beginning of period	$1,955	$1,926
Additions due to BioCatalytics acquisition	—	1,012
Adjustments to tax valuation allowances established in purchase accounting	—	(51)
Foreign exchange adjustments	(29)	212
Balance at end of period	$1,926	$3,099

6. Related Party Transactions with Maxygen

We were incorporated under the laws of the State of Delaware in January 2002 as a wholly owned subsidiary of Maxygen upon the transfer of the assets, liabilities and operations of Maxygen's chemical business unit to Codexis. We issued 999,000 shares of our common stock and 6,000,000 shares of our

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Series A convertible preferred stock to Maxygen in exchange for consideration consisting of (i) funding of our operations through June 30, 2002, (ii) intellectual property licenses granted to us in a license agreement, (iii) trademarks and patents assigned to us in a trademark assignment agreement and in a patent assignment agreement, (iv) an itemized list of assets contributed to us, and (v) the assignment to us of certain collaborative research and other agreements. The assets received from Maxygen were recorded at the historical basis of Maxygen.

Under the license agreement, Maxygen granted to us the right to use certain intellectual property owned or controlled by Maxygen, tangible property, and other technology of Maxygen in connection with its discovery, research, development, and commercialization of certain chemical products. The licenses provided in the agreement continue in force until the last-to-expire patent within the licensed intellectual property provided, however, that upon a change of control of Codexis, Codexis may not be entitled to receive any additional license rights to patent applications made, or patents related to Maxygen's intellectual property issued, after the change of control.

Under the trademark assignment agreement, Maxygen assigned us all rights, title, and interest in the "Codexis" trademark for all jurisdictions in which it had filed trademark applications and related registrations.

Under the patent assignment agreement, Maxygen assigned us all rights, title, and interest in certain patent applications related to various products.

In July 2002, we entered into a services agreement with Maxygen ("2002 Services Agreement"). Under the 2002 Services Agreement, we could receive certain finance, human resources, facility, information systems, purchasing, legal, patent, investor and public relations, and laboratory research services ("Services") and designated space in the Maxygen facility ("Facilities"). We agreed to reimburse Maxygen for all necessary and reasonable direct and indirect costs that Maxygen incurred in providing these Services and Facilities to us. Direct costs include third party costs paid by Maxygen on behalf of Codexis that are specifically attributable to Codexis. Indirect costs include an allocation of Maxygen's costs for Services shared between Maxygen and Codexis based on a methodology defined in the 2002 Services Agreement. Effective January 2005, we terminated this agreement and initiated a new agreement. Under the new agreement ("2005 Services Agreement"), we leased from Maxygen certain equipment and received certain facility, information systems, patent, and library services on terms similar to the 2002 Services Agreement. The 2005 Services Agreement expired on December 31, 2005. Codexis and Maxygen have continued to operate under the terms of the 2005 Services Agreement although it has lapsed; however, continuing services being provided are minimal.

Total fees paid to Maxygen for Facilities and Services under the 2005 Services Agreement during the years ended December 31, 2005, 2006 and 2007 were $1.4 million, $652,000 and $259,000, respectively. At December 31, 2006 and 2007, we owed Maxygen $21,000 and $116,000, respectively, in connection with the 2005 Services Agreement.

In August 2006, Maxygen purchased 254,838 shares of Series D redeemable convertible preferred stock for $3.97 per share. Other investors not affiliated with Maxygen also purchased shares of Series D redeemable convertible preferred stock at the same price and on the same date as Maxygen. Maxygen has not subsequently purchased or been granted any additional shares as of December 31, 2007.

In August 2006, we entered into an amendment to the license agreement with Maxygen. Under the amendment, Codexis is required to pay Maxygen a fee based on a percentage of all consideration received by Codexis from Shell related to the use of certain intellectual property owned or controlled by Maxygen in

the specified field of biofuels. We expense all payments owed to Maxygen as they become due as collaborative research and development expenses, which we report as research and development expenses in our consolidated statements of operations. We expensed $556,000 and $7.8 million during the years ended December 31, 2006 and 2007, respectively. We had a payable due to Maxygen in the amount of $556,000 and $7.6 million at December 31, 2006 and 2007, respectively, related to the payments received under our collaborative research and license agreements with Shell (see Note 3).

7. Financing Obligations

At December 31, 2006 and 2007, financing obligations, net of debt discounts, consisted of the following (in thousands):

	December 31,	
	2006	2007
Loans payable	$ 3,740	$17,035
Lines of credit	253	217
Capital leases	80	155
	4,073	17,407
Less: current portion	(1,560)	(4,507)
Financing obligations, net of current portion	$ 2,513	$12,900

Loans Payable

In September 2007, we entered into a loan and security agreement with General Electric Capital Corporation and Oxford Finance Corporation (“Lenders”) under which we could borrow up to $15.0 million. In connection with the execution of the loan and security agreement, we incurred costs of $269,000 and, in addition, we issued the Lenders a warrant to purchase 109,091 shares of Series D redeemable convertible preferred stock with an estimated fair value of $297,000, which were recorded on the consolidated balance sheet as a debt discount that is being amortized to interest expense over the life of the loans (see Note 9). During 2007, we drew down the entire $15.0 million, net of issuance costs which remained outstanding at December 31, 2007. The loan agreement provides for a 42-month repayment term from the date of each funding, is secured by our specific assets and also contains covenants that, among other things, place restrictions on our use of cash including the payment of dividends, investment in subsidiaries and the purchase of capital assets. At December 31, 2007, we were in compliance with or had obtained a waiver for the covenants under the loan agreement. All borrowings are subject to monthly cash payments of principal and interest following a six-month period of interest-only monthly payments. Interest accrues at 9.4% per annum. During 2007, we recorded interest expense of $362,000 under the effective interest rate method and amortization expense of $67,000 for the debt discounts related to these loans.

In October 2005, we entered into a loan agreement with Oxford Finance Corporation to borrow up to $3.0 million to be used for equipment purchases. Borrowings under the agreement to purchase equipment are secured by the equipment financed. The ability to make new borrowings under this financing agreement expired on December 31, 2006. Each borrowing is being repaid over 48 months from the date of drawdown at a fixed interest rate that is derived from the four-year Treasury Bill Weekly Average rate at the time of the drawdown. The fixed interest rates for the loan range between 9.9% and 10.7%, respectively. At December 31, 2006 and 2007, the principal amount outstanding was $1.3 million and $923,000, respectively. In connection with this loan agreement, we issued to the lender a warrant to purchase 9,100 shares of our common stock at $0.70 per share (see Note 9). The estimated fair value of the warrant on the issue date of $4,000 was recorded as debt discount to be amortized over approximately four years.

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Notes to Consolidated Financial Statements — (Continued)

In February 2004, we entered into a loan agreement with Lighthouse Capital Partners V, L.P. to borrow up to $4.8 million to be used for equipment purchases and to fund working capital requirements. Borrowings under this agreement to purchase equipment are secured by the equipment financed while borrowings to fund working capital requirements are unsecured. The ability to make new borrowings under this financing agreement expired on March 31, 2005. The borrowings are being repaid over 48 months from the date of drawdown at a fixed interest rate that is derived from the prime lending rate at the time of the drawdown. The fixed interest rates for the loan range between 9.2% and 10.9%. At December 31, 2006 and 2007, the principal amount outstanding was $1.8 million and $858,000, respectively. In connection with this loan agreement, we issued to the financing company a warrant to purchase 46,176 shares of our common stock at $0.40 per share (see Note 9). The estimated fair value of the warrant on the issue date of $14,000 was recorded as debt discount to be amortized over approximately four years.

In August 2001, JFC entered into a loan agreement with a German bank denominated in Euros in which JFC borrowed $753,000 at a fixed interest rate of 7.9%. The loan requires interest-only payments of $15,000 per quarter until September 2011, at which time, the entire principal of $753,000 is payable in full. The principal amount outstanding at December 31, 2006 and 2007 was $753,000.

Lines of Credit

In February 2006, JFC entered into a line of credit agreement with a German bank denominated in Euros, which can be used for both equipment purchases and working capital requirements in the amount of $184,000. The interest rate for the line of credit ranges between 8.3% and 8.5%. The line of credit is secured by a standby letter of credit in the amount of $182,000 in favor of the German bank for which Codexis is the guarantor. The standby letter of credit expires in May 2008. In the event that the standby letter of credit is not renewed, all amounts owed under the line of credit become immediately due and payable. At December 31, 2006 and 2007, $85,000 and $128,000, respectively, was owed under the line of credit. In addition, at December 31, 2006 and 2007, we classified $182,000 as restricted cash to collateralize the standby letter of credit.

Prior to its acquisition, JFC had entered into a line of credit agreement with a German bank denominated in Euros, which can be used for both equipment purchases and working capital requirements. The interest rate for the line of credit in 2006 and 2007 ranges between 9.6% and 12.3%. The line of credit increased from $135,000 at December 31, 2006 to $175,000 at December 31, 2007. In May 2006, Codexis guaranteed the line of credit by issuing a standby letter of credit in the amount of $250,000 in favor of the German bank. The standby letter of credit expires in May 2008. In the event that the standby letter of credit is not renewed, all amounts owed under the line of credit become immediately due and payable. At December 31, 2006 and 2007, $168,000 and $89,000, respectively, was owed under the line of credit. In addition, at each of December 31, 2006 and 2007, we classified $250,000 as restricted cash to fully collateralize the standby letter of credit.

Bridge Financing Agreement

In May 2006, we entered into a bridge financing agreement with several of our then current investors. Under the agreement, the investors loaned us a total of $4.2 million in exchange for convertible promissory notes bearing interest at an annual rate of 8.0%. With the exception of certain assets securing various notes under our other financing agreements, the notes were secured by all of our assets including our intellectual property.

Under the terms of the bridge financing agreement, in the event that we sold preferred stock with proceeds of at least $20.0 million prior to December 31, 2006, the outstanding principal balance of the

convertible promissory notes, together with all unpaid interest, would automatically convert into shares of the new series of preferred stock. The conversion price was to be the price per share at which the preferred stock was sold in the initial closing. In addition, each investor was entitled to receive a warrant to purchase that number of shares of the new series of preferred stock equal to 30% of the number of shares acquired by each investor upon loan conversion. Commensurate with our closing of the Series D redeemable convertible preferred stock offering in August 2006, the bridge loan principal of $4.2 million plus accrued interest of $82,000 was converted into 1,078,568 shares of Series D redeemable convertible preferred stock. In accordance with the terms of the bridge loan financing, warrants to purchase 323,569 shares of our Series D redeemable convertible preferred stock were also issued (See Note 9).

In connection with closing the bridge loan financing on May 25, 2006, the estimated fair value of the warrants of $5,000 was recorded as debt discount with an offsetting entry to the preferred stock warrant liability. As the strike price of the warrants is equal to the liquidation preference of Series D redeemable convertible preferred stock and the warrants convert to common stock warrants upon a merger or a qualified initial public offering, the fair value was determined on an "as-converted" basis using the Black-Scholes option-pricing model. The entire amount of the debt discount was amortized to interest expense during 2006. The initial allocation of proceeds received from the bridge loan financing to the warrants resulted in an embedded beneficial conversion feature in the amount of $5,000. The beneficial conversion feature has been recorded as interest expense with an offsetting entry to additional paid-in capital during 2006.

Capital Leases and Future Payments

We lease certain property and equipment under leases classified as capital leases. Future payments due for all financing obligations, including capital leases, are as follows (in thousands):

Years	Loans Payable	Lines of Credit	Capital Leases	Total
2008	$ 6,098	$ 217	$ 80	$ 6,395
2009	6,255	—	67	6,322
2010	5,980	—	18	5,998
2011	2,983	—	—	2,983
Total payments	$21,316	$ 217	$ 165	21,698
Less: amount representing interest				(4,291)
Present value of minimum payments				17,407
Less: current portion of financing obligations				(4,507)
Long-term portion of financing obligations				$12,900

Interest expense for the three years ended December 31, 2005, 2006 and 2007 was $344,000, $485,000 and $829,000, respectively.

8. Commitments and Contingencies

Operating Leases

In October 2003, we entered into an operating lease agreement with a third party landlord for our facilities in Redwood City, California. The rent payments commenced in February 2004, with scheduled rent increases through the lease expiration in January 2011. Rent expense is recognized on a straight-line

basis over the term of the lease. In accordance with the terms of the lease agreement, we exercised our right to deliver a letter of credit in the amount of $450,000 in lieu of a security deposit. Provided that we have not been in default of the lease, the amount of the letter of credit will be reduced to $225,000 in February 2010. This letter of credit, which is recorded as restricted cash on the consolidated balance sheets, will be required until the termination of the lease.

In connection with this lease agreement, we were reimbursed $618,000 by the landlord for leasehold improvements. We recorded this amount as a lease incentive obligation that is being amortized as a reduction of rent expense on a straight-line basis over the term of the operating lease. Rent expense was reduced by $63,000, $78,000 and $78,000 during the years ended December 31, 2005, 2006 and 2007, respectively.

Prior to its acquisition, JFC entered into an operating lease agreement for its facilities in Jülich, Germany. The rent payments made by JFC commenced in September 2003, with scheduled rent increases through the lease expiration in September 2013. Rent expense is being recognized on a straight-line basis over the term of the lease.

We recorded a liability of $349,000 in 2007 related to an asset retirement obligation from an operating lease in Singapore entered into in June 2007, whereby we must restore the building that we are renting to its original form. We are expensing the asset retirement obligation over the term of the lease on a straight-line basis. We review the estimated obligation each period and we will make adjustments if future estimates change.

Total rent expense under these operating leases was $1.1 million, $1.2 million and $2.1 million during the years ended December 31, 2005, 2006 and 2007, respectively. Deferred rent of $140,000 and $210,000 at December 31, 2006 and 2007, respectively, represents the difference between rent expense recognized and the cash payments related to the operating leases and is included in other accrued liabilities on our consolidated balance sheets.

During the first quarter of 2008, we entered into another operating lease agreement with the landlord for our facilities in Redwood City for additional office space adjacent to our current headquarters. The new lease commences in April 2008, with scheduled rent increases through the lease expiration in March 2013. Future minimum payments under noncancellable operating leases, including payments for the new lease signed during 2008, are as follows (in thousands):

Years	Lease Payments
2008	$ 2,591
2009	3,064
2010	2,943
2011	1,553
2012	1,144
Thereafter	428
	$ 11,723

Litigation

We have been subject to various legal proceedings related to matters that have arisen during the ordinary course of business. We are not currently subject to any pending legal proceedings, nor are we aware of any such proceedings, that would, individually or in the aggregate, have a material adverse effect on our consolidated financial position, results of operations or cash flows.

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Notes to Consolidated Financial Statements — (Continued)

Indemnifications

In November 2002, the FASB issued FIN No. 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*, which requires a guarantor to recognize a liability for the fair value of the obligations it assumes upon the issuance of a guarantee.

As permitted under Delaware law and in accordance with our bylaws, we indemnify our officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at our request in such capacity. In September 2007, we entered into indemnification agreements with our officers and directors. The maximum amount of potential future indemnification is unlimited; however, we intend to continue to maintain director and officer insurance that adequately limits our exposure and may enable us to recover a portion of any future amounts paid. We believe that fair value for these indemnification obligations is minimal. Accordingly, we have not recognized any liabilities related to these obligations at of December 31, 2007.

We have certain agreements with licensors, licensees and collaborators that contain indemnification provisions. In such provisions, we typically agree to indemnify the licensor, licensee and collaborator against certain types of third party claims. We accrue for known indemnification issues when a loss is probable and can be reasonably estimated. There were no accruals for expenses related to indemnification issues for any periods presented.

9. Warrants

We have issued warrants to purchase 861,231 shares of our Series D redeemable convertible preferred stock and warrants to purchase 58,853 shares of our common stock at various times between 2004 and 2007. The warrants are generally exercisable at any time during their term. During 2007, a warrant to purchase 428,571 shares of Series D redeemable convertible preferred stock was exercised (see Note 3). At December 31, 2007, the following warrants were issued and outstanding:

Issue Date	Reason for Grant	In Connection with Redeemable Convertible Preferred or Common Stock	Shares Subject to Warrants	Exercise Price per Share	Expiration
February 12, 2004	Debt	Common	46,176	$ 0.40	February 12, 2011
October 25, 2005	Debt	Common	9,100	0.70	October 25, 2012
May 25, 2006	Debt	Series D	323,569	3.97	May 25, 2013
July 17, 2007	Debt	Common	3,577	8.30	February 9, 2016
September 28, 2007	Debt	Series D	109,091	5.50	September 28, 2017
			491,513		

At December 31, 2006 and 2007, the outstanding warrants to purchase shares of our Series D redeemable convertible preferred stock were subject to the provisions of FSP 150-5. The fair values for these warrants were $623,000 and $1.5 million at December 31, 2006 and 2007, respectively.

An increase in fair value due to re-measurements of the preferred stock warrant liability of $156,000 and $1.3 million was recognized as interest expense and other in the consolidated statements of operations during 2006 and 2007.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

10. Redeemable Convertible Preferred Stock

The authorized, issued, and outstanding shares, aggregate liquidation preferences and carrying value of our redeemable convertible preferred stock were as follows at December 31, 2006 (in thousands):

Series (1) (2)	Number of Shares		Aggregate Liquidation Preference	Carrying Value
	Authorized	Issued and Outstanding		
Series A (3)	6,000	6,000	$ 30,000	$ 1
Series B	8,101	8,101	25,000	27,779
Series C	1,515	1,515	10,000	9,969
Series D	11,155	10,068	39,972	39,764
Balance as of December 31, 2006	26,771	25,684	$ 104,972	$ 77,513

(1) All series of preferred stock, except Series A, were convertible into common stock on a 1-for-1 basis.

(2) Series A and Series C are not redeemable; Series B and D are all redeemable.

(3) Series A was convertible on a 1:1.01 basis, or into 6,060,606 shares of common stock.

The authorized, issued, and outstanding shares, aggregate liquidation preferences and carrying value of redeemable convertible preferred stock were as follows at December 31, 2007 (in thousands):

Series (1) (2)	Number of Shares		Aggregate Liquidation Preference	Carrying Value
	Authorized	Issued and Outstanding		
Series A (3)	6,000	6,000	$ 30,000	$ 1
Series B	8,101	8,101	25,000	27,779
Series C	1,515	1,515	10,000	9,969
Series D	11,155	10,497	42,972	42,764
Series E	6,434	6,157	52,333	52,233
Balance as of December 31, 2007	33,205	32,270	$ 160,304	$ 132,746

(1) All series of preferred stock, except Series A, were convertible into common stock on a 1-for-1 basis.

(2) Series A and Series C are not redeemable; Series B, D and E are all redeemable.

(3) Series A was convertible on a 1:1.01 basis, or into 6,060,606 shares of common stock.

We recorded the redeemable convertible preferred stock at fair values on the dates of issuance, net of issuance costs. We classify the redeemable convertible preferred stock outside of stockholders' equity (deficit) in accordance with EITF Topic D-98. For the years ended December 31, 2005, 2006 and 2007, we elected not to adjust the carrying values of the redeemable convertible preferred stock to the deemed redemption value of such shares since it is uncertain as to whether or when a liquidation event could occur. Subsequent adjustments to increase the carrying values to the ultimate redemption values will be made only when it becomes probable that such a liquidation event will occur.

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Notes to Consolidated Financial Statements — (Continued)

During 2006, we sold 10,068,402 shares of Series D redeemable convertible preferred stock at a price of $3.97 per share for gross proceeds of $40.0 million. Included in the offering were 1,078,571 shares issued as a result of the conversion of the bridge loans issued under the bridge financing agreement entered into in May 2006 (See Note 7).

During 2007, we sold 6,100,305 shares of Series E redeemable convertible preferred stock at a price of $8.50 per share for gross proceeds of $51.9 million, and issued an additional 56,470 shares of Series E redeemable convertible preferred stock valued at $480,000 to a professional consulting services firm in exchange for their services. We also issued an additional 428,571 shares of Series D redeemable convertible preferred stock at a price of $7.00 per share, upon exercise of a warrant for cash, for gross proceeds of $3.0 million.

The significant rights, privileges, and preferences of our redeemable convertible preferred stock are as follows:

Voting Rights — The holders of Series A through E redeemable convertible preferred stock are all entitled to one vote for each share of common stock into which such share may be converted, and the vote of the holders of a majority of our Series B, C, D and E redeemable convertible preferred stock (voting together as a single class and on an as-if-converted basis) is required to effect certain corporate actions. In addition, the vote of the holders of a majority of our Series D redeemable convertible preferred stock is required to effect (i) any winding up or liquidation of our Singapore subsidiary, (ii) a significant reduction in the number of employees at our Singapore subsidiary or (iii) a significant reduction in the overall technological capacity of our Singapore subsidiary's operations.

Dividends — The holders of the redeemable convertible preferred stock are entitled, when, as, and if declared by the Board of Directors, to non-cumulative dividends of (i) $0.40 per share for Series A, (ii) $0.25 per share for Series B, (iii) $0.53 per share for Series C, (iv) $0.32 per share for Series D, and (v) $0.68 per share for Series E. The Series B, C, D, and E redeemable convertible preferred stock dividends are to be paid in advance of any distributions to the holders of Series A convertible preferred stock and common stock. The Series A convertible preferred stock dividends are to be paid in advance of any distributions to the holders of common stock. Once the redeemable convertible preferred stockholders have received their dividend preference, and in the event dividends are paid on any share of common stock, the holders of all series of redeemable convertible preferred stock are entitled to additional dividends equal to those paid or set aside to the common stockholders determined on an as-if-converted basis. No dividends have been declared or paid as of December 31, 2007.

Liquidation — In the event of any voluntary or involuntary liquidation, dissolution or winding up of our company, all of our assets available for distribution among the holders of redeemable convertible preferred stock are required to be distributed in the following order: (i) each holder of Series D and E redeemable convertible preferred stock is entitled to receive a liquidation preference of $3.97 and $8.50 per share, respectively, together with any declared but unpaid dividends, before any payments can be made to holders of Series A, B and C redeemable convertible preferred stock, (ii) each holder of Series B and C redeemable convertible preferred stock is entitled to receive a liquidation preference of $3.09 and $6.60 per share, respectively, together with any declared but unpaid dividends, before any payments can be made to holders of Series A convertible preferred stock, and (iii) each holder of Series A convertible preferred stock is entitled to receive a liquidation preference of $5.00 per share, together with any declared but unpaid dividends. After payment of these preferential amounts, the remaining assets are required to be distributed ratably to holders of common stock. In the event that the assets available for distribution are insufficient to make the full per share distributions, all such assets are required to be distributed among the holders of the

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Notes to Consolidated Financial Statements — (Continued)

respective series in proportion to the full preference to which such holders would otherwise be entitled. Any of the following shall be deemed a liquidation, dissolution or winding up of our company: (1) a consolidation or merger of our company with or into any other corporation or other entity or person, or any other corporate reorganization, in which (x) we do not survive or (y) our stockholders immediately prior to such consolidation, merger or reorganization, own less than 50% of our voting power immediately after such consolidation, merger or reorganization; (2) any transaction or series of related transactions to which we are a party in which greater than 50% of our voting power is transferred; or (3) a sale, lease, exclusive license or other disposition of all or substantially all of our assets. As the holders of our redeemable convertible preferred stock may elect a majority of the members of our board of directors, and control the vote of our stockholders, a liquidation may not be in our control. Accordingly, all series of redeemable convertible preferred stock are classified outside of permanent equity in accordance with the requirements of EITF Topic D-98.

From our inception through February 2005, Maxygen held a majority of our outstanding voting rights and, therefore, consolidated us as a subsidiary of Maxygen through that date. Based upon Maxygen's control of us during this period, we recorded accretion adjustments to Maxygen's Series B convertible preferred stock through the end of 2004, the last balance sheet date at which Maxygen retained such control. Accordingly, we adjusted the carrying value of redeemable convertible preferred stock to the deemed redemption amount during 2002, 2003 and 2004. During 2005, 2006 and 2007, our Board of Directors has not indicated that a deemed redemption or liquidation event, as described in the preceding paragraph, was being considered or was probable due to the reduction of Maxygen's voting rights to less than a majority of our outstanding shares. Accordingly, during 2005, 2006 and 2007, we did not adjust the carrying value of our Series A, B, C, D and E redeemable convertible preferred stock to the amounts we would have paid if a deemed redemption payment had become probable.

Conversion — The holders of Series B through E redeemable convertible preferred stock have the right, at the option of the holder, at any time, to convert their shares into shares of common stock on a 1-for-1 basis, subject to adjustment for antidilution, stock splits, reclassifications and the like. The holders of the Series A convertible preferred stock have the right, at the option of the holder, at any time, to convert their shares into shares of common stock on a 1-for-1.01 basis, subject to adjustment for antidilution, stock splits, reclassifications and the like. Conversion of all outstanding redeemable convertible preferred stock is automatic (i) at any time upon the affirmative election of the holders of at least two-thirds (66 $^{2}/_{3}$%) of the then outstanding shares of the Series B, C, D and E, voting together as a single class and on an as-if-converted basis, or (ii) immediately upon the closing of a firmly underwritten public offering in which the gross cash proceeds to Codexis before underwriting discounts, commissions and fees are equal to or exceed $50.0 million and the value of the Company immediately prior to the offering is equal to or exceeds $250.0 million.

Redemption — The holders of at least a majority of the then-outstanding shares of Series B, D and E redeemable convertible preferred stock, voting or consenting together as a separate series, may require Codexis to redeem each of these series of redeemable convertible preferred stock in three annual installments. The redemption price for each share will be payable in cash in exchange for the shares of Series B redeemable convertible preferred stock to be redeemed at a sum equal to the applicable original issue price per share plus five percent (5%) of the original issue price per annum from the Series B original issue date until the Series D original issue date and eight percent (8%) of the original issue price per annum from the Series D original issue date until the applicable Series B redemption date, plus declared but unpaid dividends. The redemption price for each share of Series D and E will be payable in cash in exchange for the shares of each series redeemable convertible preferred stock to be redeemed at a sum

equal to the applicable original issue price per share plus eight percent (8%) of the original issue price per annum from the original issue date until the applicable redemption date, plus declared but unpaid dividends. Notice of redemption can be given at any time on or after December 31, 2011.

11. Stockholders' Equity (Deficit)

2002 Stock Option Plan

In 2002, we adopted the 2002 Stock Option Plan (the "Plan"), under which our Board of Directors may issue incentive stock options, nonstatutory stock options (options that do not qualify as incentive stock options) and restricted stock to employees, officers, directors or consultants of Codexis or any parent or subsidiary. As of December 31, 2007, we have reserved 12,457,642 shares of common stock for issuance under the Plan. Options granted under the Plan expire no later than 10 years from the date of grant. For incentive stock options and nonstatutory stock options, the option price shall be at least 100% and 85%, respectively, of the fair value of the common stock on the date of grant, as determined by the Board of Directors. If, at the time of a grant, the optionee directly or by attribution owns stock possessing more than 10% of the total combined voting power of all of our outstanding capital stock, the exercise price for these options must be at least 110% of the fair value of the underlying common stock. Options typically vest over a four-year period at a rate of no less than 25% per year but may be granted with different vesting terms.

In 2007, our Board of Directors amended the Plan to allow for the early exercise of options prior to vesting. During 2007, we issued an aggregate of 130,000 shares of common stock pursuant to the early exercise of stock options. Prior to 2007, we had not issued any shares of common stock pursuant to the early exercise of stock options. The amounts received in exchange for these shares have been recorded as a liability in the accompanying consolidated balance sheet and are reclassified into equity as the shares vest.

The activity of unvested shares of common stock for 2007 is as follows:

	Number of Shares	Weighted Average Exercise Price per Share
December 31, 2006	—	$ —
Exercised unvested stock options	129,999	0.81
Vested	(72,396)	0.53
December 31, 2007	57,603	1.16

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Notes to Consolidated Financial Statements — (Continued)

A summary of activity for the Plan is as follows:

		Options Outstanding	
	Shares Available for Grant	Number of Options	Weighted Average Exercise Price per Share
December 31, 2004	1,235,377	2,617,775	$ 0.41
Authorized	1,400,000	—	—
Grants	(2,258,600)	2,258,600	0.65
Exercises	—	(176,724)	0.42
Forfeited	191,377	(191,377)	0.47
December 31, 2005	568,154	4,508,274	0.53
Authorized	3,700,000	—	—
Grants	(322,500)	322,500	0.70
Exercises	—	(125,121)	0.44
Forfeited	582,715	(582,715)	0.55
December 31, 2006	4,528,369	4,122,938	0.54
Authorized	3,357,642	—	—
Grants	(5,807,825)	5,807,825	2.74
Exercises	—	(595,684)	0.63
Forfeited	368,005	(368,005)	0.73
December 31, 2007	2,446,191	8,967,074	1.95

During January 2007, we granted 521,000 options to employees that were authorized by our Board of Directors in 2006 under the Plan; however, we did not communicate all of the key terms of the grants to these employees until May 2007. Therefore, the grant date as defined in SFAS 123(R) did not occur until May 2007. As a result, no compensation expense was recorded related to these grants in 2006. These options have exercise prices of $0.70 per share, weighted average measurement date fair value of $0.97 per share at May 2007 and an aggregate fair value of $507,000. A compensation charge in the amount of $140,000 was recorded on the May 2007 measurement date representing the fair value of options that had vested according to their terms by that date.

The following table summarizes information about stock options outstanding and exercisable at December 31, 2007:

	Options Outstanding			Options Exercisable	
Exercise Prices	Number of Options	Weighted Average Remaining Contractual Term (Years)	Weighted Average Exercise Price per Share	Number of Options	Weighted Average Remaining Contractual Term (Years)
$0.40	1,491,644	5.5	$ 0.40	1,432,207	5.5
0.45	129,500	6.5	0.45	110,144	6.5
0.60	615,963	7.1	0.60	457,938	7.1
0.70	1,528,142	7.9	0.70	880,637	7.9
1.63	2,882,500	9.2	1.63	453,961	9.1
4.47	1,271,175	9.7	4.47	25,500	9.7
4.57	864,550	9.8	4.57	—	—
5.79	183,600	9.9	5.79	25,000	9.9
Total	8,967,074	8.3	1.95	3,385,387	6.9

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Notes to Consolidated Financial Statements — (Continued)

The following table summarizes information about stock options that have vested and are expected to vest at December 31, 2007:

	Number of Options Outstanding	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (In Thousands)
Vested	3,283,927	$ 0.66	6.8	$ 16,831
Expected to vest	5,478,554	2.69	9.2	16,984
Total vested and expected to vest	8,762,481	1.95	8.3	$ 33,815

The total grant date fair value of stock options that vested during 2006 and 2007 was $102,000 and $590,000, respectively. The aggregate grant date fair value of options granted during 2005, 2006 and 2007 was $192,000, $133,000 and $7.5 million, respectively.

At December 31, 2007, exercisable options had a weighted average exercise price of $0.74 per share and an intrinsic value of $17.1 million. The aggregate intrinsic value of stock options outstanding at December 31, 2007 was $34.4 million, of which $17.1 million was related to exercisable options. The aggregate intrinsic value of exercised stock options was $49,000, $50,000 and $869,000 during 2005, 2006 and 2007, respectively. The intrinsic value of stock options outstanding, exercised, exercisable and expected-to-vest is calculated based on the difference between the exercise price and the fair value of our common stock at December 31, 2007.

Stock-based compensation costs capitalized during 2005, 2006 and 2007 were insignificant. There were no stock-based compensation tax benefits during 2005, 2006 and 2007.

At December 31, 2007, there was $6.2 million of unrecognized stock-based compensation cost related to stock options granted under the Plan which is expected to be recognized over an average period of 2.2 years.

Stock Options Granted to Nonemployees

During the years ended December 31, 2005, 2006 and 2007, we granted options to purchase 260,000, 22,500 and 331,000 shares of common stock, respectively, to nonemployees. For all options granted to nonemployees in 2005, the Black- Scholes option-pricing model was applied using the following assumptions: volatility of 70%; a risk-free interest rate of 4.4%; a remaining contractual option life between 4 and 8 years; and no dividend yield. The exercise price of the options granted to nonemployees in 2005 ranged between $0.60 and $0.70 per share. For all options granted to nonemployees in 2006, the Black-Scholes option-pricing model was applied using the following assumptions: volatility between 49% and 65%; a risk-free interest rate between 4.5% and 4.7%; a remaining contractual option life of 8 years; and no dividend yield. The exercise price of all options granted to nonemployees in 2006 was $0.70 per share. For all options granted to nonemployees in 2007, the Black-Scholes option-pricing model was used with the following assumptions: volatility between 44% and 49%; a risk-free interest rate between 3.9% and 5.0%; a remaining contractual option life between 9 and 10 years; and no dividend yield. The exercise price of the options granted to nonemployees in 2007 ranged from $1.63 to $4.57 per share. We recorded stock-based compensation expense related to these options of $69,000, $32,000 and $213,000 in the years ended December 31, 2005, 2006 and 2007, respectively, as the underlying services were rendered. In accordance with SFAS 123(R) and EITF 96-18, options granted to nonemployees are periodically revalued as they vest. At December 31, 2007, there were 65,000 options outstanding that had been issued outside of the Plan.

Stock-Based Compensation after Adoption of SFAS 123(R)

Upon adoption of SFAS 123(R), we estimated the fair value of stock-based awards granted to employees and directors using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires the use of highly subjective and complex assumptions to determine the fair value of stock-based awards, including the expected life of the option and expected volatility of the underlying stock over the expected life of the related grants. As a private entity, company specific historical volatility data are not available. As a result, we estimate the expected volatility based on the historical volatility of a group of unrelated public companies within the same industry as Codexis. We will continue to consistently apply this process until a sufficient amount of historical information regarding the volatility of our own share price becomes available. Due to our limited history of grant activity, the expected life of options granted to employees is calculated using the "simplified method" permitted by SEC Staff Accounting Bulletin No. 107. In the future, as we gain historical data on the actual term employees hold our options, the expected life may change, which could substantially change the grant date fair value of future awards of stock options and, ultimately, the expense we record. The expected life represents the period of time that options granted are expected to be outstanding. The risk-free interest rate for periods pertaining to the expected life of each option is based on the U.S. Treasury strip yield of a similar duration in effect at the time of grant. We have never paid dividends and do not expect to pay dividends in the foreseeable future. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revisited in subsequent periods if actual forfeitures differ from those estimates. Prior to the adoption of SFAS 123(R), we accounted for forfeitures as they occurred.

The following assumptions were used to estimate the fair value of options granted during 2006 and 2007:

	2006	2007
Weighted average expected life (years)	6.1	6.0
Weighted average expected volatility	65%	48%
Weighted average risk-free interest rates	4.2%	4.3%
Expected dividend yield	0%	0%

We recognized stock-based compensation expense during the year ended December 31, 2006 of $32,000 for employee stock options and $32,000 for nonemployee stock options. Furthermore, $61,000 was recorded as a general and administrative expense while $3,000 was recorded as a research and development expense. We recognized stock-based compensation expense during 2007 of $1.0 million for employee stock options and $213,000 for nonemployee stock options. Furthermore, $788,000 was recorded as a general and administrative expense while $468,000 was recorded as a research and development expense.

Common Stock

In connection with the acquisition of JFC, we issued to the former shareholders of JFC a total of 312,500 shares of common stock on the acquisition date in February 2005 and an additional 36,489 shares of common stock in February 2006 in relation to the achievement of predefined performance objectives.

In connection with the acquisition of BioCatalytics, we issued to the former shareholder of BioCatalytics a total of 963,423 shares of common stock in July 2007.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Warrants to Purchase Common Stock

In October 2005, in connection with a loan agreement (see Note 7), we issued to the lender a warrant to purchase 9,100 shares of our common stock at $0.70 per share. The warrant is exercisable until October 2012. The fair value of the warrant was determined to be $4,000 using the Black-Scholes option-pricing model. We will recognize the fair value of the warrant as additional interest expense over the term of the related debt. The assumptions used in calculating the fair value were as follows: a risk-free interest rate of 4.4%; an expected life of seven years; no dividend yield; and a volatility of 70%. The warrant was outstanding and exercisable at December 31, 2007.

In February 2004, in connection with a loan agreement (see Note 7), we issued to the lender a warrant to purchase 46,176 shares of our common stock at $0.40 per share. The warrant is exercisable until February 2011. The fair value of the warrant was determined to be $14,000 using the Black-Scholes option-pricing model. We will recognize the fair value of the warrant as additional interest expense over the term of the related debt. The assumptions used in calculating the fair value were as follows: a risk-free interest rate of 3.6%; an expected life of seven years; no dividend yield; and a volatility of 80%. The warrant was outstanding and exercisable at December 31, 2007.

Shares Reserved

Common stock reserved for future issuance is as follows (in thousands):

	December 31, 2007
Conversion of redeemable convertible preferred stock	32,330
Warrants to purchase redeemable convertible preferred and common stock	492
Stock options:	
Outstanding	9,032
Reserved for future grants	2,446
	44,300

12. Income Taxes

Our loss before provision for income taxes was as follows (in thousands):

	Years ended December 31,		
	2005	2006	2007
United States	$ 10,961	$ 18,142	$ 35,504
Foreign	386	656	3,881
Loss before provision for income taxes	$ 11,347	$ 18,798	$ 39,385

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

The tax provision (benefit) for 2005, 2006 and 2007, respectively, consist primarily of foreign tax withheld at source on royalties received from overseas and other taxes attributable to foreign operations. The components of the provision (benefit) for income taxes are as follows (in thousands):

	Years ended December 31,		
	2005	2006	2007
Current provision (benefit):			
Federal	$ —	$ —	$ —
State	2	3	4
Foreign	429	208	287
Total current provision	431	211	291
Deferred provision (benefit):			
Federal	$ —	$ —	$(131)
State	—	—	—
Foreign	(188)	(338)	(568)
Total deferred (benefit)	(188)	(338)	(699)
Total provision (benefit)	$ 243	$(127)	$(408)

Reconciliation of the benefits for income taxes at the statutory rate to our provision for income taxes is as follows (in thousands):

	Years ended December 31,		
	2005	2006	2007
Tax benefit at federal statutory rate	$(3,972)	$(6,580)	$ (13,781)
State taxes	(597)	(859)	(1,827)
Research and development credits	(218)	(371)	(483)
Foreign operations taxes at different rates	(28)	(43)	1,047
Other nondeductible items	581	147	560
Change in valuation allowance	4,477	7,579	14,076
Provision (benefit) for income taxes	$ 243	$ (127)	$ (408)

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Significant components of our deferred tax assets and liabilities are as follows (in thousands):

	December 31,	
	2006	2007
Deferred tax assets:		
Federal, state and foreign net operating loss carryforwards	$ 17,100	$ 24,213
Federal and state credits	1,152	1,635
Deferred contract revenues	2,416	8,945
Capitalized research and development	395	323
Other	1,900	2,472
Total deferred tax assets	22,963	37,588
Deferred tax liabilities:		
Acquired intangible assets	(983)	(913)
Total deferred tax liabilities	(983)	(913)
Valuation allowance	(22,817)	(36,893)
Net deferred tax assets (liabilities)	$ (837)	$ (218)

Realization of the deferred tax assets is dependent upon future taxable income, if any, the amount and timing of which are uncertain. Accordingly, the net deferred tax assets have been fully reserved by a valuation allowance. The net valuation allowance increased by $4.5 million, $7.6 million and $14.1 million during the years ended December 31, 2005, 2006 and 2007, respectively. At such time as it is determined that it is more likely than not that the deferred tax assets are realizable, the valuation allowance will be reduced. Deferred tax assets primarily relate to net operating loss carryforwards (“NOLs”).

As of December 31, 2007, we had federal NOLs of $58.3 million. We also had federal research and development tax credit carryforwards of $1.0 million. The federal NOLs will expire at various dates beginning in 2022 through 2027 if not utilized and the federal research and development tax credits will expire at various dates beginning in 2022 through 2027 if not utilized.

As of December 31, 2007, we had state NOLs of $55.3 million. We also had state research and development tax credit carryforwards of $1.0 million. The state NOLs will expire at various dates beginning in 2013 through 2027 if not utilized and the state research and development tax credits will not expire.

As of December 31, 2007, we had foreign NOLs of $4.6 million, which do not expire.

Utilization of the NOLs and credits may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. Our existing NOLs and credits may already be subject to limitations arising from previous ownership changes, and if we undergo an ownership change in connection with or after this public offering, our ability to utilize NOLs and credits could be further limited by Section 382 of the Internal Revenue Code. The annual limitation may result in the expiration of net operating losses and credits before utilization.

We have not recorded deferred income taxes applicable to undistributed earnings of a foreign subsidiary that are indefinitely reinvested in foreign operations. Undistributed earnings amounted to $900,000 at December 31, 2007. Generally, such earnings become subject to U.S. tax upon the remittance of dividends and under certain other circumstances. It is not practicable to estimate the amount of the deferred tax liability on such undistributed earnings.

We adopted the provisions of FIN 48 on January 1, 2007. As a result of the adoption, we recognized a $79,000 increase in the liability for unrecognized tax benefits, which was accounted for as an adjustment to deferred tax assets which was fully offset by a valuation allowance. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

January 1, 2007	$ 1,661
Additions based on tax positions related to 2007	1,137
Additions for tax positions of prior years	—
Reductions for tax positions of prior years	—
Lapse of the applicable statute of limitations	—
Settlements	—
December 31, 2007	$ 2,798

We recognize interest and penalties in income tax expense. Total interest and penalties recognized in the consolidated statement of operations and balance sheet was $49,000 in 2007. The total unrecognized tax benefits that, if recognized, would impact our effective tax rate are $288,000. We do not expect any unrecognized tax benefits to be recognized within the next 12 months. We are not subject to examination by U.S. federal or state tax authorities for years prior to 2002 and foreign tax authorities for years prior to 2006.

13. Segment Reporting

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information*, establishes standards for reporting information about operating segments. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. Our chief operating decision maker is our Chief Executive Officer. The Chief Executive Officer reviews financial information presented on a consolidated basis, accompanied by information about revenue by geographic region, for purposes of allocating resources and evaluating financial performance. We have one business activity and there are no segment managers who are held accountable for operations, operating results beyond revenue goals or gross margins, or plans for levels or components below the consolidated unit level. Accordingly, we have a single reporting segment.

Operations outside of the United States consist principally of research and development and sales activities. Geographic revenues are identified by the location of the customer and consist of the following (in thousands):

	Years Ended December 31,		
	2005	2006	2007
Revenues			
United States	$ 6,614	$ 7,974	$ 15,458
Europe	3,201	2,437	3,343
Asia	1,969	1,716	6,532
	$ 11,784	$ 12,127	$ 25,333

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Geographic presentation of identifiable long-lived assets below shows those assets that can be directly associated with a particular geographic area and consist of the following (in thousands):

	December 31,	
	2006	2007
Long-lived assets		
United States	$ 9,562	$ 14,760
Europe	449	650
Asia	4	4,785
	$ 10,015	$ 20,195

CODEXIS®

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. ***Other Expenses of Issuance and Distribution***

The following table sets forth the fees and expenses, other than underwriting discounts and commissions, payable in connection with the registration of the common stock hereunder. All amounts are estimates except the SEC registration fee, the FINRA filing fee and The Nasdaq Global Market listing fee.

SEC registration fee	$ 3,930
FINRA filing fee	10,500
Nasdaq Global Market listing fee	*
Blue Sky fees and expenses	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees	*
Miscellaneous expenses	*
Total	*

* To be provided by amendment.

Item 14. ***Indemnification of Directors and Officers***

Section 145 of the Delaware General Corporation Law provides that a corporation may indemnify its directors and officers from certain expenses in connection with legal proceedings and permits a corporation to include in its charter documents, and in agreements between the corporation and its directors and officers, provisions expanding the scope of indemnification beyond that specifically provided by this section.

The Registrant's amended and restated certificate of incorporation provides for the indemnification of directors to the fullest extent permissible under Delaware law.

The Registrant's amended and restated bylaws provide for the indemnification of officers, directors and third parties acting on the Registrant's behalf to the full extent permitted by Delaware law, which allows for indemnification if such persons act in good faith and in a manner reasonably believed to be in and not opposed to the Registrant's best interest, and, with respect to any criminal action or proceeding, such indemnified party had no reason to believe his or her conduct was unlawful.

The Registrant is entering into indemnification agreements with each of its directors and executive officers, in addition to the indemnification provisions provided for in its charter documents, and the Registrant intends to enter into indemnification agreements with any new directors and executive officers in the future.

The underwriting agreement (a form of this agreement to be filed as Exhibit 1.1 hereto) will provide for indemnification by the underwriters of the Registrant, the Registrant's executive officers and directors, and indemnification of the underwriters by the Registrant for certain liabilities, including liabilities arising under the Securities Act, in connection with matters specifically provided in writing by the underwriters for inclusion in the registration statement.

The Registrant intends to purchase and maintain insurance on behalf of any person who is or was a director or officer against any loss arising from any claim asserted against him or her and incurred by him or her in that capacity, subject to certain exclusions and limits of the amount of coverage.

Item 15. ***Recent Sales of Unregistered Securities***

Since January 1, 2005, the Registrant has issued and sold the following unregistered securities:

1. In October 2005, the Registrant issued a warrant to purchase an aggregate of 9,100 shares of its common stock at an exercise price of $0.70 per share to a certain lender to the Registrant. The warrant may be exercised at any time prior to its termination date, which is the 7th anniversary of its issue date.
2. In May 2006, the Registrant issued warrants to purchase an aggregate of 323,569 shares of its Series D convertible preferred stock at an exercise price of $3.97 per share to certain bridge lenders to the Registrant. The warrants may be exercised at any time prior to their respective termination dates, which are the 7th anniversaries of their issue dates.
3. In August and October 2006, the Registrant issued and sold 10,068,402 shares of Series D convertible preferred stock to venture capital funds and other investors at a per share price of approximately $3.97, for aggregate consideration of approximately $40.0 million. Upon completion of this offering, these shares of Series D convertible preferred stock will convert into 10,068,402 shares of the Registrant's common stock.
4. In November 2006, the Registrant issued a warrant to purchase an aggregate of 428,571 shares of its Series D convertible preferred stock at an exercise price of $7.00 per share to a certain strategic partner of the Registrant. In November 2007, the warrant was exercised and the Registrant issued and sold 428,571 shares of Series D convertible preferred stock to the holder for a purchase price of $2,999,997.00
5. In July 2007, the Registrant issued and sold 963,423 shares of common stock to the sole shareholder of BioCatalytics, Inc. as partial consideration for the Registrant's acquisition of BioCatalytics, Inc.
6. In July 2007, the Registrant converted a warrant issued by a newly-acquired subsidiary to its landlord into a warrant to purchase an aggregate of 3,577 shares of its common stock at an exercise price of $8.30 per share. The warrant may be exercised at any time prior to its termination date, which is the 10th anniversary of its issue date.
7. In September 2007, the Registrant issued warrants to purchase an aggregate of up to 109,091 shares of its Series D convertible preferred stock at an exercise price of $5.50 per share to certain lenders to the Registrant. The warrants may be exercised at any time prior to their respective termination dates, which are the 10th anniversaries of their issue dates.
8. In November and December 2007, the Registrant issued and sold 6,156,775 shares of Series E convertible preferred stock to venture capital funds and other investors at a per share price of approximately $8.50, for aggregate consideration of approximately $52.0 million. Upon completion of this offering, these shares of Series E convertible preferred stock will convert into 6,156,775 shares of the Registrant's common stock.
9. From January 1, 2005 through December 31, 2007, the Registrant granted stock options to purchase 8,421,425 shares of the registrant's common stock at exercise prices ranging from $0.60 to $5.79 per share to employees, consultants and directors of the Registrant under the Registrant's 2002 Stock Plan. Since January 1, 2005 through December 31, 2007, the Registrant had issued and sold an aggregate of 897,529 shares of its common stock to the Registrant's employees, consultants and directors at prices ranging from $0.40 to $1.63 per share pursuant to exercises of options granted under the Registrant's 2002 Stock Plan.

The issuance of securities described above in paragraphs (1) through (8) were exempt from registration under the Securities Act, in reliance on Section 4(2) of the Securities Act, and Regulation D promulgated thereunder, as transactions by an issuer not involving any public offering. The purchasers of the securities in these transactions represented that they were accredited investors and that they were acquiring the securities for investment only and not with a view toward the public sale or distribution thereof. Such purchasers received written disclosures that the securities had not been registered under the Securities Act, and that any resale must be made pursuant to a registration statement or an available exemption from registration. All purchasers either received adequate financial statement or non-financial statement information about the Registrant or had adequate access, through their relationship with the Registrant, to financial statement or non-financial statement information about the Registrant. The sale of these securities was made without general solicitation or advertising.

Each issuance of securities described above in paragraph (9) was exempt from registration under the Securities Act, in reliance on Section 4(2) of the Securities Act and Regulation D promulgated thereunder, as transactions by an issuer not involving a public offering, Regulation S promulgated under the Securities Act, as offers and sales made outside of the United States or Rule 701 of the Securities Act, pursuant to compensatory benefit plans or agreements approved by the Registrant's board of directors.

All certificates representing the securities issued in these transactions described in this Item 15 included appropriate legends setting forth that the securities had not been offered or sold pursuant to a registration statement and describing the applicable restrictions on transfer of the securities. There were no underwriters employed in connection with any of the transactions set forth in this Item 15.

Item 16. ***Exhibits and Financial Statement Schedules***

(a) Exhibits

Exhibit No.	Description
1.1*	Form of Underwriting Agreement.
3.1	Sixth Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect.
3.2*	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be in effect upon completion of the offering.
3.3	Bylaws of the Registrant, as currently in effect.
3.4*	Form of Amended and Restated Bylaws of the Registrant, to be in effect upon completion of the offering.
4.1*	Form of the Registrant's Common Stock Certificate.
4.2	Fourth Amended and Restated Investor Rights Agreement dated November 13, 2007.
4.3	Form of Warrant to purchase shares of Common Stock issued in connection with the Loan and Security Agreement dated as of February 12, 2004.
4.4	Warrant to purchase shares of Common Stock issued to Oxford Finance Corporation dated October 25, 2005.
4.5	Form of Warrant to purchase shares of Series D preferred stock issued in connection with the Bridge Loan Agreement dated as of May 25, 2006.
4.6	Form of Warrant to purchase shares of Series D preferred stock issued in connection with the Loan and Security Agreement dated as of September 28, 2007.
4.7*	Warrant to purchase shares of Common Stock issued to Alexandria Equities, LLC.
4.8	Registration Rights Agreement dated February 11, 2005.
5.1*	Opinion of Latham & Watkins LLP.
10.1†	Loan and Security Agreement with General Electric Capital Corporation and Oxford Finance Corporation dated September 28, 2007.
10.2†	First Amendment to Loan and Security Agreement with General Electric Capital Corporation and Oxford Finance Corporation dated November 9, 2007.
10.3†	License Agreement effective as of March 28, 2002, by and between Maxygen, Inc. and the Company.
10.4†	Amendment No. 1 to License Agreement by and between Maxygen, Inc. and the Company effective as of September 13, 2002.
10.5	Amendment No. 2 to License Agreement by and between Maxygen, Inc. and the Company effective as of October 1, 2002.
10.6†	Amendment No. 3 to License Agreement by and between Maxygen, Inc. and the Company effective as of August 22, 2006.
10.7†	Side Letter by and between Maxygen, Inc. and the Company re: the Maxygen License dated February 18, 2005.

Exhibit No.	Description
10.8†	Side Letter by and between Maxygen, Inc. and the Company re: the Maxygen License dated September 11, 2007.
10.9†	Side Letter by and between Maxygen, Inc. and the Company re: the Maxygen License dated September 24, 2007.
10.10†	Amended and Restated Collaborative Research Agreement effective November 1, 2006, by and between Equilon Enterprises LLC dba Shell Oil Products US and the Company.
10.11†	Amended and Restated License Agreement by and between Equilon Enterprises LLC dba Shell Oil Products US and the Company effective as of November 1, 2007.
10.12†	Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.13†	Supply Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.14†	Enzyme License and Supply Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.15†	Master Services Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.16	Lease Agreement dated February 1, 2004 by and between Metropolitan Life Insurance Company and the Company.
10.17	Amendment to Lease Agreement by and between Metropolitan Life Insurance Company and the Company dated June 1, 2004.
10.18	Amendment to Lease Agreement by and between Metropolitan Life Insurance Company and the Company dated March 9, 2007.
10.19	Amendment to Lease Agreement by and between Metropolitan Life Insurance Company and the Company dated March 31, 2008.
10.20	Loan and Security Agreement dated February 12, 2004 by and between the Company and Lighthouse Capital Partners V, L.P.
10.21	Master Security Agreement effective October 25, 2005 by and between the Company and Oxford Finance Corporation.
10.22	Codexis, Inc. 2002 Stock Plan, as amended, and Form of Stock Option Agreement.
10.23*	Codexis, Inc. 2008 Incentive Award Plan and Form of Stock Option Agreement.
23.1	Consent of independent registered public accounting firm.
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1).
24.1	Power of Attorney (contained on signature page).

* To be filed by amendment.
† Certain portions have been omitted pursuant to a confidential treatment request. Omitted information has been filed separately with the SEC.

(b) Financial Statement Schedules

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. ***Undertakings***

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933, as amended, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933, as amended, and will be governed by the final adjudication of such issue.

The Registrant hereby undertakes that:

(a) The Registrant will provide to the underwriters at the closing as specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

(b) For purposes of determining any liability under the Securities Act of 1933, as amended, the information omitted from a form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in the form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933, as amended, shall be deemed to be part of this registration statement as of the time it was declared effective.

(c) For the purpose of determining any liability under the Securities Act of 1933, as amended, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Redwood City, State of California, on the 11th day of April, 2008.

CODEXIS, INC

By: /s/ ALAN SHAW
Alan Shaw
President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints Alan Shaw and Robert Breuil, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file any and all amendments to this Registration Statement, including any and all post-effective amendments and amendments thereto, and any registration statement relating to the same offering as this Registration Statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities indicated below on the 11th day of April, 2008.

Signature	Title	Date
/s/ ALAN SHAW Alan Shaw	President and Chief Executive Officer, Director (Principal Executive Officer)	April 11, 2008
/s/ ROBERT BREUIL Robert Breuil	Chief Financial Officer (Principal Financial and Accounting Officer)	April 11, 2008
/s/ THOMAS BARUCH Thomas Baruch	Chairman of the Board of Directors	April 11, 2008
/s/ RUSSELL HOWARD Russell Howard	Director	April 11, 2008
/s/ BERNARD J. KELLEY Bernard J. Kelley	Director	April 11, 2008
/s/ BRUCE PASTERNACK Bruce Pasternack	Director	April 11, 2008
/s/ WILLIAM ROTHWELL William Rothwell	Director	April 11, 2008
/s/ DENNIS WOLF Dennis Wolf	Director	April 11, 2008

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10.4†	Amendment No. 1 to License Agreement by and between Maxygen, Inc. and the Company effective as of September 13, 2002.
10.5	Amendment No. 2 to License Agreement by and between Maxygen, Inc. and the Company effective as of October 1, 2002.
10.6†	Amendment No. 3 to License Agreement by and between Maxygen, Inc. and the Company effective as of August 22, 2006.
10.7†	Side Letter by and between Maxygen, Inc. and the Company re: the Maxygen License dated February 18, 2005.
10.8†	Side Letter by and between Maxygen, Inc. and the Company re: the Maxygen License dated September 11, 2007.

Exhibit No.	Description
10.9†	Side Letter by and between Maxygen, Inc. and the Company re: the Maxygen License dated September 24, 2007.
10.10†	Amended and Restated Collaborative Research Agreement effective November 1, 2006, by and between Equilon Enterprises LLC dba Shell Oil Products US and the Company.
10.11†	Amended and Restated License Agreement by and between Equilon Enterprises LLC dba Shell Oil Products US and the Company effective as of November 1, 2007.
10.12†	Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.13†	Supply Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.14†	Enzyme License and Supply Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.15†	Master Services Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.16	Lease Agreement dated February 1, 2004 by and between Metropolitan Life Insurance Company and the Company.
10.17	Amendment to Lease Agreement by and between Metropolitan Life Insurance Company and the Company dated June 1, 2004.
10.18	Amendment to Lease Agreement by and between Metropolitan Life Insurance Company and the Company dated March 9, 2007.
10.19	Amendment to Lease Agreement by and between Metropolitan Life Insurance Company and the Company dated March 31, 2008.
10.20	Loan and Security Agreement dated February 12, 2004 by and between the Company and Lighthouse Capital Partners V, L.P.
10.21	Master Security Agreement effective October 25, 2005 by and between the Company and Oxford Finance Corporation.
10.22	Codexis, Inc. 2002 Stock Plan, as amended, and Form of Stock Option Agreement.
10.23*	Codexis, Inc. 2008 Incentive Award Plan and Form of Stock Option Agreement.
23.1	Consent of independent registered public accounting firm.
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1).
24.1	Power of Attorney (contained on signature page).

* To be filed by amendment.

† Certain portions have been omitted pursuant to a confidential treatment request. Omitted information has been filed separately with the SEC.

SIXTH AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
CODEXIS, INC.

Alan Shaw hereby certifies that:

ONE: The original name of this corporation is Codexis, Inc. and the date of filing the original Certificate of Incorporation of this corporation with the Secretary of State of the State of Delaware was January 31, 2002.

TWO: He is the duly elected and acting President of Codexis, Inc., a Delaware corporation.

THREE: The Certificate of Incorporation of this corporation is hereby amended and restated to read as follows:

I.

The name of the corporation is Codexis, Inc. (the "Corporation").

II.

The address of the registered office of this Corporation in the State of Delaware is 2711 Centerville Road, Suite 400, City of Wilmington, County of New Castle, 19808, and the name of the registered agent of this Corporation in the State of Delaware at such address is Corporation Service Company.

III.

The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware.

IV.

A. **Classes of Stock**. The Corporation is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares which the Corporation is authorized to issue is ninety-five million two hundred four thousand eight hundred eighty-six (95,204,886) shares, sixty-two million (62,000,000) of which shall be Common Stock (the "Common Stock") and thirty-three million two hundred four thousand eight hundred eighty-six (33,204,886) shares of which shall be Preferred Stock (the "Preferred Stock"). The Preferred Stock shall have a par value of one-hundredth of one cent ($0.0001) per share and the Common Stock shall have a par value of one-hundredth of one cent ($0.0001) per share.

B. Subject to compliance with applicable protective and voting rights provisions that have been granted to outstanding series of Preferred Stock in this Sixth Amended and Restated

Certificate of Incorporation, and irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware, the number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares of Common Stock then outstanding) by the affirmative vote of the holders of a majority of the stock of the Corporation (voting together on an as-if-converted basis).

C. Six million (6,000,000) of the authorized shares of Preferred Stock are hereby designated "Series A Preferred Stock" (the "Series A Preferred"). Eight million one hundred one thousand one hundred one (8,101,101) of the authorized shares of Preferred Stock are hereby designated "Series B Preferred Stock" (the "Series B Preferred"). One million five hundred fourteen thousand six hundred forty-five (1,514,645) of the authorized shares of Preferred Stock are hereby designated "Series C Preferred Stock" (the "Series C Preferred"). Eleven million one hundred fifty-four thousand eight hundred and two (11,154,802) of the authorized shares of Preferred Stock are hereby designated "Series D Preferred Stock" (the "Series D Preferred"). Six million four hundred thirty-four thousand three hundred thirty-eight (6,434,338) of the authorized shares of Preferred Stock are hereby designated "Series E Preferred Stock" (the "Series E Preferred").

D. The rights, preferences, privileges, restrictions and other matters relating to the Preferred Stock are as follows:

1. Dividend Rights.

(a) The holders of Series B Preferred, Series C Preferred, Series D Preferred and Series E Preferred, on a pari passu basis, in preference to the holders of Series A Preferred and in preference to the holders of Common Stock, shall be entitled to receive, when and as declared by the Board of Directors, but only out of funds that are legally available therefor, cash dividends at the rate of eight percent (8%) of the applicable Original Issue Price (as defined below) per annum on each outstanding share of Series B Preferred, Series C Preferred, Series D Preferred and Series E Preferred (in each case as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares). The holders of Series A Preferred, in preference to the holders of Common Stock of the Corporation, shall be entitled to receive, when and as declared by the Board of Directors, but only out of funds that are legally available therefor, cash dividends at the rate of eight percent (8%) of the applicable Original Issue Price (as defined below) per annum on each outstanding share of Series A Preferred (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares). The "Original Issue Price" of the Series A Preferred shall be five dollars ($5.00) per share (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares). The "Original Issue Price" of the Series B Preferred shall be three dollars and eight and six tenths cents ($3.086) per share (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares). The "Original Issue Price" of the Series C Preferred shall be six dollars and sixty and twenty-two hundredths of a cent ($6.6022) per share (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares). The "Original Issue Price" of the Series D Preferred shall be three dollars and ninety-seven cents ($3.97) per share (as adjusted for any stock dividends, combinations, splits, recapitalizations and

the like with respect to such shares). The "Original Issue Price" of the Series E Preferred shall be eight dollars and fifty cents ($8.50) per share (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares). Such dividends shall be payable only when, as and if declared by the Board of Directors and shall be non-cumulative.

(b) So long as any shares of Series B Preferred, Series C Preferred, Series D Preferred and Series E Preferred shall be outstanding, no dividend, whether in cash or property, shall be paid or declared, nor shall any other distribution be made, on any Series A Preferred or Common Stock, nor shall any shares of Series A Preferred or Common Stock of the Corporation be purchased, redeemed, or otherwise acquired for value by the Corporation (except for acquisitions of Common Stock by the Corporation pursuant to agreements that permit the Corporation to repurchase such shares upon termination of services to the Corporation or in exercise of the Corporation's right of first refusal upon a proposed transfer) until all dividends (set forth in Section 1(a) above) on the Series B Preferred, the Series C Preferred, the Series D Preferred and the Series E Preferred shall have been paid or declared and set apart. So long as any shares of Series A Preferred shall be outstanding, no dividend, whether in cash or property, shall be paid or declared, nor shall any other distribution be made, on any Common Stock, nor shall any shares of any Common Stock of the Corporation be purchased, redeemed, or otherwise acquired for value by the Corporation (except for acquisitions of Common Stock by the Corporation pursuant to agreements that permit the Corporation to repurchase such shares upon termination of services to the Corporation or in exercise of the Corporation's right of first refusal upon a proposed transfer) until all dividends (set forth in Section 1(a) above) on the Series A Preferred shall have been paid or declared and set apart. In the event dividends are paid on any share of Common Stock, an additional dividend shall be paid with respect to all outstanding shares of Preferred Stock in an amount equal per share (on an as-if-converted to Common Stock basis) to the amount paid or set aside for each share of Common Stock. The provisions of this Section 1(b) shall not, however, apply to (i) a dividend payable in Common Stock or (ii) any repurchase of any outstanding securities of the Corporation that is approved by the Corporation's Board of Directors.

2. Voting Rights.

(a) General Rights. The holder of each share of Preferred Stock shall have the right to one vote for each share of Common Stock into which such Preferred Stock could be converted on the record date for the vote or written consent of stockholders. In all cases any fractional share, determined on an aggregate conversion basis, shall be rounded to the nearest whole share. Except as otherwise provided herein or as required by law, with respect to such vote, such holder shall have full voting rights and powers equal to the voting rights and powers of the holders of Common Stock, and shall be entitled, notwithstanding any provision hereof, to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation, and shall be entitled to vote, together with holders of Common Stock, with respect to any matter upon which holders of Common Stock have the right to vote.

(b) Protective Provisions; Vote of Series B Preferred, Series C Preferred, Series D Preferred and Series E Preferred In addition to any other vote or consent required herein or by law, the vote or written consent of the holders of at least a majority of the then

outstanding Series B Preferred, Series C Preferred, Series D Preferred and Series E Preferred (voting together as a single class and not as a separate series and on an as-if-converted basis) (for so long as at least an aggregate of five million (5,000,000) shares of Series B Preferred, Series C Preferred, Series D Preferred and Series E Preferred (subject to adjustment for any stock split, reverse stock split or other similar event affecting such Preferred Stock) remain outstanding) shall be necessary for effecting or validating the following actions:

(i) Any amendment, alteration, repeal or waiver of any provision of this Restated Certificate or the Bylaws of the Corporation (by merger, consolidation or otherwise and including any filing of a Certificate of Designation);

(ii) Any increase or decrease in the authorized or designated number of shares of Common Stock or Preferred Stock or any series or class of Common Stock or Preferred Stock;

(iii) Any authorization or any designation, whether by reclassification or otherwise, of any new class or series of stock or any other securities convertible into equity securities of the Corporation ranking on a parity with or senior to the Series B Preferred, Series C Preferred, Series D Preferred or Series E Preferred in right of redemption, liquidation preference, conversion, voting or dividends or any increase in the authorized or designated number of any such new class or series;

(iv) Any authorization or issuance of any new class or series of stock or any other securities convertible into equity securities of the Corporation ranking junior to the Series B Preferred, Series C Preferred, Series D Preferred or Series E Preferred for consideration other than cash;

(v) Any redemption or repurchase of Common Stock or Preferred Stock (except (x) for acquisitions of Common Stock by the Corporation pursuant to agreements that permit the Corporation to repurchase such shares upon termination of services to the Corporation or in exercise of the Corporation's right of first refusal upon a proposed transfer, or (y) in connection with the redemption of Series B Preferred, Series D Preferred and Series E Preferred as provided in Section 5 of this Restated Certificate);

(vi) Any agreement by the Corporation or its stockholders regarding an Asset Transfer or Acquisition (each as defined in Section 3(e));

(vii) Any action that results in the payment or declaration of a dividend on any shares of Common Stock or Preferred Stock (other than a dividend payable solely in shares of capital stock);

(viii) Any agreement by the Corporation to become indebted for borrowed money or capital lease obligations greater than five million dollars ($5,000,000) in the aggregate;

(ix) Any merger or consolidation of the Corporation or any voluntary dissolution, winding up or liquidation of the Corporation;

(x) Any recapitalization of the Corporation;

(xi) Any increase or decrease in the authorized number of members of the Corporation's Board of Directors from eight (8), except as provided in Sections 5(a)(iv), 5(b)(iv) and/or 5(c)(iv) of Section B of this Article IV;

(xii) Creation of any subsidiary of the Corporation;

(xiii) Any agreement by the Corporation to acquire a corporation or other entity or person;

(xiv) Establishment of any enzyme manufacturing facility owned and/or operated by the Corporation;

(xv) Any action that alters or changes the rights, preferences and privileges of the Series A Preferred Stock so as to affect the Series A Preferred Stock adversely, but which does not so affect the entire class of Preferred Stock;

(xvi) Any action that alters or changes the rights, preferences and privileges of the Series B Preferred Stock so as to affect the Series B Preferred Stock adversely, but which does not so affect the entire class of Preferred Stock;

(xvii) Any action that alters or changes the rights, preferences and privileges of the Series C Preferred Stock so as to affect the Series C Preferred Stock adversely, but which does not so affect the entire class of Preferred Stock;

(xviii) Any action that alters or changes the rights, preferences and privileges of the Series D Preferred; or

(xix) Any action that alters or changes the rights, preferences and privileges of the Series E Preferred.

For the purposes of this Restated Certificate "Affiliate" shall mean any corporation or other entity that is directly or indirectly controlling, controlled by or under the common control with the subject entity. For the purpose of this definition, "control" shall mean the direct or indirect ownership of at least fifty percent (50%) of the outstanding shares or other voting rights of the subject entity to elect directors or equivalent governing body, or if not meeting the preceding, any entity owned or controlled by or owning or controlling at the maximum control or ownership right permitted in the country where such entity exists.

(c) Protective Provisions; Separate Vote of Series D Preferred. So long as Biomedical Sciences Investment Fund Pte Ltd ("Bio*One") (with its Affiliates) shall hold not less than five million (5,000,000) shares of Series D Preferred Stock (as adjusted for stock splits and combinations), representing not less than 10% of the Company's outstanding Common Stock (as calculated on a fully diluted as-if-converted basis, assuming conversion or exercise of all convertible or exercisable securities and including all shares reserved for issuance pursuant to any stock option or similar plan), the vote or written consent of Bio*One shall be necessary for the Board to take action to effect any of the following:

(i) any voluntary dissolution, winding up or liquidation of Codexis Laboratories Singapore Pte. Ltd. ("Codexis Singapore") other than in connection with an Asset Transfer or an Acquisition;

(ii) a significant reduction in the number of employees at Codexis Singapore; or

(iii) a significant reduction in the overall technological capacity of the Codexis Singapore operations.

(d) Election of Board of Directors. The holders of Common Stock and Preferred Stock, voting together as a single class and on an as-if-converted basis, shall be entitled to elect all members of the Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors, to remove from office such directors, and, subject to the provisions of the Corporation's bylaws, to fill any vacancy caused by the resignation, death or removal of such directors.

3. Liquidation Rights.

(a) Upon any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, before any distribution or payment shall be made to the holders of any Series C Preferred, Series B Preferred, Series A Preferred or Common Stock, the holders of Series D Preferred and Series E Preferred shall be entitled to be paid out of the assets of the Corporation an amount per share of Series D Preferred or Series E Preferred equal to the applicable Original Issue Price plus all declared and unpaid dividends on the Series D Preferred and Series E Preferred, respectively, (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares) for each share of Series D Preferred or Series E Preferred, respectively, held by them. If, upon any such liquidation, distribution or winding up, the assets of the Corporation shall be insufficient to make payment in full to all holders of Series D Preferred and Series E Preferred of the liquidation preference set forth in this Section 3(a), then such assets legally available for distribution shall be distributed among the holders of Series D Preferred and Series E Preferred at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(b) After the payment of the full liquidation preference of the Series D Preferred and Series E Preferred as set forth in Section 3(a) above, before any distribution or payment shall be made to the holders of any Series A Preferred or Common Stock, the holders of Series B Preferred and the Series C Preferred, on a pari passu basis, shall be entitled to be paid out of the assets of the Corporation an amount per share of Series B Preferred or Series C Preferred equal to the applicable Original Issue Price plus all declared and unpaid dividends on the Series B Preferred and Series C Preferred, respectively, (in each case as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares) for each share of Series B Preferred or Series C Preferred, respectively, held by them. If, upon any such liquidation, distribution or winding up, the assets of the Corporation shall be insufficient to make payment in full to all holders of Series B Preferred and Series C Preferred of the liquidation preference set forth in this Section 3(b), then such assets legally available for distribution shall be distributed among the holders of Series B Preferred and Series C Preferred at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(c) After the payment of the full liquidation preference of the Series E Preferred, Series D Preferred, Series C Preferred and the Series B Preferred as set forth in Sections 3(a) and 3(b) above, before any distribution or payment shall be made to the holders of any Common Stock, the holders of Series A Preferred shall be entitled to be paid out of the assets of the Corporation an amount per share of Series A Preferred equal to the applicable Original Issue Price plus all declared and unpaid dividends on the Series A Preferred (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares) for each share of Series A Preferred held by them. If, upon any such liquidation, distribution or winding up, the assets of the Corporation shall be insufficient to make payment in full to all holders of Series A Preferred of the liquidation preference set forth in this Section 3(c), then such assets legally available for distribution shall be distributed among the holders of Series A Preferred at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be respectively entitled.

(d) After the payment of the full liquidation preference of the Preferred Stock as set forth in Sections 3(a), 3(b) and 3(c) above, the remaining assets of the Corporation legally available for distribution, if any, shall be distributed ratably to the holders of the then outstanding Common Stock.

(e) The following events shall be considered a liquidation under this Section:

(i) any consolidation or merger of the Corporation with or into any other corporation or other entity or person, or any other corporate reorganization, in which either (i) the Corporation does not survive (except a transaction in which the holders of capital stock of the Corporation, immediately prior to such merger, consolidation or other corporate reorganization, continue to hold at least fifty percent (50%) of the voting power of capital stock of the surviving or acquiring entity) (ii) the stockholders of the Corporation immediately prior to such consolidation, merger or reorganization, own less than fifty percent (50%) of the Corporation's voting power immediately after such consolidation, merger or reorganization, or (iii) any transaction or series of related transactions to which the Corporation is a party in which in excess of fifty percent (50%) of the Corporation's voting power is transferred, excluding in each case any consolidation or merger effected exclusively to change the domicile of the Corporation (an "Acquisition"); or

(ii) a sale, lease, exclusive license or other disposition of all or substantially all of the assets of the Corporation (an "Asset Transfer").

(f) Notwithstanding the above, for purposes of determining the amount each holder of shares of Preferred Stock is entitled to receive with respect to a Liquidation Event, each such holder of shares of a series of Preferred Stock shall be deemed to have converted (regardless of whether such holder actually converted) such holder's shares of such series into shares of Common Stock immediately prior to the Liquidation Event if, as a result of an actual conversion, such holder would receive, in the aggregate and without satisfaction of any

conditions or contingencies, an amount greater than the amount that would be distributed to such holder if such holder did not convert such series of Preferred Stock into shares of Common Stock. If any such holder shall be deemed to have converted shares of Preferred Stock into Common Stock pursuant to this paragraph, then such holder shall not be entitled to receive any distribution that would otherwise be made to holders of Preferred Stock that have not converted (or have not been deemed to have converted) into shares of Common Stock.

(g) For the purposes of this Section 3, if the consideration received by the Corporation is other than cash, its value will be deemed its fair market value as determined in good faith by the Board of Directors. Any securities shall be valued as follows:

(i) Securities not subject to investment letter or other similar restrictions on free marketability covered by (ii) below:

(A) If traded on a securities exchange or through the Nasdaq National Market, the value shall be deemed to be the average of the closing prices of the securities on such quotation system over the thirty (30) day period ending three (3) days prior to the closing;

(B) If actively traded over-the-counter, the value shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the thirty (30) day period ending three (3) days prior to the closing; and

(C) If there is no active public market, the value shall be the fair market value thereof, as mutually determined by the Board of Directors and the holders of not less than a majority of the then outstanding Preferred Stock (voting together as a single class and not as separate series and on an as-if-converted basis).

(ii) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as above in (i) (A), (B) or (C) to reflect the approximate fair market value thereof, as mutually determined by the Board of Directors and the holders of not less than a majority of the then outstanding Preferred Stock (voting together as a single class and not as separate series and on an as-if-converted basis).

4. Conversion Rights.

The holders of the Preferred Stock shall have the following rights with respect to the conversion of the Preferred Stock into shares of Common Stock (the "Conversion Rights"):

(a) Optional Conversion. Subject to and in compliance with the provisions of this Section 4, any shares of Preferred Stock may, at the option of the holder, be converted at any time into fully-paid and nonassessable shares of Common Stock; provided that requests to convert shall to the extent possible be done at least five days before an applicable Series B Redemption Date, Series D Redemption Date or Series E Redemption Date (as defined in Section 5). The number of shares of Common Stock to which a holder of Preferred Stock shall be entitled upon conversion shall be the product obtained by multiplying the applicable "Preferred Stock Conversion Rate" then in effect (determined as provided in Section 4(b)) by the number of shares of Preferred Stock, as applicable, being converted.

(b) Preferred Stock Conversion Rate. The conversion rate in effect at any time for conversion of the Preferred Stock (the "Preferred Stock Conversion Rate") shall be the quotient obtained by dividing the applicable Original Issue Price of the Preferred Stock by the applicable "Preferred Stock Conversion Price," calculated as provided in Section 4(c).

(c) Preferred Stock Conversion Price. The initial conversion price per share for the Preferred Stock (the "Preferred Stock Conversion Price") shall be as follows: the Preferred Stock Conversion Price for the Series A Preferred shall be $4.95; the Preferred Stock Conversion Price for the Series B Preferred shall be the Original Issue Price of the Series B Preferred; the Preferred Stock Conversion Price for the Series C Preferred shall be the Original Issue Price of the Series C Preferred; the Preferred Stock Conversion Price for the Series D Preferred shall be the Original Issue Price of the Series D Preferred; and the Preferred Stock Conversion Price for the Series E Preferred shall be the Original Issue Price of the Series E Preferred. Such Preferred Stock Conversion Prices shall be adjusted from time to time in accordance with this Section 4. All references to the applicable Preferred Stock Conversion Price herein shall mean the applicable Preferred Stock Conversion Price as so adjusted.

(d) Mechanics of Conversion. Each holder of Preferred Stock who desires to convert the same into shares of Common Stock pursuant to this Section 4 shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or any transfer agent for the Preferred Stock, and shall give written notice to the Corporation at such office that such holder elects to convert the same. Such notice shall state the number of shares of Preferred Stock being converted and the name or names in which the certificate or certificates for shares of Common Stock are to be issued. Thereupon, the Corporation shall promptly issue and deliver at such office to such holder a certificate or certificates for the number of shares of Common Stock to which such holder is entitled and shall promptly pay (i) in cash or, to the extent sufficient funds are not then legally available therefor, in Common Stock (at the Common Stock's fair market value determined by the Board of Directors as of the date of such conversion), any declared and unpaid dividends on the shares of Preferred Stock being converted and (ii) in cash (at the Common Stock's fair market value determined by the Board of Directors as of the date of conversion) the value of any fractional share of Common Stock otherwise issuable to any holder of Preferred Stock. Such conversion shall be deemed to have been made at the close of business on the date of such surrender of the certificates representing the shares of Preferred Stock to be converted, and the person entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder of such shares of Common Stock on such date.

(e) Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the date of the filing of this Restated Certificate (the "Filing Date") effect a subdivision of the outstanding Common Stock without a corresponding subdivision of the Preferred Stock, the applicable Preferred Stock Conversion Price in effect immediately before that subdivision shall be proportionately decreased. Conversely, if the Corporation shall at any time or from time to time after the Filing Date combine the outstanding shares of Common Stock into a smaller number of shares without a corresponding combination

of the Preferred Stock, the applicable Preferred Stock Conversion Price in effect immediately before the combination shall be proportionately increased. Any adjustment under this Section 4(e) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(f) Adjustment for Common Stock Dividends and Distributions. If the Corporation at any time or from time to time after the Filing Date makes, or fixes a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in additional shares of Common Stock, in each such event the applicable Preferred Stock Conversion Price that is then in effect shall be decreased as of the time of such issuance or, in the event such record date is fixed, as of the close of business on such record date, by multiplying the applicable Preferred Stock Conversion Price then in effect by a fraction (i) the numerator of which is the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and (ii) the denominator of which is the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution; provided, however, that if such record date is fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the applicable Preferred Stock Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the applicable Preferred Stock Conversion Price shall be adjusted pursuant to this Section 4(f) to reflect the actual payment of such dividend or distribution.

(g) Adjustment for Reclassification, Exchange and Substitution. If at any time or from time to time after the Filing Date, the Common Stock issuable upon the conversion of the Preferred Stock is changed into the same or a different number of shares of any class or classes of stock, whether by recapitalization, reclassification or otherwise (other than an Acquisition or Asset Transfer as defined in Section 3(d) or a subdivision or combination of shares or stock dividend or a reorganization, merger, consolidation or sale of assets provided for elsewhere in this Section 4), in any such event each holder of Preferred Stock shall have the right thereafter to convert such stock into the kind and amount of stock and other securities and property receivable upon such recapitalization, reclassification or other change by holders of the maximum number of shares of Common Stock into which such shares of Preferred Stock could have been converted immediately prior to such recapitalization, reclassification or change, all subject to further adjustment as provided herein or with respect to such other securities or property by the terms thereof.

(h) Reorganizations, Mergers or Consolidations. If at any time or from time to time after the Filing Date, there is a capital reorganization of the Common Stock or the merger or consolidation of the Corporation with or into another corporation or another entity or person (other than an Acquisition or Asset Transfer as defined in Section 3(d) or a recapitalization, subdivision, combination, reclassification, exchange or substitution of shares provided for elsewhere in this Section 4), as a part of such capital reorganization, provision shall be made so that the holders of the Preferred Stock shall thereafter be entitled to receive upon conversion of the Preferred Stock the number of shares of stock or other securities or property of the Corporation to which a holder of the number of shares of Common Stock deliverable upon conversion would have been entitled on such capital reorganization, subject to adjustment in

respect of such stock or securities by the terms thereof. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section 4 with respect to the rights of the holders of Preferred Stock after the capital reorganization to the end that the provisions of this Section 4 (including adjustment of the applicable Preferred Stock Conversion Price then in effect and the number of shares issuable upon conversion of the Preferred Stock) shall be applicable after that event and be as nearly equivalent as practicable.

(i) Sale of Shares Below Preferred Stock Conversion Price.

(i) If at any time or from time to time after the Filing Date, the Corporation issues or sells, or is deemed by the express provisions of this subsection (i) to have issued or sold, Additional Shares of Common Stock (as defined in subsection (i)(iv) below), other than as a dividend or other distribution on any class of stock as provided in Section 4(f) above, and other than a subdivision or combination of shares of Common Stock as provided in Section 4(e) above, for an Effective Price (as defined in subsection (i)(iv) below) less than the then effective applicable Preferred Stock Conversion Price, then and in each such case the then existing applicable Preferred Stock Conversion Price shall be reduced, as of the opening of business on the date of such issue or sale, to a price determined by multiplying the applicable Preferred Stock Conversion Price by a fraction (i) the numerator of which shall be (A) the number of shares of Common Stock deemed outstanding (as defined below) immediately prior to such issue or sale, plus (B) the number of shares of Common Stock that the aggregate consideration received (as defined in subsection (i)(ii)) by the Corporation for the total number of Additional Shares of Common Stock so issued would purchase at such applicable Preferred Stock Conversion Price with respect to which this adjustment is being made, and (ii) the denominator of which shall be the number of shares of Common Stock deemed outstanding (as defined below) immediately prior to such issue or sale plus the total number of Additional Shares of Common Stock so issued. For the purposes of the preceding sentence, the number of shares of Common Stock deemed to be outstanding as of a given date shall be the sum of (A) the number of shares of Common Stock actually outstanding (excluding shares subject to repurchase by the Corporation at cost), (B) the number of shares of Common Stock into which the then outstanding shares of Preferred Stock could be converted if fully converted on the day immediately preceding the given date, and (C) the number of shares of Common Stock which could be obtained through the exercise or conversion of all other rights, options and convertible securities vested on the day immediately preceding the given date. No adjustment shall be made to the Preferred Stock Conversion Price in an amount less than one cent per share. Any adjustment otherwise required by this Section 4(i) that is not required to be made due to the preceding sentence shall be included in any subsequent adjustment to the Preferred Stock Conversion Price.

(ii) For the purpose of making any adjustment required under this Section 4(i), the consideration received by the Corporation for any issue or sale of securities shall (A) to the extent it consists of cash, be computed at the net amount of cash received by the Corporation after deduction of any underwriting or similar commissions, compensation or concessions paid or allowed by the Corporation in connection with such issue or sale but without deduction of any expenses payable by the Corporation, (B) to the extent it consists of consideration other than cash, be computed at the fair value of that consideration as determined in good faith by the Board of Directors, and (C) if Additional Shares of Common Stock,

Convertible Securities (as defined in subsection (i)(iii)) or rights or options to purchase either Additional Shares of Common Stock or Convertible Securities are issued or sold together with other stock or securities or other assets of the Corporation for a consideration which covers both, be computed as the portion of the consideration so received that may be reasonably determined in good faith by the Board of Directors to be allocable to such Additional Shares of Common Stock, Convertible Securities or rights or options.

(iii) For the purpose of the adjustment required under this Section 4(i), if the Corporation issues or sells (i) stock or other securities convertible into, Additional Shares of Common Stock (such convertible stock or securities being herein referred to as "Convertible Securities") or (ii) rights or options for the purchase of Additional Shares of Common Stock or Convertible Securities and if the Effective Price of such Additional Shares of Common Stock is less than the applicable Preferred Stock Conversion Price, in each case the Corporation shall be deemed to have issued at the time of the issuance of such rights or options or Convertible Securities the maximum number of Additional Shares of Common Stock issuable upon exercise or conversion thereof and to have received as consideration for the issuance of such shares an amount equal to the total amount of the consideration, if any, received by the Corporation for the issuance of such rights or options or Convertible Securities, plus, in the case of such rights or options, the minimum amounts of consideration, if any, payable to the Corporation upon the exercise of such rights or options, plus, in the case of Convertible Securities, the minimum amounts of consideration, if any, payable to the Corporation (other than by cancellation of liabilities or obligations evidenced by such Convertible Securities) upon the conversion thereof; provided that if in the case of Convertible Securities the minimum amounts of such consideration cannot be ascertained, but are a function of antidilution or similar protective clauses, the Corporation shall be deemed to have received the minimum amounts of consideration without reference to such clauses; provided further that if the minimum amount of consideration payable to the Corporation upon the exercise or conversion of rights, options or Convertible Securities is reduced over time or on the occurrence or non-occurrence of specified events other than by reason of antidilution adjustments, the Effective Price shall be recalculated using the figure to which such minimum amount of consideration is reduced; provided further that if the minimum amount of consideration payable to the Corporation upon the exercise or conversion of such rights, options or Convertible Securities is subsequently increased, the Effective Price shall be again recalculated using the increased minimum amount of consideration payable to the Corporation upon the exercise or conversion of such rights, options or Convertible Securities. No further adjustment of the applicable Preferred Stock Conversion Price, as adjusted upon the issuance of such rights, options or Convertible Securities, shall be made as a result of the actual issuance of Additional Shares of Common Stock on the exercise of any such rights or options or the conversion of any such Convertible Securities. If any such rights or options or the conversion privilege represented by any such Convertible Securities shall expire without having been exercised, the applicable Preferred Stock Conversion Price as adjusted upon the issuance of such rights, options or Convertible Securities shall be readjusted to the applicable Preferred Stock Conversion Price which would have been in effect had an adjustment been made on the basis that the only Additional Shares of Common Stock so issued were the Additional Shares of Common Stock, if any, actually issued or sold on the exercise of such rights or options or rights of conversion of such Convertible Securities, and such Additional Shares of Common Stock, if any, were issued or sold for the consideration actually received by the Corporation upon such exercise, plus the consideration, if any, actually received by the Corporation for the

granting of all such rights or options, whether or not exercised, plus the consideration received for issuing or selling the Convertible Securities actually converted, plus the consideration, if any, actually received by the Corporation (other than by cancellation of liabilities or obligations evidenced by such Convertible Securities) on the conversion of such Convertible Securities, provided that such readjustment shall not apply to prior conversions of Preferred Stock.

(iv) "Additional Shares of Common Stock" shall mean all shares of Common Stock issued by the Corporation or deemed to be issued pursuant to this Section 4(i), whether or not subsequently reacquired or retired by the Corporation other than (A) shares of Common Stock issued upon conversion of the Preferred Stock; (B) shares of Common Stock and/or options, warrants or other Common Stock purchase rights, and the Common Stock issued pursuant to such options, warrants or other rights (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like) after the Filing Date, issued to employees, officers or directors of, or consultants or advisors to the Corporation or any subsidiary pursuant to stock purchase or stock option plans or other agreements or arrangements that are approved by the Board of Directors; (C) shares of Common Stock issued pursuant to the exercise of options, warrants or convertible securities outstanding as of the Filing Date; (D) shares of Common Stock issued pursuant to a merger, consolidation, acquisition or similar business combination approved by the Board of Directors; (E) shares of Common Stock issued in connection with any stock split, stock dividend or recapitalization by the Corporation for which an adjustment is made under sections 4(e), (f) or (g) hereof; (F) shares of Common Stock or Preferred Stock, or warrants to purchase shares of Common Stock or Preferred Stock, issued pursuant to any equipment leasing, real property leasing or loan arrangement, or debt financing from a bank or similar financial or lending institution approved by the Board of Directors; (G) shares of Common Stock or Preferred Stock issued pursuant to the exercise of warrants issued pursuant to clause (F) of this Section 4(i)(iv); (H) shares of Common Stock issued pursuant to any licensing transaction approved by the Board of Directors; (I) shares of Common Stock issued in connection with strategic alliances, joint ventures, manufacturing, marketing or distribution arrangements or technology transfer or development arrangements; provided, however, that any such strategic transaction and the issuance of shares therein, has been approved by the Board of Directors; (J) shares of Common Stock and/or options, warrants or other Common Stock purchase rights issued in connection with the establishment of any enzyme manufacturing facility owned and/or operated by the Corporation; provided, however, that any such transaction and the issuance of shares therein, has been approved by the Board of Directors; and (K) shares of Series E Preferred Stock issued pursuant to that certain Series E Preferred Stock Purchase Agreement dated on or about November 5, 2007, as amended from time to time. References to Common Stock in the subsections of this clause (iv) above shall mean all shares of Common Stock issued by the Corporation or deemed to be issued pursuant to this Section 4(i). The "Effective Price" of Additional Shares of Common Stock shall mean the quotient determined by dividing the total number of Additional Shares of Common Stock issued or sold, or deemed to have been issued or sold by the Corporation under this Section 4(i), into the aggregate consideration received, or deemed to have been received by the Corporation for such issue under this Section 4(i), for such Additional Shares of Common Stock.

(j) Certificate of Adjustment. In each case of an adjustment or readjustment of the applicable Preferred Stock Conversion Price for the number of shares of Common Stock or other securities issuable upon conversion of the Preferred Stock, if the

Preferred Stock is then convertible pursuant to this Section 4, the Corporation, at its expense, shall compute such adjustment or readjustment in accordance with the provisions hereof and prepare a certificate showing such adjustment or readjustment, and shall mail such certificate, by first class mail, postage prepaid, to each registered holder of Preferred Stock at the holder's address as shown in the Corporation's books. The certificate shall set forth such adjustment or readjustment, showing in detail the facts upon which such adjustment or readjustment is based, including a statement, as applicable, of (i) the consideration received or deemed to be received by the Corporation for any Additional Shares of Common Stock issued or sold or deemed to have been issued or sold, (ii) the applicable Preferred Stock Conversion Price at the time in effect, (iii) the number of Additional Shares of Common Stock and (iv) the type and amount, if any, of other property which at the time would be received upon conversion of the Preferred Stock.

(k) Notices of Record Date. Upon (i) any taking by the Corporation of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend, other distribution or other right, or (ii) any Acquisition (as defined in Section 3(d)) or other capital reorganization of the Corporation, any reclassification or recapitalization of the capital stock of the Corporation, any merger or consolidation of the Corporation with or into any other corporation, or any Asset Transfer (as defined in Section 3(d)), or any voluntary or involuntary dissolution, liquidation or winding up of the Corporation, the Corporation shall mail to each holder of Preferred Stock at least ten (10) days prior to the record date specified therein (or such shorter period approved by a majority of the outstanding Preferred Stock) a notice specifying (A) the date on which any such record is to be taken for the purpose of such dividend, distribution or right and a description of such dividend, distribution or right, (B) the date on which any such Acquisition, reorganization, reclassification, transfer, consolidation, merger, Asset Transfer, dissolution, liquidation or winding up is expected to become effective, and (C) the date, if any, that is to be fixed as to when the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such Acquisition, reorganization, reclassification, transfer, consolidation, merger, Asset Transfer, dissolution, liquidation or winding up.

(l) Automatic Conversion.

(i) Each share of Preferred Stock shall automatically be converted into shares of Common Stock, based on the then-effective applicable Preferred Stock Conversion Price, (A) at any time upon the affirmative election of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the then outstanding shares of the Series B Preferred, Series C Preferred, Series D Preferred and Series E Preferred (voting together as a single class and not as a separate series and on an as-if-converted basis) or (B) immediately upon the closing of a firmly underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of Common Stock for the account of the Corporation in which (x) the gross cash proceeds to the Corporation (before underwriting discounts, commissions and fees) are at least fifty million dollars ($50,000,000) and (y) the pre-money valuation of the Corporation (calculated based on capital stock outstanding on an as-converted basis, assuming conversion or exercise of all convertible or exercisable securities and including all shares reserved for issuance pursuant to any stock option

or similar plan) immediately prior to the offering is at least two hundred fifty million dollars ($250,000,000). Upon such automatic conversion, any declared and unpaid dividends shall be paid in accordance with the provisions of Section 4(d).

(ii) Upon the occurrence of either of the events specified in Section 4(l)(i) above, the applicable outstanding shares of Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless the certificates evidencing such shares of Preferred Stock are either delivered to the Corporation or its transfer agent as provided below, or the holder notifies the Corporation or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. Upon the occurrence of such automatic conversion of the Preferred Stock, the holders of Preferred Stock shall surrender the certificates representing such shares at the office of the Corporation or any transfer agent for the Preferred Stock. Thereupon, there shall be issued and delivered to such holder promptly at such office and in its name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Common Stock into which the shares of Preferred Stock surrendered were convertible on the date on which such automatic conversion occurred, and any declared and unpaid dividends shall be paid in accordance with the provisions of Section 4(d).

(m) Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of Preferred Stock. All shares of Common Stock (including fractions thereof) issuable upon conversion of more than one share of Preferred Stock by a holder thereof shall be aggregated for purposes of determining whether the conversion would result in the issuance of any fractional share. If, after the aforementioned aggregation, the conversion would result in the issuance of any fractional share, the Corporation shall, in lieu of issuing any fractional share, pay cash equal to the product of such fraction multiplied by the Common Stock's fair market value (as determined by the Board of Directors) on the date of conversion.

(n) Reservation of Stock Issuable Upon Conversion. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Preferred Stock. If at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose.

(o) Notices. Any notice required by the provisions of this Section 4 shall be in writing and shall be deemed effectively given: (i) upon personal delivery to the party to be notified, (ii) when sent by confirmed facsimile if sent during normal business hours of the recipient; if not, then on the next business day, (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (iv) one (1) day after

deposit with a nationally recognized overnight courier, specifying next day delivery, with verification of receipt. All notices shall be addressed to each holder of record at the address of such holder appearing on the books of the Corporation.

(p) Payment of Taxes. The Corporation will pay all taxes (other than taxes based upon income) and other governmental charges that may be imposed with respect to the issue or delivery of shares of Common Stock upon conversion of shares of Preferred Stock, excluding any tax or other charge imposed in connection with any transfer involved in the issue and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered.

(q) No Dilution or Impairment. Without the consent of the holders of then outstanding Preferred Stock as required under Section 2(b), the Corporation shall not amend this Restated Certificate or participate in any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or take any other voluntary action, for the purpose of avoiding or seeking to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation, but shall at all times in good faith assist in carrying out all such action as may be reasonably necessary or appropriate in order to protect the conversion rights of the holders of the Preferred Stock against dilution or other impairment.

5. Redemption.

(a) The Corporation shall be obligated to redeem the Series E Preferred as follows:

(i) At any time on or after December 31, 2011, the holders of at least a majority of the then outstanding shares of Series E Preferred, voting or consenting together as a separate series, may require the Corporation, to the extent it may lawfully do so, to redeem the Series E Preferred in three (3) annual installments as provided in subparagraph (ii) below. The Corporation shall effect such redemptions beginning on the date sixty (60) days after the date the holders provide notice to the Corporation of their election to redeem their shares of Series E Preferred (the date of the first such redemption, the "First Series E Redemption Date" and the date of such notice, the "Series E Redemption Notice Date"). The Corporation shall redeem one third of the Series E Preferred on the First Series E Redemption Date, one third of the Series E Preferred on or before the first anniversary of the First Series E Redemption Date (the "Second Series E Redemption Date") and the final one third of the Series E Preferred on or before the second anniversary of the First Series E Redemption Date (the "Third Series E Redemption Date," and, with the First Series E Redemption Date, Second Series E Redemption Date and Third Series E Redemption Date each referred to as a "Series E Redemption Date").

(ii) Each redemption shall be effected on the applicable date by paying in cash in exchange for the shares of Series E Preferred to be redeemed a sum equal to the applicable Original Issue Price per share of the Series E Preferred (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like) plus eight percent (8%) of the applicable Original Issue Price (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares) per annum from the date that the first share of Series E Preferred was issued (the "Series E Original Issue Date") until the applicable

Series E Redemption Date, plus declared and unpaid dividends with respect to such shares. The number of shares of Series E Preferred that the Corporation shall be required to redeem on any one Series E Redemption Date shall be equal to the amount determined by dividing (A) the aggregate number of shares of Series E Preferred outstanding immediately prior to the Series E Redemption Date by (B) the number of remaining Series E Redemption Dates (including the Series E Redemption Date to which such calculation applies). Shares subject to redemption pursuant to this Section 5(a) shall be redeemed from each holder of Series E Preferred on a pro rata basis.

(iii) At least thirty (30) days but no more than sixty (60) days prior to the First Series E Redemption Date, the Corporation shall send a notice (a "Series E Redemption Notice") to all holders of Series E Preferred setting forth (A) the redemption price for the shares to be redeemed; and (B) the place at which such holders may obtain payment of the redemption price upon surrender of their share certificates.

(iv) Subject to Section 5(d), if the Corporation does not have sufficient funds legally available to redeem all shares to be redeemed at the applicable Series E Redemption Date, then (i) it shall redeem such shares pro rata (based on the portion of the aggregate redemption price payable to them) to the extent possible and (ii) the holders of the Series E Preferred shall be entitled to elect a majority of the members of the Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors, and to remove from office such directors and to fill any vacancy caused by the resignation, death or removal of such directors and the number of directors constituting the Corporation's Board of Directors shall be automatically increased to a number such that representatives of the Series E Preferred will constitute a majority of the members of the Board of Directors. Subject to Section 5(d), at any time thereafter when additional funds of the Corporation are legally available for the redemption of shares of Series E Preferred, such funds will immediately be used to redeem the balance of the shares that the Corporation has become obligated to redeem on any Series E Redemption Date but that it has not redeemed.

(v) On or prior to each Series E Redemption Date, the Corporation shall deposit the redemption price of all shares to be redeemed with a bank or trust company having aggregate capital and surplus in excess of one hundred million dollars ($100,000,000), as a trust fund for the benefit of the respective holders of shares designated for redemption but not yet redeemed, with irrevocable instructions and authority to the bank or trust company to pay, on and after such Series E Redemption Date, the redemption price of the shares to their respective holders upon the surrender of their share certificates. Any moneys deposited by the Corporation pursuant to this Section 5(a) for the redemption of shares thereafter converted into shares of Common Stock pursuant to Section 4 hereof no later than the fifth (5th) day preceding the applicable Series E Redemption Date shall be returned to the Corporation forthwith upon such conversion. The balance of any funds deposited by the Corporation pursuant to this Section 5(a) remaining unclaimed at the expiration of one (1) year following the applicable Series E Redemption Date shall be returned to the Corporation promptly upon its written request; provided that the stockholder to which such money would be payable hereunder shall be entitled, upon proof of its ownership of such shares of Series E Preferred and payment of any bond requested by the Corporation, to receive such monies without interest from the applicable Series E Redemption Date.

(vi) On or after each Series E Redemption Date, each holder of shares of Series E Preferred to be redeemed shall surrender such holder's certificates representing such shares to the Corporation in the manner and at the place designated in the Series E Redemption Notice, and thereupon the redemption price of such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof and each surrendered certificate shall be canceled. From and after each Series E Redemption Date, unless there shall have been a default in payment of the redemption price or the Corporation is unable to pay the redemption price due to not having sufficient legally available funds, all rights of the holder of such shares as holder of Series E Preferred (except the right to receive the redemption price without interest upon surrender of their certificates), shall cease and terminate with respect to such shares; provided, however, that in the event that shares of Series E Preferred are not redeemed due to a default in payment by the Corporation or because the Corporation does not have sufficient legally available funds, such shares of Series E Preferred shall remain outstanding and shall be entitled to all of the rights and preferences provided herein.

(vii) In the event of a call for redemption of the Series E Preferred, the Conversion Rights (as defined in Section 4) for such Series E Preferred shall terminate as to the shares designated for redemption at the close of business on the fifth (5th) day preceding each Series E Redemption Date, unless default is made in payment of the redemption price.

(viii) Within five (5) days after the Series E Redemption Notice Date, the Company shall deliver a notice to the holders of Series B Preferred and Series D Preferred notifying such holders of (x) the intent of the holders of Series E Preferred to exercise their redemption rights pursuant to this Section 5 and (y) the Series E Redemption Notice Date. Subject to Section 5(d), provided that such holders deliver notice to the Corporation of their election to redeem their shares of Series B Preferred or Series D Preferred, as applicable, within thirty (30) days after the Series E Redemption Notice Date, the holders of at least a majority of the then outstanding shares of Series B Preferred or Series D Preferred, as applicable, each voting as a separate series, may require the Corporation, to the extent it may lawfully do so, to redeem the Series B Preferred or Series D Preferred, as applicable, in three (3) annual installments on each of the Series E Redemption Dates, pursuant to Sections 5(b)(ii) through 5(b)(vii) and/or 5(c)(ii) through 5(c)(vii), as applicable, and such dates shall also be deemed to be Series B Redemption Dates and/or Series D Redemption Dates.

(b) The Corporation shall be obligated to redeem the Series D Preferred as follows:

(i) At any time on or after December 31, 2011, the holders of at least a majority of the then outstanding shares of Series D Preferred, voting or consenting together as a separate series, may require the Corporation, to the extent it may lawfully do so, to redeem the Series D Preferred in three (3) annual installments as provided in subparagraph (ii) below. The Corporation shall effect such redemptions beginning on the date sixty (60) days after the date the holders provide notice to the Corporation of their election to redeem their shares of Series D Preferred (the date of the first such redemption, the "First Series D Redemption Date" and the date of such notice, the "Series D Redemption Notice Date"). The Corporation shall

redeem one third of the Series D Preferred on the First Series D Redemption Date, one third of the Series D Preferred on or before the first anniversary of the First Series D Redemption Date (the "Second Series D Redemption Date") and the final one third of the Series D Preferred on or before the second anniversary of the First Series D Redemption Date (the "Third Series D Redemption Date," and, with the First Series D Redemption Date, Second Series D Redemption Date and Third Series D Redemption Date each referred to as a "Series D Redemption Date").

(ii) Each redemption shall be effected on the applicable date by paying in cash in exchange for the shares of Series D Preferred to be redeemed a sum equal to the applicable Original Issue Price per share of the Series D Preferred (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like) plus eight percent (8%) of the applicable Original Issue Price (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like with respect to such shares) per annum from the date that the first share of Series D Preferred was issued (the "Series D Original Issue Date") until the applicable Series D Redemption Date, plus declared and unpaid dividends with respect to such shares. The number of shares of Series D Preferred that the Corporation shall be required to redeem on any one Series D Redemption Date shall be equal to the amount determined by dividing (A) the aggregate number of shares of Series D Preferred outstanding immediately prior to the Series D Redemption Date by (B) the number of remaining Series D Redemption Dates (including the Series D Redemption Date to which such calculation applies). Shares subject to redemption pursuant to this Section 5(b) shall be redeemed from each holder of Series D Preferred on a pro rata basis.

(iii) At least thirty (30) days but no more than sixty (60) days prior to the First Series D Redemption Date, the Corporation shall send a notice (a "Series D Redemption Notice") to all holders of Series D Preferred setting forth (A) the redemption price for the shares to be redeemed; and (B) the place at which such holders may obtain payment of the redemption price upon surrender of their share certificates.

(iv) Subject to Section 5(d), if the Corporation does not have sufficient funds legally available to redeem all shares to be redeemed at the applicable Series D Redemption Date, then (i) it shall redeem such shares pro rata (based on the portion of the aggregate redemption price payable to them) to the extent possible and (ii) the holders of the Series D Preferred shall be entitled to elect a majority of the members of the Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors, and to remove from office such directors and to fill any vacancy caused by the resignation, death or removal of such directors and the number of directors constituting the Corporation's Board of Directors shall be automatically increased to a number such that representatives of the Series D Preferred will constitute a majority of the members of the Board of Directors. Subject to Section 5(d), at any time thereafter when additional funds of the Corporation are legally available for the redemption of shares of Series D Preferred, such funds will immediately be used to redeem the balance of the shares that the Corporation has become obligated to redeem on any Series D Redemption Date but that it has not redeemed.

(v) On or prior to each Series D Redemption Date, the Corporation shall deposit the redemption price of all shares to be redeemed with a bank or trust company having aggregate capital and surplus in excess of one hundred million dollars

($100,000,000), as a trust fund for the benefit of the respective holders of shares designated for redemption but not yet redeemed, with irrevocable instructions and authority to the bank or trust company to pay, on and after such Series D Redemption Date, the redemption price of the shares to their respective holders upon the surrender of their share certificates. Any moneys deposited by the Corporation pursuant to this Section 5(b) for the redemption of shares thereafter converted into shares of Common Stock pursuant to Section 4 hereof no later than the fifth (5th) day preceding the applicable Series D Redemption Date shall be returned to the Corporation forthwith upon such conversion. The balance of any funds deposited by the Corporation pursuant to this Section 5(b) remaining unclaimed at the expiration of one (1) year following the applicable Series D Redemption Date shall be returned to the Corporation promptly upon its written request; provided that the stockholder to which such money would be payable hereunder shall be entitled, upon proof of its ownership of such shares of Series D Preferred and payment of any bond requested by the Corporation, to receive such monies without interest from the applicable Series D Redemption Date.

(vi) On or after each Series D Redemption Date, each holder of shares of Series D Preferred to be redeemed shall surrender such holder's certificates representing such shares to the Corporation in the manner and at the place designated in the Series D Redemption Notice, and thereupon the redemption price of such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof and each surrendered certificate shall be canceled. From and after each Series D Redemption Date, unless there shall have been a default in payment of the redemption price or the Corporation is unable to pay the redemption price due to not having sufficient legally available funds, all rights of the holder of such shares as holder of Series D Preferred (except the right to receive the redemption price without interest upon surrender of their certificates), shall cease and terminate with respect to such shares; provided, however, that in the event that shares of Series D Preferred are not redeemed due to a default in payment by the Corporation or because the Corporation does not have sufficient legally available funds, such shares of Series D Preferred shall remain outstanding and shall be entitled to all of the rights and preferences provided herein.

(vii) In the event of a call for redemption of the Series D Preferred, the Conversion Rights (as defined in Section 4) for such Series D Preferred shall terminate as to the shares designated for redemption at the close of business on the fifth (5th) day preceding each Series D Redemption Date, unless default is made in payment of the redemption price.

(viii) Within five (5) days after the Series D Redemption Notice Date, the Company shall deliver a notice to the holders of Series B Preferred and Series E Preferred notifying such holders of (x) the intent of the holders of Series D Preferred to exercise their redemption rights pursuant to this Section 5 and (y) the Series D Redemption Notice Date. Subject to Section 5(d), provided that such holders deliver notice to the Corporation of their election to redeem their shares of Series B Preferred or Series E Preferred, as applicable, within thirty (30) days after the Series D Redemption Notice Date, the holders of at least a majority of the then outstanding shares of Series B Preferred or Series E Preferred, as applicable, each voting as a separate series, may require the Corporation, to the extent it may lawfully do so, to redeem the Series B Preferred or Series E Preferred, as applicable, in three (3) annual installments on

each of the Series D Redemption Dates, pursuant to Sections 5(a)(ii) through 5(a)(vii) and/or 5(c)(ii) through 5(c)(vii), as applicable, and such dates shall also be deemed to be Series B Redemption Dates and/or Series E Redemption Dates.

(c) The Corporation shall be obligated to redeem the Series B Preferred as follows:

(i) At any time on or after December 31, 2011, the holders of at least a majority of the then outstanding shares of Series B Preferred, voting or consenting together as a separate series, may require the Corporation, to the extent it may lawfully do so, to redeem the Series B Preferred in three (3) annual installments as provided in subparagraph (ii) below. The Corporation shall effect such redemptions beginning on the date sixty (60) days after the date the holders provide notice to the Corporation of their election to redeem their shares of Series B Preferred (the date of the first such redemption, the "First Series B Redemption Date" and the date of such notice, the "Series B Redemption Notice Date"). The Corporation shall redeem one third of the Series B Preferred on the First Series B Redemption Date, one third of the Series B Preferred on or before the first anniversary of the First Series B Redemption Date (the "Second Series B Redemption Date") and the final one third of the Series B Preferred on or before the second anniversary of the First Series B Redemption Date (the "Third Series B Redemption Date," with the First Series B Redemption Date, Second Series B Redemption Date and Third Series B Redemption Date each referred to as a "Series B Redemption Date," and with each Series D Redemption Date and each Series E Redemption Date, a "Redemption Date").

(ii) Each redemption shall be effected on the applicable date by paying in cash in exchange for the shares of Series B Preferred to be redeemed a sum equal to the applicable Original Issue Price per share of the Series B Preferred (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like) plus five percent (5%) of the applicable Original Issue Price (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like) per annum from the date that the first share of Series B Preferred was issued until the Series E Original Issue Date and eight percent (8%) of the applicable Original Issue Price (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like) per annum from the Series D Original Issue Date until the applicable Series B Redemption Date, plus declared and unpaid dividends with respect to such shares. The number of shares of Series B Preferred that the Corporation shall be required to redeem on any one Series B Redemption Date shall be equal to the amount determined by dividing (A) the aggregate number of shares of Series B Preferred outstanding immediately prior to the Series B Redemption Date by (B) the number of remaining Series B Redemption Dates (including the Series B Redemption Date to which such calculation applies). Shares subject to redemption pursuant to this Section 5(c) shall be redeemed from each holder of Series B Preferred on a pro rata basis.

(iii) At least thirty (30) days but no more than sixty (60) days prior to the First Series B Redemption Date, the Corporation shall send a notice (a "Series B Redemption Notice") to all holders of Series B Preferred setting forth (A) the redemption price for the shares to be redeemed; and (B) the place at which such holders may obtain payment of the redemption price upon surrender of their share certificates.

(iv) Subject to Section 5(d), if the Corporation does not have sufficient funds legally available to redeem all shares to be redeemed at the applicable Series B Redemption Date, then (i) it shall redeem such shares pro rata (based on the portion of the aggregate redemption price payable to them) to the extent possible and (ii) the holders of the Series B Preferred shall be entitled to elect a majority of the members of the Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors, and to remove from office such directors and to fill any vacancy caused by the resignation, death or removal of such directors and the number of directors constituting the Corporation's Board of Directors shall be automatically increased to a number such that representatives of the Series B Preferred will constitute a majority of the members of the Board of Directors. Subject to Section 5(d), at any time thereafter when additional funds of the Corporation are legally available for the redemption of shares of Series B Preferred, such funds will immediately be used to redeem the balance of the shares that the Corporation has become obligated to redeem on any Series B Redemption Date but that it has not redeemed.

(v) On or prior to each Series B Redemption Date, the Corporation shall deposit the redemption price of all shares to be redeemed with a bank or trust company having aggregate capital and surplus in excess of one hundred million dollars ($100,000,000), as a trust fund for the benefit of the respective holders of shares designated for redemption but not yet redeemed, with irrevocable instructions and authority to the bank or trust company to pay, on and after such Series B Redemption Date, the redemption price of the shares to their respective holders upon the surrender of their share certificates. Any moneys deposited by the Corporation pursuant to this Section 5(c) for the redemption of shares thereafter converted into shares of Common Stock pursuant to Section 4 hereof no later than the fifth (5th) day preceding the applicable Series B Redemption Date shall be returned to the Corporation forthwith upon such conversion. The balance of any funds deposited by the Corporation pursuant to this Section 5(c) remaining unclaimed at the expiration of one (1) year following the applicable Series B Redemption Date shall be returned to the Corporation promptly upon its written request; provided that the stockholder to which such money would be payable hereunder shall be entitled, upon proof of its ownership of such shares of Series B Preferred and payment of any bond requested by the Corporation, to receive such monies without interest from the applicable Series B Redemption Date.

(vi) On or after each Series B Redemption Date, each holder of shares of Series B Preferred to be redeemed shall surrender such holder's certificates representing such shares to the Corporation in the manner and at the place designated in the Series B Redemption Notice, and thereupon the redemption price of such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof and each surrendered certificate shall be canceled. From and after each Series B Redemption Date, unless there shall have been a default in payment of the redemption price or the Corporation is unable to pay the redemption price due to not having sufficient legally available funds, all rights of the holder of such shares as holder of Series B Preferred (except the right to receive the redemption price without interest upon surrender of their certificates), shall cease and terminate with respect to such shares; provided, however, that in the event that shares of Series B Preferred are not redeemed due to a default in payment by the Corporation or because the Corporation does not have sufficient legally available funds, such shares of Series B Preferred shall remain outstanding and shall be entitled to all of the rights and preferences provided herein.

(vii) In the event of a call for redemption of the Series B Preferred, the Conversion Rights (as defined in Section 4) for such Series B Preferred shall terminate as to the shares designated for redemption at the close of business on the fifth (5th) day preceding each Series B Redemption Date, unless default is made in payment of the redemption price.

(viii) Within five (5) days after the Series B Redemption Notice Date, the Company shall deliver a notice to the holders of Series D Preferred and Series E Preferred notifying such holders of (x) the intent of the holders of Series B Preferred to exercise their redemption rights pursuant to this Section 5 and (y) the Series B Redemption Notice Date. Subject to Section 5(d), provided that such holders deliver notice to the Corporation of their election to redeem their shares of Series D Preferred or Series E Preferred, as applicable, within thirty (30) days after the Series B Redemption Notice Date, the holders of at least a majority of the then outstanding shares of Series D Preferred or Series E Preferred, as applicable, each voting as a separate series, may require the Corporation, to the extent it may lawfully do so, to redeem the Series D Preferred or Series E Preferred, as applicable, in three (3) annual installments on each of the Series B Redemption Dates, pursuant to Sections 5(a)(ii) through 5(a)(vii) and/or Sections 5(b)(ii) through 5(b)(vii), as applicable, and such dates shall also be deemed to be Series D Redemption Dates and/or Series E Redemption Dates.

(d) If the Corporation does not have sufficient funds legally available to redeem on any Redemption Date all shares of Series B Preferred, Series D Preferred and Series E Preferred and of any other class or series of stock to be redeemed on such Redemption Date, the Corporation shall redeem a pro rata portion of each holder's redeemable shares of such stock out of funds legally available therefor, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor. If, pursuant to Sections 5(a), 5(b) and/or 5(c) hereof, the holders of more than one of the Series B Preferred, the Series D Preferred and the Series E Preferred shall be entitled to elect a majority of the members of the Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors, then holders of the outstanding Series B Preferred, Series D Preferred and/or Series E Preferred, as applicable (voting together as a single class and not as a separate series and on an as-if-converted basis) shall be entitled to elect a majority of the members of the Board of Directors at each meeting or pursuant to each consent of the Corporation's stockholders for the election of directors, and to remove from office such directors and to fill any vacancy caused by the resignation, death or removal of such directors and the number of directors constituting the Corporation's Board of Directors shall be automatically increased to a number such that representatives of the Series B Preferred, Series D Preferred and/or the Series E Preferred, as applicable, will constitute a majority of the members of the Board of Directors.

V.

A. The liability of the directors for monetary damages shall be eliminated to the fullest extent allowed under applicable law.

B. Each person who is or is made a party or is threatened to be made a party to or is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she, or a person of whom he or she is the legal representative, is or was a director or officer of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the Delaware General Corporation Law, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than said law permitted the Corporation to provide prior to such amendment), against all expense, liability and loss (including attorneys' fees, judgments, fines, Employee Retirement Income Security Act excise taxes or penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such person in connection therewith and such indemnification shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of his or her heirs, executors and administrators; provided, however, that, except as provided in the second paragraph hereof, the Corporation shall indemnify any such person seeking indemnification in connection with a proceeding (or part thereof) initiated by such person only if such proceeding (or part thereof) was authorized by the Board of Directors of the Corporation. The right to indemnification conferred in this section shall be a contract right and shall include the right to be paid by the Corporation any expenses incurred in defending any such proceeding in advance of its final disposition; provided, however, that, if the Delaware General Corporation Law requires, the payment of such expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such person while a director or officer, including, without limitation, service to an employee benefit plan) in advance of the final disposition of a proceeding, shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified under this section or otherwise. The Corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

If a claim under the first paragraph of this section (B) is not paid in full by the Corporation within thirty (30) days after a written claim has been received by the Corporation, the claimant may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall be entitled to be paid also the expense of prosecuting such claim. It shall be a defense to any such action (other than an action brought to enforce a claim for expenses incurred in defending any proceeding in advance of its final disposition where the required undertaking, if any is required, has been tendered to the Corporation) that the claimant has not met the standards of conduct which make

it permissible under the Delaware General Corporation Law for the Corporation to indemnify the claimant for the amount claimed, but the burden of proving such defense shall be on the Corporation. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he or she has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that the claimant has not met the applicable standard of conduct.

The right to indemnification and the payment of expenses incurred in defending a proceeding in advance of its final disposition conferred in this section shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, provision of this Restated Certificate or Bylaws of the Corporation, agreement, vote of stockholders or disinterested directors or otherwise.

The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any such expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the Delaware General Corporation Law.

C. Any repeal or modification of this Article V shall only be prospective and shall not effect the rights under this Article V in effect at the time of the alleged occurrence of any action or omission to act giving rise to liability.

VI.

For the management of the business and for the conduct of the affairs of the Corporation, and in further definition, limitation and regulation of the powers of the Corporation, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

A. The management of the business and the conduct of the affairs of the Corporation shall be vested in its Board of Directors. The number of directors which shall constitute the whole Board of Directors shall be fixed by the Board of Directors in the manner provided in the Bylaws, subject to any restrictions that may be set forth in this Restated Certificate.

B. Subject to compliance with applicable protective voting rights that have been or may be granted to the Preferred Stock or series thereof in a Certificate of Designation or this Restated Certificate and to the indemnification provisions in the Bylaws, the Board of Directors may from time to time make, amend, supplement or repeal the Bylaws; provided, however, that the stockholders may change or repeal any Bylaw adopted by the Board of Directors by the affirmative vote of the percentage of holders of capital stock as provided therein; and, provided further, that no amendment or supplement to the Bylaws adopted by the Board of Directors shall vary or conflict with any amendment or supplement thus adopted by the stockholders.

C. The directors of the Corporation need not be elected by written ballot unless the Bylaws so provide.

* * * *

FOUR: This Restated Certificate has been duly approved by the Board of Directors of this Corporation.

FIVE: This Restated Certificate has been duly adopted in accordance with the provisions of Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware by the Board of Directors and the stockholders of the Corporation. The total number of outstanding shares entitled to vote or act by written consent was three million three hundred thirty-nine thousand seven hundred six (3,339,706) shares of Common Stock, six million (6,000,000) shares of Series A Preferred, eight million one hundred one thousand one hundred one (8,101,101) shares of Series B Preferred, one million five hundred fourteen thousand six hundred forty-five (1,514,645) shares of Series C Preferred and ten million sixty-eight thousand four hundred two (10,068,402) shares of Series D Preferred. All of the outstanding shares of Common Stock, Series A Preferred, Series B Preferred, Series C Preferred and Series D Preferred approved this Restated Certificate by written consent in accordance with Section 228 of the General Corporation Law of the State of Delaware and written notice of such was given by the Corporation in accordance with Section 228.

[Signature Page Follows]

IN WITNESS WHEREOF, Codexis, Inc. has caused this Sixth Amended and Restated Certificate of Incorporation to be signed by its President this 31st day of October, 2007.

CODEXIS, INC.

By: /s/ Alan Shaw
President

Exhibit 3.3

BYLAWS

OF

CODEXIS, INC.
(A DELAWARE CORPORATION)

(as adopted on January 31, 2002)

TABLE OF CONTENTS

BYLAWS

OF

CODEXIS, INC.
(A DELAWARE CORPORATION)

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of the corporation in the State of Delaware shall be in the City of Wilmington, County of New Castle. (Del. Code Ann., tit. 8, § 131)

Section 2. Other Offices. The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the Board of Directors, and may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine or the business of the corporation may require. (Del. Code Ann., tit. 8, § 122(8))

ARTICLE II

CORPORATE SEAL

Section 3. Corporate Seal. The corporate seal shall consist of a die bearing the name of the corporation and the inscription, "Corporate Seal-Delaware." The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise. (Del. Code Ann., tit. 8, § 122(3))

ARTICLE III

STOCKHOLDERS' MEETINGS

Section 4. Place of Meetings. Meetings of the stockholders of the corporation shall be held at such place, either within or without the State of Delaware, as may be designated from time to time by the Board of Directors. (Del. Code Ann., tit. 8, § 211(a))

Section 5. Annual Meeting.

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may lawfully come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors of the corporation and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the corporation's notice of meeting of stockholders; (ii) by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the time of giving of notice provided for in the following paragraph, who is entitled to vote at the meeting and who complied with the notice procedures set forth in Section 5. (Del. Code Ann., tit. 8, § 211(b)).

(b) At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. For nominations or other business to be properly brought before an annual meeting by a stockholder pursuant to clause (c) of Section 5(a) of these Bylaws, (i) the stockholder must have given timely notice thereof in writing to the Secretary of the corporation, (ii) such other business must be a proper matter for stockholder action under the General Corporation Law of Delaware, (iii) if the stockholder, or the beneficial owner on whose behalf any such proposal or nomination is made, has provided the corporation with a Solicitation Notice (as defined in this Section 5(b)), such stockholder or beneficial owner must, in the case of a proposal, have delivered a proxy statement and form of proxy to holders of at least the percentage of the corporation's voting shares required under applicable law to carry any such proposal, or, in the case of a nomination or nominations, have delivered a proxy statement and form of proxy to holders of a percentage of the corporation's voting shares reasonably believed by such stockholder or beneficial owner to be sufficient to elect the nominee or nominees proposed to be nominated by such stockholder, and must, in either case, have included in such materials the Solicitation Notice, and (iv) if no Solicitation Notice relating thereto has been timely provided pursuant to this section, the stockholder or beneficial owner proposing such business or nomination must not have solicited a number of proxies sufficient to have required the delivery of such a Solicitation Notice under this Section 5. To be timely, a stockholder's notice shall be delivered to the Secretary at the principal executive offices of the Corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred twentieth (120th) day prior to the first anniversary of the preceding year's annual meeting; provided, however, that in the event that the date of the annual meeting is advanced more than thirty (30) days prior to or delayed by more than thirty (30) days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so delivered not earlier than the close of business on the one hundred twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10h) day following the day on which public announcement of the date of such meeting is first made. In no event shall the public announcement of an adjournment of an annual meeting commence a new time period for the giving of a stockholder's notice as described above. Such stockholder's notice shall set forth: (A) as to each person whom the stockholder proposed to nominate for election or reelection as a director all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors in an election contest, or is otherwise required, in each case pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "1934 Act") and Rule 14a-11 thereunder (including such person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected); (B) as to any other business that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made; and (C) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (i) the name and address of such stockholder, as they appear on the corporation's books, and of such beneficial owner, (ii) the class and number of shares of the corporation which are owned beneficially and of record by such stockholder and such beneficial owner, and (iii)

whether either such stockholder or beneficial owner intends to deliver a proxy statement and form of proxy to holders of, in the case of the proposal, at least the percentage of the corporation's voting shares required under applicable law to carry the proposal or, in the case of a nomination or nominations, a sufficient number of holders of the corporation's voting shares to elect such nominee or nominees (an affirmative statement of such intent, a "Solicitation Notice").

(c) Notwithstanding anything in the second sentence of Section 5(b) of these Bylaws to the contrary, in the event that the number of directors to be elected to the Board of Directors of the Corporation is increased and there is no public announcement naming all of the nominees for director or specifying the size of the increased Board of Directors made by the corporation at least one hundred (100) days prior to the first anniversary of the preceding year's annual meeting, a stockholder's notice required by this Section 5 shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be delivered to the Secretary at the principal executive offices of the corporation not later than the close of business on the tenth (10^{th}) day following the day on which such public announcement is first made by the corporation.

(d) Only such persons who are nominated in accordance with the procedures set forth in this Section 5 shall be eligible to serve as directors and only such business shall be conducted at a meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section 5. Except as otherwise provided by law, the Chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, to declare that such defective proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded.

(e) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, stockholders must provide notice as required by the regulations promulgated under the 1934 Act. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation proxy statement pursuant to Rule 14a-8 under the 1934 Act.

(f) For purposes of this Section 5, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act.

Section 6. Special Meetings.

(a) Special meetings of the stockholders of the corporation may be called, for any purpose or purposes, by (i) the Chairman of the Board of Directors, (ii) the Chief Executive Officer, (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption)

or (iv) by the holders of shares entitled to cast not less than ten percent (10%) of the votes at the meeting, and shall be held at such place, on such date, and at such time as the Board of Directors shall fix. At any time or times that the corporation is subject to Section 2115(b) of the California General Corporation Law ("CGCL"), stockholders holding five percent (5%) or more of the outstanding shares shall have the right to call a special meeting of stockholders as set forth in Section 18(c) herein.

(b) If a special meeting is properly called by any person or persons other than the Board of Directors, the request shall be in writing, specifying the general nature of the business proposed to be transacted, and shall be delivered personally or sent by registered mail or by telegraphic or other facsimile transmission to the Chairman of the Board of Directors, the Chief Executive Officer, or the Secretary of the corporation. No business may be transacted at such special meeting otherwise than specified in such notice. The Board of Directors shall determine the time and place of such special meeting, which shall be held not less than thirty-five (35) nor more than one hundred twenty (120) days after the date of the receipt of the request. Upon determination of the time and place of the meeting, the officer receiving the request shall cause notice to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7 of these Bylaws. If the notice is not given within sixty (60) days after the receipt of the request, the person or persons properly requesting the meeting may set the time and place of the meeting and give the notice. Nothing contained in this paragraph (b) shall be construed as limiting, fixing, or affecting the time when a meeting of stockholders called by action of the Board of Directors may be held.

Section 7. Notice of Meetings. Except as otherwise provided by law or the Certificate of Incorporation, written notice of each meeting of stockholders shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting, such notice to specify the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and purpose or purposes of the meeting. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof, or a waiver by electronic transmission by the person entitled to notice thereof, either before or after such meeting, and will be waived by any stockholder by his attendance thereat in person or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given. (Del. Code Ann., tit. 8, §§ 222, 229)

Section 8. Quorum. At all meetings of stockholders, except where otherwise provided by statute or by the Certificate of Incorporation, or by these Bylaws, the presence, in person or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairman of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business

until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of a majority of shares present in person or represented by proxy duly authorized at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person or represented by proxy duly authorized at the meeting and entitled to vote on the election of directors. Where a separate vote by a class or series or classes or series is required, except where otherwise provided by the statute or by the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or series or classes or series, present in person or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of the outstanding shares of such class or series or classes or series present in person or represented by proxy duly authorized at the meeting shall be the act of such class or classes or series. (Del. Code Ann., tit. 8, § 216)

Section 9. Adjournment and Notice of Adjourned Meetings. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairman of the meeting or by the vote of a majority of the shares casting votes. When a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. (Del. Code Ann., tit. 8, § 222(c))

Section 10. Voting Rights. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 12 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every person entitled to vote or execute consents shall have the right to do so either in person or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three (3) years from its date of creation unless the proxy provides for a longer period. (Del. Code Ann., tit. 8, § 212(b))

Section 11. Joint Owners of Stock. If shares or other securities having voting power stand of record in the names of two (2) or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two (2) or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one (1) votes, such person's act

binds all; (b) if more than one (1) votes, the act of the majority so voting binds all; (c) if more than one (1) votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the Delaware General Corporation Law, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (c) shall be a majority or even-split in interest. (Del. Code Ann., tit. 8, § 217(b))

Section 12. List of Stockholders. The Secretary shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least ten (10) days prior to the meeting: (i) on a reasonably accessible electronic network, provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the corporation. If the meeting is to be hold at a place, then the list shall be produced and kept at the time and place of meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. (Del. Code Ann., tit. 8, § 219(a))

Section 13. Action Without Meeting.

(a) Unless otherwise provided in the Certificate of Incorporation, any action required by statute to be taken at any annual or special meeting of the stockholders, or any action that may be taken at any annual or special meeting of the stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

(b) Every written consent shall bear the date of signature of each stockholder who signs the consent, and no written consent shall be effective to take the corporate action referred to therein unless, within sixty (60) days of the earliest dated consent delivered to the corporation in the manner herein required, written consents signed by a sufficient number of stockholders to take action are delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. (Del. Code Ann., tit. 8, § 228(c))

(c) Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed

by a sufficient number of stockholders to take action were delivered to the corporation as provided in Section 228(c) of the Delaware General Corporation Law. If the action that is consented to is such as would have required the filing of a certificate under any section of the Delaware General Corporation Law if such action had been voted on by stockholders at a meeting thereof, then the certificate filed under such section shall state, in lieu of any statement required by such section concerning any vote of stockholders, that written consent has been given in accordance with Section 228 of the Delaware General Corporation Law.

Section 14. Organization.

(a) At every meeting of stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the President, or, if the President is absent, a chairman of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairman. The Secretary, or, in his absence, an Assistant Secretary directed to do so by the President, shall act as secretary of the meeting.

(b) The Board of Directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters which are to be voted on by ballot. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV

DIRECTORS

Section 15. Number and Term of Office.

The authorized number of directors of the corporation shall be fixed by the Board of Directors from time to time. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient. (Del. Code Ann., tit. 8, §§ 141(b), 211(b), (c))

Section 16. Powers. The powers of the corporation shall be exercised, its business conducted and its property controlled by the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation. (Del. Code Ann., tit. 8, § 141(a))

Section 17. Term of Directors.

(a) Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, directors shall be elected at each annual meeting of stockholders for a term of one year. Each director shall serve until his successor is duly elected and qualified or until his death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

(b) No person entitled to vote at an election for directors may cumulate votes to which such person is entitled, unless, at the time of such election, the corporation is subject to Section 2115(b) of the CGCL. During such time or times that the corporation is subject to Section 2115(b) of the CGCL, every stockholder entitled to vote at an election for directors may cumulate such stockholder's votes and give one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which such stockholder's shares are otherwise entitled, or distribute the stockholder's votes on the same principle among as many candidates as such stockholder thinks fit. No stockholder, however, shall be entitled to so cumulate such stockholder's votes unless (a) the names of such candidate or candidates have been placed in nomination prior to the voting and (b) the stockholder has given notice at the meeting, prior to the voting, of such stockholder's intention to cumulate such stockholder's votes. If any stockholder has given proper notice to cumulate votes, all stockholders may cumulate their votes for any candidates who have been properly placed in nomination. Under cumulative voting, the candidates receiving the highest number of votes, up to the number of directors to be elected, are elected.

Section 18. Vacancies.

(a) Unless otherwise provided in the Certificate of Incorporation, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director. (Del. Code Ann., tit. 8, § 223(a), (b))

(b) If at the time of filling any vacancy or any newly created directorship, the directors then in office shall constitute less than a majority of the whole board (as constituted immediately prior to any such increase), the Delaware Court of Chancery may, upon application of any stockholder or stockholders holding at least ten percent (10%) of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an

election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in offices as aforesaid, which election shall be governed by Section 211 of the Delaware General Corporation Law (Del. Code Ann. tit. 8, §223(c)).

(c) At any time or times that the corporation is subject to §2115(b) of the CGCL, if, after the filling of any vacancy, the directors then in office who have been elected by stockholders shall constitute less than a majority of the directors then in office, then

(i) any holder or holders of an aggregate of five percent (5%) or more of the total number of shares at the time outstanding having the right to vote for those directors may call a special meeting of stockholders; or

(ii) the Superior Court of the proper county shall, upon application of such stockholder or stockholders, summarily order a special meeting of the stockholders, to be held to elect the entire board, all in accordance with Section 305(c) of the CGCL, the term of office of any director shall terminate upon that election of a successor. (CGCL §305(c))

Section 19. Resignation. Any director may resign at any time by delivering notice given in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time, upon receipt by the Secretary or at the pleasure of the Board of Directors. If no such specification is made, it shall be deemed effective at the pleasure of the Board of Directors. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each Director so chosen shall hold office for the unexpired portion of the term of the Director whose place shall be vacated and until his successor shall have been duly elected and qualified. (Del. Code Ann., tit. 8, §§ 141(b), 223(d))

Section 20. Removal.

(a) Subject to any limitations imposed by applicable law (and assuming the corporation is not subject to Section 2115 of the CGCL), the Board of Directors or any director may be removed from office at any time (i) with cause by the affirmative vote of the holders of a majority of the voting power of all then-outstanding shares of voting stock of the corporation entitled to vote at an election of directors or (ii) without cause by the affirmative vote of sixty-six and two-thirds percent (66-$^{2}/_{3}$%) of the voting power of all then-outstanding shares of voting stock of the corporation, entitled to vote at an election of directors.

(b) During such time or times that the corporation is subject to Section 2115(b) of the CGCL, the Board of Directors or any individual director may be removed from office at any time without cause by the affirmative vote of the holders of at least a majority of the outstanding shares entitled to vote on such removal; provided, however, that unless the entire Board is removed, no individual director may be removed when the votes cast against such director's removal, or not consenting in writing to such removal, would be sufficient to elect that director if voted cumulatively at an election which the same total number of votes were cast (or, if such action is taken by written consent, all shares entitled to vote were voted) and the entire number of directors authorized at the time of such director's most recent election were then being elected.

Section 21. Meetings.

(a) Annual Meetings. The annual meeting of the Board of Directors shall be held immediately before or after the annual meeting of stockholders and at the place where such meeting is held. No notice of an annual meeting of the Board of Directors shall be necessary and such meeting shall be held for the purpose of electing officers and transacting such other business as may lawfully come before it.

(b) Regular Meetings. Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware that has been designated by the Board of Directors and publicized among all directors. No formal notice shall be required for a regular meeting of the Board of Directors. (Del. Code Ann., tit. 8, § 141(g))

(c) Special Meetings. Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by the Chairman of the Board, the President or any two of the directors. (Del. Code Ann., tit. 8, § 141(g))

(d) Telephone Meetings. Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting. (Del. Code Ann., tit. 8, § 141(i))

(e) Notice of Meetings. Notice of the time and place of all meetings of the Board of Directors shall be orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means, during normal business hours, at least twenty-four (24) hours before the date and time of the meeting, or sent in writing to each director by first class mail, postage prepaid, at least three (3) days before the date of the meeting. Notice of any meeting may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. (Del. Code Ann., tit. 8, § 229)

(f) Waiver of Notice. The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though had at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present shall sign a written waiver of notice or provide notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting. (Del. Code Ann., tit. 8, § 229)

Section 22. Quorum and Voting.

(a) Unless the Certificate of Incorporation requires a greater number and except with respect to indemnification questions arising under Section 43 hereof, for which a quorum shall be one-third of the exact number of directors fixed from time to time, a quorum of the Board of Directors shall consist of a majority of the exact number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation; *provided*, *however*, at any meeting, whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting. (Del. Code Ann., tit. 8, § 141(b))

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws. (Del. Code Ann., tit. 8, § 141(b))

Section 23. Action Without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form. (Del. Code Ann., tit. 8, § 141(f))

Section 24. Fees and Compensation. Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor. (Del. Code Ann., tit. 8, § 141(h))

Section 25. Committees.

(a) Executive Committee. The Board of Directors may appoint an Executive Committee to consist of one (1) or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the Delaware General Corporation Law to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any bylaw of the corporation. (Del. Code Ann., tit. 8, § 141(c))

(b) Other Committees. The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one (1) or more members of the Board of Directors and shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws. (Del. Code Ann., tit. 8, § 141(c))

(c) Term. Each member of a committee of the Board of Directors shall serve a term on the committee coexistent with such member's term on the Board of Directors. The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock, the provisions of subsections (a) or (b) of this Bylaw may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. (Del. Code Ann., tit. 8, §141(c))

(d) Meetings. Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 25 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place that has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice given in writing or by electronic transmission to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. A majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee. (Del. Code Ann., tit. 8, §§ 141(c), 229)

Section 26. Organization. At every meeting of the directors, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the President, or if the President is absent, the most senior Vice President, (if a director) or, in the absence of any such person, a chairman of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his absence, any Assistant Secretary directed to do so by the President, shall act as secretary of the meeting.

ARTICLE V

OFFICERS

Section 27. Officers Designated. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chairman of the Board of Directors, the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer, the Treasurer and the Controller, all of whom shall be elected at the annual organizational meeting of the Board of Directors. The Board of Directors may also appoint one or more Assistant Secretaries, Assistant Treasurers, Assistant Controllers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors. (Del. Code Ann., tit. 8, §§ 122(5), 142(a), (b))

Section 28. Tenure and Duties of Officers.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors. (Del. Code Ann., tit. 8, § 141(b), (e))

(b) Duties of Chairman of the Board of Directors. The Chairman of the Board of Directors, when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board of Directors shall perform other duties commonly incident to his office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time. If there is no President, then the Chairman of the Board of Directors shall also serve as the Chief Executive Officer of the corporation and shall have the powers and duties prescribed in paragraph (c) of this Section 28. (Del. Code Ann., tit. 8, § 142(a))

(c) Duties of President. The President shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors has been appointed and is present. Unless some other officer has been elected Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to his office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time. (Del. Code Ann., tit. 8, § 142(a))

(d) Duties of Vice Presidents. The Vice Presidents may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant. The Vice Presidents shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. (Del. Code Ann., tit. 8, § 142(a))

(e) Duties of Secretary. The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties given him in these Bylaws and other duties commonly incident to his office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time. The President may direct any Assistant Secretary to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform other duties commonly incident to his office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. (Del. Code Ann., tit. 8, § 142(a))

(f) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to his office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. The President may direct the Treasurer or any Assistant Treasurer, or the Controller or any Assistant Controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each Controller and Assistant Controller shall perform other duties commonly incident to his office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. (Del. Code Ann., tit. 8, § 142(a))

Section 29. Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 30. Resignations. Any officer may resign at any time by giving written notice to the Board of Directors or to the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer. (Del. Code Ann., tit. 8, § 142(b))

Section 31. Removal. Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written consent of the directors in office at the time, or by any committee or superior officers upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI

EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION

Section 32. Execution of Corporate Instruments. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name without limitation, or to enter into contracts on behalf of the corporation, except where otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation. (Del. Code Ann., tit. 8, §§ 103(a), 142(a), 158)

All checks and drafts drawn on banks or other depositaries on funds to the credit of the corporation or in special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do.

Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount. (Del. Code Ann., tit. 8, §§ 103(a), 142(a), 158)

Section 33. Voting of Securities Owned by the Corporation. All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President. (Del. Code Ann., tit. 8, § 123)

ARTICLE VII

SHARES OF STOCK

Section 34. Form and Execution of Certificates. Certificates for the shares of stock of the corporation shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock in the corporation shall be entitled to have a certificate signed by or in the name of the corporation by the Chairman of the Board of Directors, or the President or any Vice President and by the Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue. Each certificate shall state upon the face or back thereof, in full or in summary, all of the powers, designations, preferences, and rights, and the limitations or restrictions of the shares authorized to be issued or shall, except as otherwise required by law, set forth on the face or back a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional, or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated stock, the corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to this section or otherwise required by law or with respect to this section a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Except as otherwise expressly provided by law, the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical. (Del. Code Ann., tit. 8, § 158)

Section 35. Lost Certificates. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or his legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed. (Del. Code Ann., tit. 8, § 167)

Section 36. Transfers.

(a) Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, and upon the surrender of a properly endorsed certificate or certificates for a like number of shares. (Del. Code Ann., tit. 8, § 201, tit. 6, § 8- 401(1))

(b) The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the Delaware General Corporation Law. (Del. Code Ann., tit. 8, § 160 (a))

Section 37. Fixing Record Dates.

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided*, *however*, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. Any stockholder of record seeking to have the stockholders authorize or take corporate action by written consent shall, by written notice to the Secretary, request the Board of Directors to fix a record date. The Board of Directors shall promptly, but in all events within ten (10) days after the date on which such a request is received, adopt a resolution fixing the record date. If no record date has been fixed by the Board of Directors within ten (10) days of the date on which such a request is received, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business or an officer or agent of the corporation having custody of the book in which proceedings of meetings of

stockholders are recorded. Delivery made to the corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

(c) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. (Del. Code Ann., tit. 8, § 213)

Section 38. Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware. (Del. Code Ann., tit. 8, §§ 213(a), 219)

ARTICLE VIII

OTHER SECURITIES OF THE CORPORATION

Section 39. Execution of Other Securities. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 34), may be signed by the Chairman of the Board of Directors, the President or any Vice President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; *provided*, *however*, that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be

adopted by the corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

ARTICLE IX

DIVIDENDS

Section 40. Declaration of Dividends. Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law. (Del. Code Ann., tit. 8, §§ 170, 173)

Section 41. Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created. (Del. Code Ann., tit. 8, § 171)

ARTICLE X

FISCAL YEAR

Section 42. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 43. Indemnification of Directors and Officers, Employees and Other Agents.

(a) Directors and Officers. The corporation shall indemnify its directors and officers to the fullest extent not prohibited by the Delaware General Corporation Law or any other applicable law; *provided*, *however*, that the corporation may modify the extent of such indemnification by individual contracts with its directors and officers; and, *provided*, *further*, that the corporation shall not be required to indemnify any director or officer in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the Delaware General Corporation Law or any other applicable law or (iv) such indemnification is required to be made under subsection (d).

(b) Employees and Other Agents. The corporation shall have power to indemnify its employees and other agents as set forth in the Delaware General Corporation Law or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person to such officers or other persons as the Board of Directors shall determine.

(c) Expenses. The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director or officer, of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or officer in connection with such proceeding upon receipt of an undertaking by or on behalf of such person to repay said amounts if it should be determined ultimately that such person is not entitled to be indemnified under this Bylaw or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this Bylaw, no advance shall be made by the corporation to an officer of the corporation (except by reason of the fact that such officer is or was a director of the corporation, in which event this paragraph shall not apply) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by the Board of Directors by a majority vote of a quorum consisting of directors who were not parties to the proceeding, or (ii) if such quorum is not obtainable, or, even if obtainable, a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and officers under this Bylaw shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director or officer. Any right to indemnification or advances granted by this Bylaw to a director or officer shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within ninety (90) days of request therefor. The claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting his claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the Delaware General Corporation Law or any other applicable law for the corporation to indemnify the claimant for the amount claimed. In connection with any claim by an officer of the corporation (except in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such officer is or was a director of the corporation) for advances, the corporation shall be entitled to raise a defense as to any such action clear and convincing evidence that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation, or with

respect to any criminal action or proceeding that such person acted without reasonable cause to believe that his conduct was lawful. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he has met the applicable standard of conduct set forth in the Delaware General Corporation Law or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director or officer to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director or officer is not entitled to be indemnified, or to such advancement of expenses, under this Article XI or otherwise shall be on the corporation.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the Delaware General Corporation Law or any other applicable law.

(f) Survival of Rights. The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director, officer, employee or other agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) Insurance. To the fullest extent permitted by the Delaware General Corporation Law, or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this Bylaw.

(h) Amendments. Any repeal or modification of this Bylaw shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

(i) Saving Clause. If this Bylaw or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director and officer to the full extent not prohibited by any applicable portion of this Bylaw that shall not have been invalidated, or by any other applicable law. If this Section 43 shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director and officer to the full extent under applicable law.

(j) Certain Definitions. For the purposes of this Bylaw, the following definitions shall apply:

(1) The term "proceeding" shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(2) The term "expenses" shall be broadly construed and shall include, without limitation, court costs, attorneys' fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

(3) The term the "corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Bylaw with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(4) References to a "director," "executive officer," "officer," "employee," or "agent" of the corporation shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, executive officer, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

(5) References to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this Bylaw.

ARTICLE XII

NOTICES

Section 44. Notices.

(a) Notice to Stockholders. Whenever, under any provisions of these Bylaws, notice is required to be given to any stockholder, it shall be given in writing, timely and duly deposited in the United States mail, postage prepaid, and addressed to his last known post office address as shown by the stock record of the corporation or its transfer agent. (Del. Code Ann., tit. 8, § 222)

(b) Notice to Directors. Any notice required to be given to any director may be given by the method stated in subsection (a), or by electronic transmission, overnight delivery service, facsimile, telex or telegram, except that such notice other than one which is delivered personally shall be sent to such address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known post office address of such director.

(c) Affidavit of Mailing. An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained. (Del. Code Ann., tit. 8, § 222)

(d) Time Notices Deemed Given. All notices given by mail or by overnight delivery service, as above provided, shall be deemed to have been given as at the time of mailing, and all notices given by electronic transmission, facsimile, telex or telegram shall be deemed to have been given as of the sending time recorded at time of transmission.

(e) Methods of Notice. It shall not be necessary that the same method of giving notice be employed in respect of all directors, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(f) Failure to Receive Notice. The period or limitation of time within which any stockholder may exercise any option or right, or enjoy any privilege or benefit, or be required to act, or within which any director may exercise any power or right, or enjoy any privilege, pursuant to any notice sent him in the manner above provided, shall not be affected or extended in any manner by the failure of such stockholder or such director to receive such notice.

(g) Notice to Person with Whom Communication Is Unlawful. Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting that shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the Delaware General Corporation Law, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(h) Notice to Person with Undeliverable Address. Whenever notice is required to be given, under any provision of law or the Certificate of Incorporation or Bylaws of the corporation, to any stockholder to whom (i) notice of two consecutive annual meetings, and all notices of meetings or of the taking of action by written consent without a meeting to such person during the period between such two consecutive annual meetings, or (ii) all, and at least two, payments (if sent by first class mail) of dividends or interest on securities during a twelve-month

period, have been mailed addressed to such person at his address as shown on the records of the corporation and have been returned undeliverable, the giving of such notice to such person shall not be required. Any action or meeting that shall be taken or held without notice to such person shall have the same force and effect as if such notice had been duly given. If any such person shall deliver to the corporation a written notice setting forth his then current address, the requirement that notice be given to such person shall be reinstated. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the Delaware General Corporation Law, the certificate need not state that notice was not given to persons to whom notice was not required to be given pursuant to this paragraph. The exception in this subsection (h) to the requirement that notice be given shall not be applicable to any notice returned as undeliverable if the notice was given by electronic transmission. (Del. Code Ann, tit. 8, § 230)

ARTICLE XIII

AMENDMENTS

Section 45. Amendments. Subject to paragraph (h) of Section 43 of the Bylaws, these Bylaws may be amended or repealed and new Bylaws adopted by the stockholders entitled to vote. The Board of Directors shall also have the power, if such power is conferred upon the Board of Directors by the Certificate of Incorporation, to adopt, amend, or repeal Bylaws (including, without limitation, the amendment of any Bylaw setting forth the number of Directors who shall constitute the whole Board of Directors). (Del. Code Ann., tit. 8, §§109(a), 122(6)).

ARTICLE XIV

RIGHT OF FIRST REFUSAL

Section 46. Right of First Refusal. No stockholder shall sell, assign, pledge, or in any manner transfer any of the shares of common stock of the corporation or any right or interest therein, whether voluntarily or by operation of law, or by gift or otherwise, except by a transfer which meets the requirements hereinafter set forth in this bylaw:

(a) If the stockholder desires to sell or otherwise transfer any of his shares of common stock, then the stockholder shall first give written notice thereof to the corporation. The notice shall name the proposed transferee and state the number of shares to be transferred, the proposed consideration, and all other terms and conditions of the proposed transfer.

(b) For thirty (30) days following receipt of such notice, the corporation shall have the option to purchase all (but not less than all) of the shares specified in the notice at the price and upon the terms set forth in such notice; *provided*, *however*, that, with the consent of the stockholder, the corporation shall have the option to purchase a lesser portion of the shares specified in said notice at the price and upon the terms set forth therein. In the event of a gift, property settlement or other transfer in which the proposed transferee is not paying the full price for the shares, and that is not otherwise exempted from the provisions of this Section 46, the price shall be deemed to be the fair market value of the stock at such time as determined in good faith by the Board of Directors. In the event the corporation elects to purchase all of the shares

or, with consent of the stockholder, a lesser portion of the shares, it shall give written notice to the transferring stockholder of its election and settlement for said shares shall be made as provided below in paragraph (d).

(c) The corporation may assign its rights hereunder.

(d) In the event the corporation and/or its assignee(s) elect to acquire any of the shares of the transferring stockholder as specified in said transferring stockholder's notice, the Secretary of the corporation shall so notify the transferring stockholder and settlement thereof shall be made in cash within thirty (30) days after the Secretary of the corporation receives said transferring stockholder's notice; provided that if the terms of payment set forth in said transferring stockholder's notice were other than cash against delivery, the corporation and/or its assignee(s) shall pay for said shares on the same terms and conditions set forth in said transferring stockholder's notice.

(e) In the event the corporation and/or its assignees(s) do not elect to acquire all of the shares specified in the transferring stockholder's notice, said transferring stockholder may, within the sixty-day period following the expiration of the option rights granted to the corporation and/or its assignees(s) herein, transfer the shares specified in said transferring stockholder's notice which were not acquired by the corporation and/or its assignees(s) as specified in said transferring stockholder's notice. All shares so sold by said transferring stockholder shall continue to be subject to the provisions of this bylaw in the same manner as before said transfer.

(f) Anything to the contrary contained herein notwithstanding, the following transactions shall be exempt from the provisions of this bylaw:

(1) A stockholder's transfer of any or all shares held either during such stockholder's lifetime or on death by will or intestacy to such stockholder's immediate family or to any custodian or trustee for the account of such stockholder or such stockholder's immediate family or to any limited partnership of which the stockholder, members of such stockholder's immediate family or any trust for the account of such stockholder or such stockholder's immediate family will be the general of limited partner(s) of such partnership. "Immediate family" as used herein shall mean spouse, lineal descendant, father, mother, brother, or sister of the stockholder making such transfer.

(2) A stockholder's bona fide pledge or mortgage of any shares with a commercial lending institution, provided that any subsequent transfer of said shares by said institution shall be conducted in the manner set forth in this bylaw.

(3) A stockholder's transfer of any or all of such stockholder's shares to the corporation or to any other stockholder of the corporation.

(4) A stockholder's transfer of any or all of such stockholder's shares to a person who, at the time of such transfer, is an officer or director of the corporation.

(5) A corporate stockholder's transfer of any or all of its shares pursuant to and in accordance with the terms of any merger, consolidation, reclassification of shares or capital reorganization of the corporate stockholder, or pursuant to a sale of all or substantially all of the stock or assets of a corporate stockholder.

(6) A corporate stockholder's transfer of any or all of its shares to any or all of its stockholders.

(7) A transfer by a stockholder that is a limited or general partnership to any or all of its partners or former partners.

In any such case, the transferee, assignee, or other recipient shall receive and hold such stock subject to the provisions of this bylaw, and there shall be no further transfer of such stock except in accord with this bylaw.

(g) The provisions of this bylaw may be waived with respect to any transfer either by the corporation, upon duly authorized action of its Board of Directors, or by the stockholders, upon the express written consent of the owners of a majority of the voting power of the corporation (excluding the votes represented by those shares to be transferred by the transferring stockholder). This bylaw may be amended or repealed either by a duly authorized action of the Board of Directors or by the stockholders, upon the express written consent of the owners of a majority of the voting power of the corporation.

(h) Any sale or transfer, or purported sale or transfer, of securities of the corporation shall be null and void unless the terms, conditions, and provisions of this bylaw are strictly observed and followed.

(i) The foregoing right of first refusal shall terminate on either of the following dates, whichever shall first occur:

(1) On January 30, 2012; or

(2) Upon the date securities of the corporation are first offered to the public pursuant to a registration statement filed with, and declared effective by, the United States Securities and Exchange Commission under the Securities Act of 1933, as amended.

(j) The certificates representing shares of stock of the corporation shall bear on their face the following legend so long as the foregoing right of first refusal remains in effect:

"THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A RIGHT OF FIRST REFUSAL OPTION IN FAVOR OF THE CORPORATION AND/OR ITS ASSIGNEE(S), AS PROVIDED IN THE BYLAWS OF THE CORPORATION."

ARTICLE XV

LOANS TO OFFICERS

Section 47. Loans to Officers. The corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiaries, including any officer or employee who is a Director of the corporation or its

subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute. (Del. Code Ann., tit. 8, § 143)

ARTICLE XVI

MISCELLANEOUS

Section 48. Annual Report.

(a) Subject to the provisions of paragraph (b) of this Bylaw, the Board of Directors shall cause an annual report to be sent to each stockholder of the corporation not later than one hundred twenty (120) days after the close of the corporation's fiscal year. Such report shall include a balance sheet as of the end of such fiscal year and an income statement and statement of changes in financial position for such fiscal year, accompanied by any report thereon of independent accounts or, if there is no such report, the certificate of an authorized officer of the corporation that such statements were prepared without audit from the books and records of the corporation. When there are more than 100 stockholders of record of the corporation's shares, as determined by Section 605 of the CGCL, additional information as required by Section 1501(b) of the CGCL shall also be contained in such report, provided that if the corporation has a class of securities registered under Section 12 of the 1934 Act, that Act shall take precedence. Such report shall be sent to stockholders at least fifteen (15) days prior to the next annual meeting of stockholders after the end of the fiscal year to which it relates.

(b) If and so long as there are fewer than 100 holders of record of the corporation's shares, the requirement of sending of an annual report to the stockholders of the corporation is hereby expressly waived.

Exhibit 4.2

CODEXIS, INC.

FOURTH AMENDED AND RESTATED

INVESTOR RIGHTS AGREEMENT

November 13, 2007

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CODEXIS, INC.

FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

This Fourth Amended and Restated Investor Rights Agreement (the "Agreement") is entered into as of November 13, 2007, by and among Codexis, Inc., a Delaware corporation (the "Company") and the investors listed on Exhibit A hereto, referred to hereinafter as the "Investors" and each individually as an "Investor."

RECITALS

WHEREAS, certain of the Investors hold shares of the Company's Series A Preferred Stock, $.0001 par value per share (the "Series A Stock"), Series B Preferred Stock, $.0001 par value per share (the "Series B Stock"), Series C Preferred Stock, $.0001 par value per share (the "Series C Stock") and/or Series D Preferred Stock, $.0001 par value per share (the "Series D Stock"), and possess registration rights, information rights, rights of first offer, and other rights pursuant to that certain Third Amended and Restated Investors' Rights Agreement dated as of August 22, 2006, as amended, by and among the Company and such Investors (the "Prior Agreement");

WHEREAS, certain of the Investors and the Company are parties to that certain Series E Preferred Stock Purchase Agreement of even date herewith (the "Purchase Agreement") which contemplates the sale of Series E Preferred Stock, $.0001 par value per share (the "Series E Stock") to such Investors (the "Financing");

WHEREAS, the parties to the Prior Agreement desire to terminate the Prior Agreement and accept the rights and covenants hereof in lieu of their rights and covenants under the Prior Agreement;

WHEREAS, the obligations in the Purchase Agreement are conditioned upon the execution and delivery of this Agreement; and

WHEREAS, in connection with the consummation of the Financing, the parties desire to enter into this Agreement in order to grant registration, information rights and other rights to the Investors as set forth below.

AGREEMENT

NOW, THEREFORE, in consideration of the representations, warranties, covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree that the Prior Agreement shall be superseded and replaced in its entirety by this Agreement, and the parties hereto further agree as follows:

SECTION 1. GENERAL.

1.1 Definitions. As used in this Agreement the following terms shall have the following respective meanings:

(a) "Affiliate" means any corporation or other entity that is directly or indirectly controlling, controlled by or under common control with a party hereto, or any investment funds with the same manager or advisor as a party hereto. For the purpose of this definition, "control" shall mean the direct or indirect ownership of at least fifty percent (50%) of the outstanding shares or other voting rights of the subject entity to elect directors or the equivalent governing body, or if not meeting the preceding, any entity owned or controlled by or owning or controlling the maximum control or ownership right permitted in the country where such entity exists.

(b) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(c) "Form S-3" means such form under the Securities Act as in effect on the date hereof or any successor or similar registration form under the Securities Act subsequently adopted by the SEC that permits inclusion or incorporation of substantial information by reference to other documents filed by the Company with the SEC.

(d) "Holder" means any person owning of record Registrable Securities that have not been sold to the public or any assignee of record of such Registrable Securities in accordance with Section 2.10 hereof.

(e) "Initial Offering" means the Company's first firm commitment underwritten public offering of its Common Stock registered under the Securities Act that results in the Preferred Stock being converted into Common Stock.

(f) "Initating Holders" shall mean Holders of Registrable Securities who in the aggregate hold not less than thirty percent (30%) of the outstanding Registrable Securities.

(g) "Preferred Stock" means the Series A Stock, the Series B Stock, the Series C Stock, the Series D Stock and the Series E Stock.

(h) "Register," "registered," and "registration" refer to a registration effected by preparing and filing a registration statement in compliance with the Securities Act, and the declaration or ordering of effectiveness of such registration statement or document.

(i) "Registrable Securities" means (a) Common Stock of the Company issued or issuable upon conversion of the Shares and the exercise of any warrants and (b) any Common Stock of the Company issued as (or issuable upon the conversion or exercise of any warrant, right or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, such above-described securities. Notwithstanding the foregoing, Registrable Securities shall not include any securities sold by a person to the public either pursuant to a registration statement or Rule 144 or sold in a private transaction in which the transferor's rights under Section 2 of this Agreement are not assigned.

(j) "Registrable Securities then outstanding" shall be the number of shares determined by calculating the total number of shares of the Company's Common Stock that are Registrable Securities and either (a) are then issued and outstanding or (b) are issuable pursuant to then exercisable or convertible securities.

(k) "Registration Expenses" shall mean all expenses incurred by the Company in complying with Sections 2.2, 2.3, 2.4 and 2.6 hereof, including, without limitation, all registration and filing fees, printing expenses, fees and disbursements of counsel for the Company, reasonable fees and disbursements of counsel for the Holders not to exceed (a) fifty thousand dollars ($50,000) in the aggregate in the case of a registration on Form S-1 or its equivalent or (b) twenty five thousand dollars ($25,000) in the aggregate in the case of a registration on Form S-3 or its equivalent, blue sky fees and expenses and the expense of any special audits incident to or required by any such registration (but excluding the compensation of regular employees of the Company, which shall be paid in any event by the Company).

(l) "SEC" or "Commission" means the Securities and Exchange Commission.

(m) "Securities Act" shall mean the Securities Act of 1933, as amended.

(n) "Selling Expenses" shall mean all underwriting discounts and selling commissions applicable to the sale.

(o) "Senior Officer" shall mean the Chief Executive Officer, Chief Financial Officer, General Counsel, President or any Senior Vice President of the Company.

(p) "Shares" shall mean the Company's Series E Stock issued pursuant to the Purchase Agreement and the Series A Stock, Series B Stock, Series C Stock and the Series D Stock of the Company held by certain Investors listed on Exhibit A hereto and their permitted assigns.

(q) "Special Registration Statement" shall mean (i) a registration statement relating to any employee benefit plan or (ii) with respect to any corporate reorganization or transaction under Rule 145 of the Securities Act, including any registration statements related to the resale of securities issued in such a transaction or (iii) a registration related to stock issued or issuable upon conversion of debt securities.

SECTION 2. REGISTRATION; RESTRICTIONS ON TRANSFER

2.1 Restrictions on Transfer.

(a) Each Holder agrees not to make any disposition of all or any portion of the Shares or Registrable Securities unless and until:

(i) There is then in effect a registration statement under the Securities Act covering such proposed disposition and such disposition is made in accordance with such registration statement; or

(ii) (A) The transferee has agreed in writing to be bound by the terms of this Agreement, (B) such Holder shall have notified the Company of the proposed disposition and shall have furnished the Company with a detailed statement of the circumstances surrounding the proposed disposition, and (C) if reasonably requested by the Company, such Holder shall have furnished the Company with an opinion of counsel, reasonably satisfactory to the Company, that such disposition will not require registration of such shares under the Securities Act. It is agreed that the Company will not require opinions of counsel for transactions made pursuant to Rule 144, except in unusual circumstances. After its Initial Offering, the Company will not require the transferee to be bound by the terms of Section 2.1(a)(ii) of this Agreement.

(iii) Notwithstanding the provisions of paragraphs (i) and (ii) above, no such registration statement or opinion of counsel shall be necessary for a transfer by a Holder that is (A) a partnership transferring to its partners or former partners in accordance with partnership interests, (B) a corporation transferring to a wholly-owned subsidiary or a parent corporation that owns all of the capital stock of the Holder, (C) a limited liability company transferring to its members or former members in accordance with their interest in the limited liability company, (D) an individual transferring to the Holder's family member or trust for the benefit of an individual Holder, or (E) an Affiliate; provided, however, that in each case the transferee will be subject to the terms of this Agreement to the same extent as if he were an original Holder hereunder.

(b) Each certificate representing Shares or Registrable Securities shall (unless otherwise permitted by the provisions of the Agreement) be stamped or otherwise imprinted with a legend substantially similar to the following (in addition to any legend required under applicable state securities laws):

> THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF AN INVESTOR RIGHTS AGREEMENT THAT PLACES CERTAIN RESTRICTIONS ON THE TRANSFER OF THE SHARES REPRESENTED HEREBY. A COPY OF SUCH INVESTOR RIGHTS AGREEMENT WILL BE FURNISHED TO THE RECORD HOLDER OF THIS CERTIFICATE WITHOUT CHARGE UPON WRITTEN REQUEST TO THE COMPANY AT ITS PRINCIPAL PLACE OF BUSINESS.

(c) The Company shall be obligated to reissue promptly unlegended certificates at the request of any Holder thereof if the Holder shall have obtained an opinion of counsel (which counsel may be counsel to the Company) reasonably acceptable to the Company to the effect that the securities proposed to be disposed of may lawfully be so disposed of without registration, qualification or legend.

(d) Any legend endorsed on an instrument pursuant to applicable state securities laws and the stop-transfer instructions with respect to such securities shall be removed upon receipt by the Company of an order of the appropriate blue sky authority authorizing such removal.

2.2 Demand Registration.

(a) Subject to the conditions of this Section 2.2, if the Company shall receive a written request from the Initiating Holders that the Company file a registration statement under the Securities Act covering the registration of Registrable Securities with an anticipated aggregate offering price, net of underwriting discounts and commissions, of at least ten million dollars ($10,000,000) (a "Qualified Public Offering"), then the Company shall, within thirty (30) days of the receipt thereof, give written notice of such request to all Holders, and subject to the limitations of this Section 2.2, effect, as expeditiously as reasonably possible, the registration under the Securities Act of all Registrable Securities that the Holders request to be registered.

(b) If the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 2.2 or any request pursuant to Section 2.4 and the Company shall include such information in the written notice referred to in Section 2.2(a) or Section 2.4(a), as applicable. In such event, the right of any Holder to include its Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by a majority in interest of the Initiating Holders (which underwriter or underwriters shall be reasonably acceptable to the Company). Notwithstanding any other provision of this Section 2.2 or Section 2.4, if the underwriter advises the Company that marketing factors require a limitation of the number of securities to be underwritten (including Registrable Securities) then the Company shall so advise all Holders of Registrable Securities that would otherwise be underwritten pursuant hereto, and the number of shares that may be included in the underwriting shall be allocated to the Holders of such Registrable Securities on a *pro rata* basis based on the number of Registrable Securities held by all such Holders (including the Initiating Holders); provided, however, that the number of shares of Registrable Securities to be included in such underwriting and registration shall not be reduced unless all other securities of the Company are first entirely excluded from the underwriting and registration. Any Registrable Securities excluded or withdrawn from such underwriting shall be withdrawn from the registration.

(c) The Company shall not be required to effect a registration pursuant to this Section 2.2:

(i) prior to the earlier of (A) November 13, 2010 or (B) one hundred eighty (180) days following the effective date of the registration statement pertaining to the Initial Offering;

(ii) after the Company has effected two (2) registrations pursuant to this Section 2.2, and such registrations have been declared or ordered effective;

(iii) during the period starting with the date of filing of, and ending on the date one hundred eighty (180) days following the effective date of the registration statement pertaining to the Initial Offering; provided, however, that the Company makes reasonable best efforts to cause such registration statement to become effective;

(iv) if within thirty (30) days of receipt of a written request from Initiating Holders pursuant to Section 2.2(a), the Company gives notice to the Holders of the Company's intention to file a registration statement for its Initial Offering within ninety (90) days;

(v) if the Company shall furnish to Holders requesting a registration statement pursuant to this Section 2.2, a certificate signed by the Chairman of the Board stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its stockholders for such registration statement to be effected at such time, in which event the Company shall have the right to defer such filing for a period of not more than one hundred twenty (120) days after receipt of the request of the Initiating Holders; provided that such right to delay a request shall be exercised by the Company not more than once in any twelve (12) month period; or

(vi) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance.

2.3 Piggyback Registrations. The Company shall notify all Holders of Registrable Securities in writing at least fifteen (15) days prior to the filing of any registration statement under the Securities Act for purposes of a public offering of securities of the Company (including, but not limited to, registration statements relating to secondary offerings of securities of the Company, but excluding Special Registration Statements) and will afford each such Holder an opportunity to include in such registration statement all or part of such Registrable Securities held by such Holder. Each Holder desiring to include in any such registration statement all or any part of the Registrable Securities held by it shall, within seven (7) days after the above-described notice from the Company, so notify the Company in writing. Such notice shall state the intended method of disposition of the Registrable Securities by such Holder. If a Holder decides not to include all of its Registrable Securities in any registration statement thereafter filed by the Company, such Holder shall nevertheless continue to have the right to include any Registrable Securities in any subsequent registration statement or registration statements as may be filed by the Company with respect to offerings of its securities, all upon the terms and conditions set forth herein.

(a) Underwriting. If the registration statement under which the Company gives notice under this Section 2.3 is for an underwritten offering, the Company shall so advise the Holders of Registrable Securities. In such event, the right of any such Holder to be included in a registration pursuant to this Section 2.3 shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their Registrable Securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by the Company. Notwithstanding any other provision of this Agreement, if the underwriter determines in good faith that marketing factors require a limitation of the number of shares to be underwritten, the number of shares that

may be included in the underwriting shall be allocated, first, to the Company; second, to the Holders on a *pro rata* basis based on the total number of Registrable Securities held by the Holders; and third, to any stockholder of the Company (other than a Holder) on a *pro rata* basis. No such reduction shall reduce the amount of securities of the selling Holders included in the registration below twenty-five percent (25%) of the total amount of securities included in such registration, unless such offering is the Initial Offering and such registration does not include shares of any other selling stockholders, in which event any or all of the Registrable Securities of the Holders may be excluded in accordance with the immediately preceding sentence. If any Holder disapproves of the terms of any such underwriting, such Holder may elect to withdraw therefrom by written notice to the Company and the underwriter, delivered at least ten (10) business days prior to the effective date of the registration statement. Any Registrable Securities excluded or withdrawn from such underwriting shall be excluded and withdrawn from the registration. For any Holder that is a partnership, limited liability company or corporation, the partners, retired partners, members, retired members and stockholders of such Holder, or the estates and family members of any such partners, retired partners, member and retired members and any trusts for the benefit of any of the foregoing person shall be deemed to be a single "Holder," and any *pro rata* reduction with respect to such "Holder" shall be based upon the aggregate amount of shares carrying registration rights owned by all entities and individuals included in such "Holder," as defined in this sentence.

(b) Right to Terminate Registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.3 prior to the effectiveness of such registration whether or not any Holder has elected to include securities in such registration. The Registration Expenses of such withdrawn registration shall be borne by the Company in accordance with Section 2.5 hereof.

2.4 Form S-3 Registration. In case the Company shall receive from any Holder or Holders of Registrable Securities a written request or requests that the Company effect a registration on Form S-3 (or any successor to Form S-3) or any similar short-form registration statement and any related qualification or compliance with respect to all or a part of the Registrable Securities owned by such Holder or Holders, the Company will:

(a) promptly give written notice of the proposed registration, and any related qualification or compliance, to all other Holders of Registrable Securities; and

(b) as soon as practicable, effect such registration and all such qualifications and compliances as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Holder's or Holders' Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any other Holder or Holders joining in such request as are specified in a written request given within fifteen (15) days after receipt of such written notice from the Company; provided, however, that the Company shall not be obligated to effect any such registration, qualification or compliance pursuant to this Section 2.4:

(i) if Form S-3 is not available for such offering by the Holders;

(ii) if the Holders, together with the holders of any other securities of the Company entitled to inclusion in such registration, propose to sell Registrable Securities and such other securities (if any) at an aggregate price to the public of less than one million dollars ($1,000,000);

(iii) if within thirty (30) days of receipt of a written request from any Holder or Holders pursuant to this Section 2.4, the Company gives notice to such Holder or Holders of the Company's intention to make a public offering within ninety (90) days, other than pursuant to a Special Registration Statement;

(iv) if the Company shall furnish to the Holders a certificate signed by the Chairman of the Board of Directors of the Company stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its stockholders for such Form S-3 registration to be effected at such time, in which event the Company shall have the right to defer the filing of the Form S-3 registration statement for a period of not more than ninety (90) days after receipt of the request of the Holder or Holders under this Section 2.4; provided, that such right to delay a request shall be exercised by the Company not more than once in any twelve (12) month period;

(v) if the Company has, within the twelve (12) month period preceding the date of such request, already effected two (2) registrations on Form S-3 for the Holders pursuant to this Section 2.4; or

(vi) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance.

(c) Subject to the foregoing, the Company shall file a Form S-3 registration statement covering the Registrable Securities and other securities so requested to be registered as soon as practicable after receipt of the requests of the Holders. Registrations effected pursuant to this Section 2.4 shall not be counted as demands for registration or registrations effected pursuant to Sections 2.2 or 2.3, respectively. All Registration Expenses incurred in connection with registrations requested pursuant to this Section 2.4 after the first two (2) registrations shall be paid by the selling Holders *pro rata* in proportion to the number of shares sold by each such Holder.

2.5 Expenses of Registration. Except as specifically provided herein, all Registration Expenses incurred in connection with any registration, qualification or compliance pursuant to Section 2.2 or any registration under Section 2.3 or Section 2.4 herein shall be borne by the Company. All Selling Expenses incurred in connection with any registrations hereunder shall be borne by the holders of the securities so registered *pro rata* on the basis of the number of shares so registered. The Company shall not, however, be required to pay for expenses of any registration proceeding begun pursuant to Section 2.2 or 2.4, the request of which has been subsequently withdrawn by the Initiating Holders unless (a) the withdrawal is based upon material adverse information concerning the Company of which the Initiating Holders were not aware at the time of such request or (b) the Holders of a majority of Registrable Securities agree to forfeit their right to one requested registration pursuant to Section 2.2 or Section 2.4, as

applicable, in which event such right shall be forfeited by all Holders. If the Holders are required to pay the Registration Expenses, such expenses shall be borne by the holders of securities (including Registrable Securities) requesting such registration in proportion to the number of shares for which registration was requested. If the Company is required to pay the Registration Expenses of a withdrawn offering pursuant to clause (a) above, then the Holders shall not forfeit their rights pursuant to Section 2.2 or Section 2.4 to a demand registration.

2.6 Obligations of the Company. Whenever required to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) Prepare and file with the SEC a registration statement with respect to such Registrable Securities and use all reasonable best efforts to cause such registration statement to become effective, and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for up to one hundred twenty (120) days or, if earlier, until the Holder or Holders have completed the distribution related thereto; provided, however, that at any time, upon written notice to the participating Holders and for a period not to exceed sixty (60) days thereafter (the "Suspension Period"), the Company may delay the filing or effectiveness of any registration statement or suspend the use or effectiveness of any registration statement (and the Initiating Holders hereby agree not to offer or sell any Registrable Securities pursuant to such registration statement during the Suspension Period) if the Company reasonably believes that the Company may, in the absence of such delay or suspension hereunder, be required under state or federal securities laws to disclose any corporate development the disclosure of which could reasonably be expected to have an adverse effect upon the Company, its stockholders, a potentially significant transaction or event involving the Company, or any negotiations, discussions, or proposals directly relating thereto. No more than two (2) such Suspension Periods shall occur in any twelve (12) month period. In the event that the Company shall exercise its rights hereunder, the applicable time period during which the registration statement is to remain effective shall be extended by a period of time equal to the duration of the Suspension Period. The Company may extend the Suspension Period for an additional consecutive sixty (60) days with the consent of the holders of a majority of the Registrable Securities proposed to be sold by the Initiating Holders, which consent shall not be unreasonably withheld. If so directed by the Company, the Initiating Holders shall use their reasonable efforts to deliver to the Company (at the Company's expense) all copies, other than permanent file copies then in such Initiating Holders' possession, of the prospectus relating to such Registrable Securities current at the time of receipt of such notice.

(b) Prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement for the period set forth in paragraph (a) above.

(c) Furnish to the Holders such number of copies of a prospectus, including a preliminary prospectus, in conformity with the requirements of the Securities Act, and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities owned by them.

(d) Use its reasonable best efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested by the Holders; provided, however that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or jurisdictions.

(e) In the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter(s) of such offering. Each Holder participating in such underwriting shall also enter into and perform its obligations under such an agreement.

(f) Notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Securities Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing. The Company will use reasonable best efforts to amend or supplement such prospectus in order to cause such prospectus not to include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing.

(g) Furnish, on the date that such Registrable Securities are delivered to the underwriters for sale, if such securities are being sold through underwriters, (i) an opinion, dated as of such date, of the counsel representing the Company for the purposes of such registration, in form and substance as is customarily given to underwriters in an underwritten public offering, addressed to the underwriters, if any, and (ii) a letter, dated as of such date, from the independent certified public accountants of the Company, in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering addressed to the underwriters.

2.7 Termination of Registration Rights. All registration rights granted under this Section 2 shall terminate and be of no further force and effect five (5) years after the date of the Company's Initial Offering. In addition, a Holder's registration rights shall expire if (a) the Company has completed its Initial Offering and is subject to the provisions of the Exchange Act, (b) such Holder (together with its affiliates) holds less than 1% of the Company's outstanding Common Stock (treating all shares of convertible Preferred Stock on an as converted basis) and (c) all Registrable Securities held by and issuable to such Holder (and its affiliates) may be sold under Rule 144 promulgated under Securities Act during any ninety (90) day period.

2.8 Delay of Registration; Furnishing Information.

(a) No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any such registration as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

(b) It shall be a condition precedent to the obligations of the Company to take any action pursuant to Section 2.2, 2.3 or 2.4 that the selling Holders shall furnish to the Company such information regarding themselves, the Registrable Securities held by them and the intended method of disposition of such securities as shall be required to effect the registration of their Registrable Securities.

(c) The Company shall have no obligation with respect to any registration requested pursuant to Section 2.2 or Section 2.4 if, due to the operation of subsection 2.2(b), the anticipated aggregate offering price of the Registrable Securities to be included in the registration does not equal or exceed the anticipated aggregate offering price required to originally trigger the Company's obligation to initiate such registration as specified in Section 2.2 or Section 2.4, whichever is applicable.

2.9 Indemnification. In the event any Registrable Securities are included in a registration statement under Sections 2.2, 2.3 or 2.4:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each Holder, the partners, members, officers and directors of each Holder, any underwriter (as defined in the Securities Act) for such Holder and each person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any of the following statements, omissions or violations (collectively, "Violations") by the Company: (i) any untrue statement or alleged untrue statement of a material fact contained in such registration statement, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto, (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading, or (iii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act, any state securities law or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities law in connection with the offering covered by such registration statement; and the Company will pay as incurred to each such Holder, partner, member, officer, director, underwriter or controlling person for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; provided, however, that the indemnity agreement contained in this Section 2.9(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable in any such case for any such loss, claim, damage, liability or action to the extent that it arises out of or is based upon a Violation that occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by such Holder, partner, member, officer, director, underwriter or controlling person of such Holder.

(b) To the extent permitted by law, each Holder will, severally but not jointly, if Registrable Securities held by such Holder are included in the securities as to which such registration qualifications or compliance is being effected, indemnify and hold harmless the Company, each of its directors, its officers and each person, if any, who controls the Company

within the meaning of the Securities Act, any underwriter and any other Holder selling securities under such registration statement or any of such other Holder's partners, members, directors or officers or any person who controls such Holder, against any losses, claims, damages or liabilities to which the Company or any such director, officer, controlling person, underwriter or other such Holder, or partner, member, director, officer or controlling person of such other Holder may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by such Holder under an instrument duly executed by such Holder and stated to be specifically for use in connection with such registration; and each such Holder will pay as incurred any legal or other expenses reasonably incurred by the Company or any such director, officer, controlling person, underwriter or other Holder, or partner, member, officer, director or controlling person of such other Holder in connection with investigating or defending any such loss, claim, damage, liability or action if it is judicially determined that there was such a Violation; provided, however, that the indemnity agreement contained in this Section 2.9(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; provided further, that in no event shall any indemnity under this Section 2.9 exceed the net proceeds from the offering received by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.9 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.9, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party shall have the right to retain its own counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action, if materially prejudicial to its ability to defend such action, shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.9, but the omission so to deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.9.

(d) If the indemnification provided for in this Section 2.9 is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any losses, claims, damages or liabilities referred to herein, the indemnifying party, in lieu of indemnifying such indemnified party thereunder, shall to the extent permitted by applicable law contribute to the amount paid or payable by such indemnified party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the Violation(s) that resulted in such loss, claim, damage or liability, as well as any other relevant equitable

considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by a court of law by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission; provided, that, in no event shall any contribution by a Holder hereunder exceed the net proceeds from the offering received by such Holder.

(e) The obligations of the Company and Holders under this Section 2.9 shall survive completion of any offering of Registrable Securities in a registration statement and the termination of this Agreement. No indemnifying party, in the defense of any such claim or litigation, shall, except with the consent of each indemnified party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation.

2.10 Assignment of Registration Rights. The rights to cause the Company to register Registrable Securities pursuant to this Section 2 may be assigned by a Holder to a transferee or assignee of Registrable Securities that (a) is a subsidiary, parent, general partner, limited partner, retired partner, member or retired member of a Holder, (b) is a Holder's family member or trust for the benefit of an individual Holder, or (c) acquires at least fifty thousand (50,000) shares of Registrable Securities (as adjusted for stock splits and combinations); or (d) is an Affiliate of such Holder provided, however, (i) the transferor shall, within ten (10) days after such transfer, furnish to the Company written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned and (ii) such transferee shall agree in writing to be subject to all restrictions set forth in this Agreement.

2.11 Limitation on Subsequent Registration Rights. Other than as provided in Section 5.11, after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of at least two-thirds of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would grant such holder registration rights pari passu or senior to those granted to the Holders hereunder, other than the right to a Special Registration Statement ("Subsequent Registration Rights").

2.12 "Market Stand-Off" Agreement. Each Holder hereby agrees that such Holder shall not sell, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, any Common Stock (or other securities) of the Company held by such Holder (other than those included in the registration and Common Stock purchased by a Holder in the open market after the effective date of such registration statement) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Company not to exceed one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act (or such longer period, not to exceed eighteen (18) days after the expiration of the 180-day period as the underwriters or the Company shall request in order to facilitate compliance with National Association of Securities Dealers Rule 2711); provided that:

(i) such agreement shall apply only to the Company's Initial Offering; and

(ii) all executive officers and directors of the Company and holders of at least one percent (1%) of the Company's capital stock (on an as converted basis) and all other persons with registration rights (whether or not pursuant to this Agreement) enter into similar agreements.

2.13 Agreement to Furnish Information. Each Holder agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter that are consistent with the Holder's obligations under Section 2.12 or that are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common Stock (or other securities) of the Company, each Holder shall provide, within ten (10) days of such request, such information as may be required by the Company or such representative in connection with the completion of any public offering of the Company's securities pursuant to a registration statement filed under the Securities Act. The obligations described in Section 2.12 and this Section 2.13 shall not apply to a Special Registration. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of the one hundred eighty (180) day (or one hundred and ninety eight (198) day) period, if applicable. Each Holder agrees that any transferee of any shares of Registrable Securities shall be bound by Sections 2.12 and 2.13. The underwriters of the Company's stock are intended third party beneficiaries of Sections 2.12 and 2.13 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

2.14 Rule 144 Reporting. With a view to making available to the Holders the benefits of certain rules and regulations of the SEC that may permit the sale of the Registrable Securities to the public without registration, the Company agrees to use its reasonable best efforts to:

(a) Make and keep public information available, as those terms are understood and defined in SEC Rule 144 or any similar or analogous rule promulgated under the Securities Act, at all times after the effective date of the first registration filed by the Company for an offering of its securities to the general public;

(b) File with the SEC, in a timely manner, all reports and other documents required of the Company under the Exchange Act; and

(c) So long as a Holder owns any Registrable Securities, furnish to such Holder forthwith upon request: a written statement by the Company as to its compliance with the reporting requirements of Rule 144 of the Securities Act, and of the Exchange Act (at any time after it has become subject to such reporting requirements); a copy of the most recent annual or quarterly report of the Company; and such other reports and documents as a Holder may reasonably request in availing itself of any rule or regulation of the SEC allowing it to sell any such securities without registration.

SECTION 3. COVENANTS OF THE COMPANY.

3.1 Basic Financial Information and Reporting.

(a) The Company will maintain true books and records of account in which full and correct entries will be made of all its business transactions pursuant to a system of accounting established and administered in accordance with United States generally accepted accounting principles consistently applied, and will set aside on its books all such proper accruals and reserves as shall be required under generally accepted accounting principles consistently applied.

(b) As soon as practicable after the end of each fiscal year of the Company, and in any event within one hundred and twenty (120) days thereafter, the Company will furnish each Investor a balance sheet of the Company, as at the end of such fiscal year, and a statement of income and a statement of cash flows of the Company, for such year, all prepared in accordance with United States generally accepted accounting principles consistently applied and setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail. Such financial statements shall be accompanied by a report and opinion thereon by independent public accountants of national standing selected by the Company's Board of Directors.

(c) The Company will furnish each Investor, as soon as practicable after the end of the first, second and third quarterly accounting periods in each fiscal year of the Company, and in any event within forty-five (45) days thereafter, a balance sheet of the Company as of the end of each such quarterly period and a statement of income of the Company for such period and for the current fiscal year to date, prepared in accordance with United States generally accepted accounting principles, with the exception that no notes need be attached to such statements and year-end audit adjustments may not have been made.

(d) So long as an Investor (with its Affiliates) shall own not less than one hundred thousand (100,000) shares of Registrable Securities (as adjusted for stock splits and combinations) (a "Major Investor"), the Company will furnish each such Major Investor: (i) at least sixty (60) days prior to the beginning of each fiscal year an annual budget and operating plans for such fiscal year (and as soon as available, any subsequent revisions thereto); and (ii) as soon as practicable after the end of each month, and in any event within thirty (30) days thereafter, a statement of income of the Company for such month and for the current fiscal year to date, including a comparison to plan figures for such period, prepared in accordance with United States generally accepted accounting principles consistently applied, with the exception that no notes need be attached to such statements and year-end audit adjustments may not have been made.

3.2 Stockholder/Option Lists. The Company will furnish each Major Investor, as soon as practicable after the end of each calendar quarter, and in any event within twenty (20) days thereafter, a stockholder list for the Company and an option holder list for the Company as of the last day of the applicable calendar quarter.

3.3 Inspection Rights. Each Major Investor shall have the right to visit and inspect any of the properties of the Company or any of its subsidiaries, and to discuss the affairs, finances and

accounts of the Company or any of its subsidiaries with its officers, and to review such information as is reasonably requested all at such reasonable times and as often as may be reasonably requested; provided, however, that the Company shall not be obligated under this Section 3.3 with respect to a competitor of the Company or with respect to information that the Board of Directors determines in good faith is confidential and should not, therefore, be disclosed.

3.4 Confidentiality of Records. Each Holder agrees to use, and to use reasonable efforts to ensure that its authorized representatives use, the same degree of care as such recipient uses to protect its own confidential information to keep confidential any information furnished to it pursuant to this Section 3 and any other information identified as proprietary or confidential except such information that (i) was in the public domain prior to the time it was furnished to such recipient, (ii) is or becomes (through no willful or improper action or inaction by such recipient) generally available to the public, (iii) was in its possession or known by such recipient (as evidenced by written records) without restriction prior to receipt from the Company, (iv) was rightfully disclosed to such recipient by a third party without restriction or (v) was independently developed (as evidenced by written records) without any use of the Company's confidential information. Furthermore, nothing contained herein shall prevent any Holder or Permitted Disclosee (as defined below) from (a) entering into any business, entering into any agreement with a third party, or investing in or engaging in investment discussions with any other company (whether or not competitive with the Company), provided that such Holder or Permitted Disclosee does not, except as permitted in accordance with this Section 3.4, disclose any proprietary or confidential information of the Company in connection with such activities, or (b) making any disclosures required by law, rule, regulation or court or other governmental order. Notwithstanding the foregoing, any such Holder may disclose such proprietary or confidential information to any former, current or prospective partner, affiliated company, limited partner, general partner or management company of such Holder (or any employee or representative of any of the foregoing) (each of the foregoing persons, a "Permitted Disclosee") or legal counsel, accountants or representatives for such Holder or Permitted Disclosee, so long as such Permitted Disclosees are subject to equivalent confidentiality obligations. Notwithstanding the foregoing confidentiality provisions, a Holder (and any of the Holder's respective employees, representatives, or other agents) may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of the transaction contemplated by the Purchase Agreement and all materials of any kind (including opinions or other tax analyses) that are provided relating to such tax treatment and tax structure. In addition, at no time will a Holder be subject to any restriction concerning its consultation with its tax advisors regarding the tax treatment or tax structure of the transaction contemplated by the Purchase Agreement.

3.5 Reservation of Common Stock. The Company will at all times reserve and keep available, solely for issuance and delivery upon the conversion of the Preferred Stock, all Common Stock issuable from time to time upon such conversion.

3.6 Stock Vesting. Unless otherwise approved by the Board of Directors, all stock options and other stock equivalents issued after the date of this Agreement to employees, directors, consultants and other service providers shall be subject to vesting as follows: (a) twenty-five percent (25%) of such stock shall vest at the end of the first year following the earlier of the date of issuance or such person's services commencement date with the company,

and (b) seventy-five percent (75%) of such stock shall vest over the remaining three (3) years. With respect to any shares of stock purchased by any such person, the Company's repurchase option shall provide that upon such person's termination of employment or service with the Company, with or without cause, the Company or its assignee shall have the option to purchase at cost any unvested shares of stock held by such person.

3.7 Proprietary Information and Inventions Agreement. The Company shall require all employees and consultants to execute and deliver a Proprietary Information and Inventions Agreement substantially in the form provided to the Investors.

3.8 Approval of Director/Management Transactions. The Company shall not, without the approval of a majority of the non-interested directors, authorize or enter into any transactions with any director or management employee, or such director's or employee's immediate family.

3.9 Approval of Maxygen Transactions. From and after October 1, 2002, the Company has not and shall not authorize or enter into any contracts or agreements with Maxygen, Inc. ("Maxygen") or its Affiliates without the approval of a majority of the non-interested directors.

3.10 Directors' Liability and Indemnification. The Company's Certificate of Incorporation and Bylaws shall provide (a) for elimination of the liability of directors to the maximum extent permitted by law and (b) for indemnification of directors for acts on behalf of the Company to the maximum extent permitted by law. In addition, the Company shall enter into and at all times maintain indemnification contracts substantially in the form attached as Exhibit B hereto with each of its directors to indemnify such directors to the maximum extent permissible under Delaware law.

3.11 Compensation Committee. The Company shall maintain a compensation committee of the Board of Directors. The approval of the compensation committee will be required to (i) hire or terminate any Senior Officer, (ii) change the base salary of any Senior Officer or (iii) grant any cash bonus to any Senior Officer.

3.12 Budget Approval. The Company shall not, without the approval of the Board of Directors, approve any annual budget of the Company or any formal amendment thereto.

3.13 Observer Rights. As long as Biomedical Sciences Investment Fund Pte Ltd ("Bio*One") owns not less than fifty percent (50%) of the number of shares of Series D Preferred Stock (or an equivalent amount of Common Stock issued upon conversion thereof) originally purchased by Bio*One, the Company shall invite a representative of Bio*One to attend all meetings of its Board of Directors in a nonvoting observer capacity and, in this respect, shall give such representative copies of all notices, minutes, consents and other materials that it provides to its directors; provided, however, that such representative shall agree to hold in confidence and trust and to act in a fiduciary manner with respect to all information so provided; and, provided further, that the Company reserves the right to withhold any information and to exclude such representative from any meeting or portion thereof (i) to protect confidential proprietary information, or (ii) if access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel or would result in disclosure of trade secrets to such representative or if such Investor or its representative is or is affiliated with a direct competitor of the Company.

3.14 Termination of Covenants. All covenants of the Company contained in Section 3 of this Agreement shall expire and terminate as to each Investor upon the earlier of (i) the effective date of the registration statement pertaining to the Initial Offering that results in the Preferred Stock being converted into Common Stock or (ii) upon (a) the sale, lease or other disposition of all or substantially all of the assets of the Company or (b) an acquisition of the Company by another corporation or entity by consolidation, merger or other reorganization in which the holders of the Company's outstanding voting stock immediately prior to such transaction own, immediately after such transaction, securities representing less than fifty percent (50%) of the voting power of the corporation or other entity surviving such transaction, provided, however, that this Section 3.14(ii)(b) shall not apply to a merger effected exclusively for the purpose of changing the domicile of the Company (a "Change in Control").

SECTION 4. SUBSCRIPTION RIGHT.

4.1 Subsequent Offerings. Each Investor shall have a subscription right to purchase its *pro rata* share of all Equity Securities, as defined below, that the Company may, from time to time, propose to sell and issue after the date of this Agreement, other than the Equity Securities excluded by Section 4.6 hereof. Each Investor's *pro rata* share is equal to the ratio of (a) the sum of the number of shares of the Company's Common Stock issued or issuable upon conversion of the Series B Stock, the Series C Stock, the Series D Stock and/or the Series E Stock which such Investor is deemed to be a holder immediately prior to the issuance of such Equity Securities plus the number of shares of Common Stock issuable upon the exercise of warrants or options held by such Investor to (b) the total number of shares of the Company's outstanding Common Stock (including all shares of Common Stock issued or issuable upon conversion of the Shares or upon the exercise of any outstanding warrants or options) immediately prior to the issuance of the Equity Securities. The term "Equity Securities" shall mean (i) any Common Stock, Shares or other security of the Company, (ii) any security convertible, with or without consideration, into any Common Stock, Shares or other security (including any option to purchase such a convertible security), (iii) any security carrying any warrant or right to subscribe to or purchase any Common Stock, Shares or other security or (iv) any such warrant or right.

4.2 Exercise of Rights. If the Company proposes to issue any Equity Securities, it shall give each Investor written notice ("Notice") of its bona fide intention, describing the Equity Securities, the price and the terms and conditions upon which the Company proposes to issue the same. Each Investor shall have fifteen (15) days from the giving of such Notice to agree to purchase up to that portion of such Equity Securities that equals the proportion that the number of shares of Common Stock issued and held, or issuable upon conversion of the Series B Stock, the Series C Stock, the Series D Stock and/or the Series E Stock then held by such Investor bears to the total number of shares of Common Stock issued and held, or issuable upon conversion of the Series B Stock, the Series C Stock, the Series D Stock and/or the Series E Stock then outstanding, for the price and upon the terms and conditions specified in the Notice by giving written notice to the Company and stating therein the quantity of Equity Securities to be purchased. The Company shall promptly, in writing, inform each Investor that purchases all the

shares available to it ("Fully Exercising Investor") of any other Investor's failure to do likewise. During the ten (10) day period commencing after receipt of such information, each Fully Exercising Investor shall be entitled to obtain that portion of the shares subject to such subscription right and not subscribed for by the Investors that is equal to the proportion that the number of shares of Common Stock issued and held, or issuable upon conversion of the Series B Stock, the Series C Stock, the Series D Stock and/or the Series E Stock then held, by such Fully Exercising Investor bears to the total number of shares of Common Stock issued and held, or issuable upon conversion of Series B Stock, the Series C Stock, the Series D Stock and the Series E Stock then held, by all Fully Exercising Investors who wish to purchase some of the unsubscribed shares. Notwithstanding the foregoing, the Company shall not be required to offer or sell such Equity Securities to any Investor who would cause the Company to be in violation of applicable federal securities laws by virtue of such offer or sale.

4.3 Issuance of Equity Securities to Other Persons. If the Investors fail to exercise in full the subscription rights, the Company shall have ninety (90) days thereafter to sell the Equity Securities in respect of which the Investor's rights were not exercised, at a price and upon general terms and conditions materially no more favorable to the purchasers thereof than specified in the Company's notice to the Investors pursuant to Section 4.2 hereof. If the Company has not sold such Equity Securities within ninety (90) days of the notice provided pursuant to Section 4.2, the Company shall not thereafter issue or sell any Equity Securities, without first offering such securities to the Investors in the manner provided above.

4.4 Termination and Waiver of Subscription Rights. The subscription rights established by this Section 4 shall not apply to, and shall terminate upon the earlier of (i) the effective date of the registration statement pertaining to the Company's Initial Offering or (ii) a Change in Control.

4.5 Transfer of Subscription Rights. The subscription rights of each Investor under this Section 4 may be transferred to the same persons described in Section 2.10, and shall be subject to the same restrictions, as any transfer of registration rights pursuant to Section 2.10.

4.6 Excluded Securities. The subscription rights established by this Section 4 shall have no application to any of the following Equity Securities (the "Excluded Securities"):

(a) options, warrants or other Common Stock purchase rights and the Common Stock issued pursuant to such options, warrants or other rights (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like after the filing of the Company's Second Amended and Restated Certificate of Incorporation) issued or to be issued after the date of this Agreement to employees, officers or directors of, or consultants or advisors to the Company or any subsidiary pursuant to stock purchase or stock option plans or other arrangements, where the primary purpose of such is not to raise additional equity capital;

(b) stock issuable pursuant to any rights or agreements outstanding as of the date of this Agreement, options and warrants outstanding as of the date of this Agreement; and stock issued pursuant to any such rights or agreements granted after the date of this Agreement; provided, however, that the subscription rights established by this Section 4 applied with respect to the initial sale or grant by the Company of such rights or agreements;

(c) any Equity Securities issued pursuant to a merger, consolidation, acquisition or similar business combination approved by the Board of Directors;

(d) shares of Common Stock issued in connection with any stock split, stock dividend or recapitalization by the Company;

(e) shares of Common Stock issued upon conversion of the Shares;

(f) any Equity Securities issued pursuant to any equipment leasing, real property leasing or loan arrangement, or debt financing from a bank or similar financial or lending institution approved by the Board of Directors;

(g) any Equity Securities issued pursuant to any licensing transaction approved by the Board of Directors; and

(h) any Equity Securities issued in connection with strategic alliances, joint ventures, manufacturing, marketing or distribution arrangements or technology transfer or development arrangements; provided, however, that such strategic transactions and the issuance of shares therein, has been approved by the Company's Board of Directors.

4.7 Waiver of Subscription Rights. To the extent that any Investor is deemed to have had subscription rights with respect to the Series E Preferred Stock issued pursuant to the terms of the Purchase Agreement, each Investor hereby waives any and all such subscription rights pursuant to this Section 4, including any notice provisions relating thereto, on behalf of all Investors, with respect to the issuance of the Series E Preferred Stock pursuant to the Purchase Agreement.

SECTION 5. MISCELLANEOUS.

5.1 Governing Law. This Agreement shall be governed by and construed under the laws of the State of California as applied to agreements among California residents entered into and to be performed entirely within California.

5.2 Survival. The representations, warranties, covenants, and agreements made herein shall survive the closing of the transactions contemplated hereby. All statements as to factual matters contained in any certificate or other instrument delivered by or on behalf of the Company pursuant hereto in connection with the transactions contemplated hereby shall be deemed to be representations and warranties by the Company hereunder solely as of the date of such certificate or instrument.

5.3 Successors and Assigns. Except as otherwise expressly provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors, and administrators of the parties hereto and shall inure to the benefit of and be enforceable by each person who shall be a holder of Registrable Securities from time to time; provided, however, that prior to the receipt by the Company of adequate written notice of the transfer of any Registrable Securities specifying the full name and address of the transferee, the Company may deem and treat the person listed as the holder of such shares in its records as the absolute owner and holder of such shares for all purposes, including the payment of dividends or any redemption price.

5.4 Entire Agreement. This Agreement, the Exhibits and Schedules hereto, the Purchase Agreement and the other documents delivered pursuant thereto constitute the full and entire understanding and agreement between the parties with regard to the subjects hereof and no party shall be liable or bound to any other in any manner by any representations, warranties, covenants and agreements except as specifically set forth herein and therein.

5.5 Severability. In the event one or more of the provisions of this Agreement should, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provisions of this Agreement, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

5.6 Amendment and Waiver.

(a) Except as otherwise expressly provided, this Agreement may be amended or modified only upon the written consent of (i) the Company and (ii) the holders of at least a majority of the Preferred Stock, voting together as a single class on an as-converted basis and including any Common Stock issued upon conversion; provided, however, that no amendment of this Agreement shall materially and adversely affect the rights of an Investor in a manner that materially and disproportionately discriminates against such Investor in relation to the other Investors without such Investor's written consent; provided, further, however, that the addition of new parties to this Agreement or the proportionate adjustment in rights that would result from adding new parties shall not be deemed to be amendments which materially and disproportionately discriminate against such Investor.

(b) Except as otherwise expressly provided, the obligations of the Company and the rights of the Holders under this Agreement may be waived only with the written consent of (i) the Company and (ii) the holders of at least a majority of the Preferred Stock voting together as a single class on an as-converted basis and including any Common Stock issued upon conversion; provided, however, that no waiver of this Agreement shall materially and adversely affect the rights of an Investor in a manner that materially and disproportionately discriminates against such Investor in relation to the other Investors without such Investor's written consent; provided, further, however, that the addition of new parties to this Agreement or the proportionate adjustment in rights that would result from adding new parties shall not be deemed to be a waiver which materially and disproportionately discriminate against such Investor.

(c) For the purposes of determining the number of Holders or Investors entitled to vote or exercise any rights hereunder, the Company shall be entitled to rely solely on the list of record holders of its stock as maintained by or on behalf of the Company.

5.7 Delays or Omissions. It is agreed that no delay or omission to exercise any right, power, or remedy accruing to any Holder, upon any breach, default or noncompliance of the Company under this Agreement shall impair any such right, power, or remedy, nor shall it be construed to be a waiver of any such breach, default or noncompliance, or any acquiescence

therein, or of any similar breach, default or noncompliance thereafter occurring. It is further agreed that any waiver, permit, consent, or approval of any kind or character on any Holder's part of any breach, default or noncompliance under the Agreement or any waiver on such Holder's part of any provisions or conditions of this Agreement must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies, either under this Agreement, by law, or otherwise afforded to Holders, shall be cumulative and not alternative.

5.8 Notices. All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed facsimile if sent during normal business hours of the recipient; if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the party to be notified at the address as set forth on the signature pages hereof or Exhibit A hereto or at such other address as such party may designate by ten (10) days advance written notice to the other parties hereto.

5.9 Attorneys' Fees. In the event that any suit or action is instituted to enforce any provision in this Agreement, the prevailing party in such dispute shall be entitled to recover from the losing party all fees, costs and expenses of enforcing any right of such prevailing party under or with respect to this Agreement, including without limitation, such reasonable fees and expenses of attorneys and accountants, which shall include, without limitation, all fees, costs and expenses of appeals.

5.10 Titles and Subtitles. The titles of the sections and subsections of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

5.11 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company shall issue additional shares of its Preferred Stock pursuant to the Purchase Agreement, any purchaser of such shares of Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement and shall be deemed an "Investor," a "Holder" and a party hereunder. Notwithstanding anything to the contrary contained herein, if the Company shall issue Equity Securities in accordance with Section 4.6 (c), (f), (g) or (h) of this Agreement, any purchaser of such Equity Securities may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement and shall be deemed an "Investor," a "Holder" and a party hereunder.

5.12 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

5.13 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates or persons or persons or entities under common management or control shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

5.14 Specific Performance. The parties hereto hereby declare that it is impossible to measure in money the damages that will accrue to a party hereto or to their heirs, personal representatives, or assigns by reason of a failure to perform any of the obligations under this Agreement, that such a breach would cause irreparable harm to the parties and agree that the terms of this Agreement shall be specifically enforceable by equitable remedies, including, but not limited to, temporary, preliminary and injunctive relief, specific performance and the right to compel the breaching party to vote his or its capital stock of the Company in accordance with the provisions of the Agreement. If any party hereto or his heirs, personal representatives, or assigns institutes any action or proceeding to specifically enforce the provisions hereof, any person against whom such action or proceeding is brought hereby waives the claim or defense therein that such party or such personal representative has an adequate remedy at law, and such person shall not offer in any such action or proceeding the claim or defense that such remedy at law exists.

(Signature Page Follows)

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

CODEXIS, INC.

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President

SIGNATURE PAGE TO
FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

MAXYGEN, INC.

By: /s/ Russell J. Howard
Name: Russell J. Howard, Ph.D.
Title: Chief Executive Officer

SIGNATURE PAGE TO
FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

MALAYSIAN LIFE SCIENCES CAPITAL FUND, LTD.

By: Malaysian Life Sciences Capital Fund Management Company Ltd, its Manager

By: /s/ Roger Wyse
Name: Dr. Roger Earl Wyse
Title: Co-Chairman

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

CMEA VENTURES LIFE SCIENCES 2000, L.P.

By: /s/ Karl Handelsman
Name: Karl Handelsman
Title: Managing Director

CMEA VENTURES LIFE SCIENCES 2000, CIVIL LAW PARTNERSHIP

By: /s/ Karl Handelsman
Name: Karl Handelsman
Title: Managing Director

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

PEQUOT PRIVATE EQUITY FUND III, L.P.

By: PEQUOT CAPITAL MANAGEMENT, INC.,
its investment manager

By: /s/ Carlos Rodrigues
Name: Carlos Rodrigues
Title: Chief Financial Officer

PEQUOT OFFSHORE PRIVATE EQUITY PARTNERS III, L.P.

By: PEQUOT CAPITAL MANAGEMENT, INC.,
its investment manager

By: /s/ Carlos Rodrigues
Name: Carlos Rodrigues
Title: Chief Financial Officer

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

CTTV INVESTMENTS LLC

By: /s/ Don C. Riley
Name: Don C. Riley
Title: Venture Executive

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

BIOMEDICAL SCIENCES INVESTMENT FUND PTE LTD

By: /s/ Chu Swee Yeok
Name: Chu Swee Yeok
Title: Director

SIGNATURE PAGE TO
FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

ROBERT W. CRANMER-BROWN

By: /s/ RW Cranmer-Brown
Name: Robert W. Cranmer-Brown

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

THE CONUS FUND, L.P.

By: /s/ Andrew D. Zacks
Name: Andrew D. Zacks
Title: Managing Director, Investment Manager Conus Partners, Inc.

THE CONUS FUND OFFSHORE LTD.

By: /s/ Andrew D. Zacks
Name: Andrew D. Zacks
Title: Managing Director, Investment Manager Conus Partners, Inc.

THE CONUS FUND (QP) L.P.

By: /s/ Andrew D. Zacks
Name: Andrew D. Zacks
Title: Managing Director, Investment Manager Conus Partners, Inc.

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

EQUILON ENTERPRISES LLC DBA SHELL OIL PRODUCTS US

By: /s/ David A. Sexton
Name:
Title:

SIGNATURE PAGE TO
FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

GPSF SECURITIES INC.

By: /s/ Dawn Pasquin
Name: Dawn Pasquin
Title: Vice President

SIGNATURE PAGE TO
FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties hereto have executed this **FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

AFAC EQUITY, L.P.

By: /s/ Brian M. Feuer
Name: Brian M. Feuer
Title: Portfolio Manager

Address:

McKinsey & Company, Inc.
55 East 52nd Street, 27th Floor
New York, New York, 10055
Office (212) 446-8029
Fax (646) 307-6552

SIGNATURE PAGE TO
FOURTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

EXHIBIT A

SCHEDULE OF INVESTORS

Maxygen, Inc.
CMEA Ventures Life Sciences 2000, L.P.
CMEA Ventures Life Sciences 2000, Civil Law Partnership
CTTV Investments LLC
Pequot Offshore Private Equity Partners III, L.P.
Pequot Private Equity Fund III, L.P.
Pfizer Overseas Pharmaceuticals
Biomedical Sciences Investment Fund Pte Ltd
Robert W. Cranmer-Brown
The Conus Fund, L.P.
East Hudson Inc. (BVI)
The Conus Fund Offshore Ltd.
The Conus Fund (QP) L.P.
Equilon Enterprises LLC dba Shell Oil Products US
GPSF Securities Inc.
Malaysian Life Sciences Capital Fund, Ltd.
AFAC Equity, L.P.

EXHIBIT B

FORM OF INDEMNIFICATION AGREEMENT

Exhibit 4.3

THIS WARRANT HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "*1933 ACT*"), OR ANY APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE SOLD OR TRANSFERRED UNLESS SUCH SALE OR TRANSFER IS IN ACCORDANCE WITH THE REGISTRATION REQUIREMENTS OF SUCH ACT AND APPLICABLE LAWS OR SOME OTHER EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF SUCH ACT AND APPLICABLE LAWS IS AVAILABLE WITH RESPECT THERETO.

COMMON STOCK PURCHASE WARRANT

Warrant No. _____ Number of Shares: _____

CODEXIS, INC.

Effective as of February 12, 2004

Void after February 12, 2011

1. Issuance. This Common Stock Purchase Warrant (the "*Warrant*") is issued to _____ by **CODEXIS, INC.**, a Delaware corporation (hereinafter with its successors called the "*Company*").

2. Purchase Price; Number of Shares. The registered holder of this Warrant (the "*Holder*"), commencing on the date hereof, is entitled upon surrender of this Warrant with the subscription form annexed hereto duly executed, at the principal office of the Company, to purchase from the Company at a price per share of _____ (the "*Purchase Price*"), _____ fully paid and nonassessable shares of Common Stock, $0.0001 par value, of the Company (the "*Common Stock*").

Until such time as this Warrant is exercised in full or expires, the Purchase Price and the securities issuable upon exercise of this Warrant are subject to adjustment as hereinafter provided. The person or persons in whose name or names any certificate representing shares of Common Stock is issued hereunder shall be deemed to have become the holder of record of the shares represented thereby as at the close of business on the date this Warrant is exercised with respect to such shares, whether or not the transfer books of the Company shall be closed.

3. Payment of Purchase Price. The Purchase Price may be paid (a) in cash or by check, or (b) by any combination of the foregoing.

4. Net Issue Election. The Holder may elect to receive, without the payment by the Holder of any additional consideration, shares of Common Stock equal to the value of this Warrant or any portion hereof by the surrender of this Warrant or such portion to the Company, with the net issue election notice annexed hereto duly executed, at the principal office of the Company. Thereupon, the Company shall issue to the Holder such number of fully paid and nonassessable shares of Common Stock as is computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

where: X = the number of shares of Common Stock to be issued to the Holder pursuant to this **Section 4**.

Y = the number of shares of Common Stock covered by this Warrant in respect of which the net issue election is made pursuant to this **Section 4**.

A = the Fair Market Value (defined below) of one share of Common Stock as determined at the time the net issue election is made pursuant to this **Section 4**.

B = the Purchase Price in effect under this Warrant at the time the net issue election is made pursuant to this **Section 4**.

"*Fair Market Value*" of a share of Common Stock as of the date that the net issue election is made (the "*Determination Date*") shall mean:

(i) If the net issue election is made in connection with and contingent upon the closing of the sale of the Company's Common Stock to the public in a public offering pursuant to a Registration Statement under the 1933 Act (a "*Public Offering*"), and if the Company's Registration Statement relating to such Public Offering ("*Registration Statement*") has been declared effective by the Securities and Exchange Commission, then the initial "Price to Public" specified in the final prospectus with respect to such offering.

(ii) If the net issue election is not made in connection with and contingent upon a Public Offering, then as follows:

(a) If traded on a securities exchange or the Nasdaq National Market, the fair market value of the Common Stock shall be deemed to be the average of the closing or last reported sale prices of the Common Stock on such exchange or market over the five day period ending five trading days prior to the Determination Date;

(b) If otherwise traded in an over-the-counter market, the fair market value of the Common Stock shall be deemed to be the average of the closing ask prices of the Common Stock over the five day period ending five trading days prior to the Determination Date; and

(c) If there is no public market for the Common Stock, then fair market value shall be determined in good faith by the Company's Board of Directors.

5. Partial Exercise. This Warrant may be exercised in part, and the Holder shall be entitled to receive a new warrant, which shall be dated as of the date of this Warrant, covering the number of shares in respect of which this Warrant shall not have been exercised.

6. Fractional Shares. In no event shall any fractional share of Common Stock be issued upon any exercise of this Warrant. If, upon exercise of this Warrant in its entirety, the

Holder would, except as provided in this **Section 6**, be entitled to receive a fractional share of Common Stock, then the Company shall pay cash equal to the product of such fraction multiplied by the Common Stock's fair market value (as determined by the Board of Directors) on the date of exercise.

7. Expiration Date; Automatic Exercise. This Warrant shall expire at the close of business on February 12, 2011, and shall be void thereafter. Notwithstanding the foregoing, this Warrant shall automatically be deemed to be exercised in full pursuant to the provisions of **Section 4** hereof, without any further action on behalf of the Holder, immediately prior to the time this Warrant would otherwise expire pursuant to the preceding sentence.

8. Reserved Shares; Valid Issuance. The Company covenants that it will at all times from and after the date hereof reserve and keep available such number of its authorized shares of Common Stock, free from all preemptive or similar rights therein, as will be sufficient to permit the exercise of this Warrant in full. The Company further covenants that such shares as may be issued pursuant to such exercise will, upon issuance in accordance with the terms hereof, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issuance thereof.

9. Stock Splits and Dividends. If after the date hereof the Company shall subdivide the Common Stock, by split-up or otherwise, or combine the Common Stock, or issue additional shares of Common Stock in payment of a stock dividend on the Common Stock, the number of shares of Common Stock issuable on the exercise of this Warrant shall forthwith be proportionately increased in the case of a subdivision or stock dividend, or proportionately decreased in the case of a combination, and the Purchase Price shall forthwith be proportionately decreased in the case of a subdivision or stock dividend, or proportionately increased in the case of a combination.

10. Antidilution Rights. The other antidilution rights applicable to the Common Stock of the Company are set forth in the Amended and Restated Certificate of Incorporation, as amended from time to time (the "*Articles*"), a true and complete copy in its current form which is attached hereto as ***Exhibit A***. Such rights shall not be restated, amended or modified in any manner which affects the Holder differently than the holders of Common Stock without such Holder's prior written consent. The Company shall promptly provide the Holder hereof with any restatement, amendment or modification to the Articles promptly after the same has been made.

11. Dissolutions, Liquidations, Mergers or Changes in Control.

(a) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Company shall notify the Holder as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, the Warrant will terminate immediately prior to the consummation of such proposed action.

(b) Merger or Change in Control. In the event of a merger of the Company with or into another corporation, or a Change in Control, the Warrant shall be assumed or an equivalent warrant substituted by the successor corporation or a parent or subsidiary of the

successor corporation. In the event that the successor corporation or parent or subsidiary of the successor corporation in a merger or Change in Control refuses to assume or substitute for the Warrant, then the Company shall notify the Holder in accordance with the provisions of **Section 13** hereof of the pending Change of Control and Holder may then elect to exercise the Warrant not less than three (3) days prior to the effective date of the Change of Control.

(c) "*Change in Control*" means the occurrence of any of the following events:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "*Exchange Act*")) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) The consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or

(iii) The consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

12. Certificate of Adjustment. Whenever the Purchase Price is adjusted, as herein provided, the Company shall promptly deliver to the Holder a certificate of the Company's chief financial officer setting forth the Purchase Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

13. Notices of Record Date, Etc. In the event of:

(a) any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend or other distribution, or any right to subscribe for, purchase, sell or otherwise acquire or dispose of any shares of stock of any class or any other securities or property, or to receive any other right;

(b) any reclassification of the capital stock of the Company, capital reorganization of the Company, consolidation or merger involving the Company, or sale or conveyance of all or substantially all of its assets; or

(c) any voluntary or involuntary dissolution, liquidation or winding-up of the Company;

then in each such event the Company will provide or cause to be provided to the Holder a written notice thereof. Such notice shall be provided at least ten (10) days prior to the date specified in such notice on which any such action is to be taken.

14. Representations, Warranties and Covenants. This Warrant is issued and delivered by the Company and accepted by each Holder on the basis of the following representations, warranties and covenants made by the Company as of the date of issuance of this initial Warrant to the initial Holder:

(a) The Company has all necessary authority to issue, execute and deliver this Warrant and to perform its obligations hereunder. This Warrant has been duly authorized issued, executed and delivered by the Company and is the valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

(b) The shares of Common Stock issuable upon the exercise of this Warrant have been duly authorized and reserved for issuance by the Company and, when issued in accordance with the terms hereof, will be validly issued, fully paid and nonassessable.

(c) The issuance, execution and delivery of this Warrant do not, and the issuance of the shares of Common Stock upon the exercise of this Warrant in accordance with the terms hereof will not, (i) violate or contravene the Company's Articles or by-laws, or any law, statute, regulation, rule, judgment or order applicable to the Company, (ii) violate, contravene or result in a breach or default under any contract, agreement or instrument to which the Company is a party or by which the Company or any of its assets are bound or (iii) require the consent or approval of or the filing of any notice or registration with any person or entity.

(d) As long as obligations under the _____ (the "*Loan Agreement*") are outstanding, the Company will provide to the Holder the financial and other information described in the Loan Agreement.

(e) As of the date hereof, the authorized capital stock of the Company consists of (i) 18,500,000 shares of Common Stock, of which 1,003,427 shares are issued and outstanding, 2,996,573 shares are reserved for issuance upon the exercise of options issued pursuant to the Company's 2002 Stock Plan and 46,176 shares are reserved for issuance upon the exercise of warrant, (ii) 6,000,000 shares of Series A Preferred Stock, of which 6,000,000 are issued and outstanding shares, and (iii) 8,101,102 shares of Series B Redeemable Preferred Stock, of which 8,101,101 are issued and outstanding shares. Attached hereto as ***Exhibit B*** is a capitalization table summarizing the capitalization of the Company. At Holder's request, not more than once per calendar quarter, the Company will provide Holder with a current capitalization table indicating changes, if any, to the number of outstanding shares of common stock and preferred stock.

15. Amendment. The terms of this Warrant may be amended, modified or waived only with the written consent of the Holder and the Company.

16. Representations and Covenants of the Holder. This Common Stock Purchase Warrant has been entered into by the Company in reliance upon the following representations, warranties and covenants of the Holder, which by its execution hereof each Holder hereby confirms:

(a) Investment Purpose. The right to acquire Common Stock contained herein will be acquired for investment and not with a view to the sale or distribution of any part thereof, and the Holder has no present intention of selling or engaging in any public distribution of the same except pursuant to a registration or exemption.

(b) Accredited Investor. Holder is an "accredited investor" within the meaning of the Securities and Exchange Rule 501 of Regulation D, as presently in effect.

(c) Private Issue. The Holder understands (i) that the Common Stock issuable upon exercise of the Holder's rights contained herein is not registered under the 1933 Act or qualified under applicable state securities laws on the ground that the issuance contemplated by this Warrant will be exempt from the registration and qualifications requirements thereof, and (ii) that the Company's reliance on such exemption is predicated on the representations set forth in this **Section 16**.

(d) Financial Risk. The Holder has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment and has the ability to bear the economic risks of its investment.

17. Notices, Transfers, Etc.

(a) Any notice or written communication required or permitted to be given to the Holder may be given by certified mail or delivered to the Holder at the address most recently provided by the Holder to the Company.

(b) Subject to compliance with applicable federal and state securities laws, this Warrant may be transferred by the Holder with respect to any or all of the shares purchasable hereunder. Upon surrender of this Warrant to the Company, together with the assignment notice annexed hereto duly executed, for transfer of this Warrant as an entirety by the Holder, the Company shall issue a new warrant of the same denomination to the assignee. Upon surrender of this Warrant to the Company, together with the assignment hereof properly endorsed, by the Holder for transfer with respect to a portion of the shares of Common Stock purchasable hereunder, the Company shall issue a new warrant to the assignee, in such denomination as shall be requested by the Holder hereof, and shall issue to such Holder a new warrant covering the number of shares in respect of which this Warrant shall not have been transferred.

(c) In case this Warrant shall be mutilated, lost, stolen or destroyed, the Company shall issue a new warrant of like tenor and denomination and deliver the same (i) in exchange and substitution for and upon surrender and cancellation of any mutilated Warrant, or (ii) in lieu of any Warrant lost, stolen or destroyed, upon receipt of an affidavit of the Holder or other evidence reasonably satisfactory to the Company of the loss, theft or destruction of such Warrant.

18. No Impairment. The Company will not, by amendment of its Articles or through any reclassification, capital reorganization, consolidation, merger, sale or conveyance of assets, dissolution, liquidation, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance of performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Holder.

19. Governing Law. The provisions and terms of this Warrant shall be governed by and construed in accordance with the internal laws of the State of California.

20. Successors and Assigns. This Warrant shall be binding upon the Company's successors and assigns and shall inure to the benefit of the Holder's successors, legal representatives and permitted assigns.

21. Business Days. If the last or appointed day for the taking of any action required of the expiration of any rights granted herein shall be a Saturday or Sunday or a legal holiday in California, then such action may be taken or right may be exercised on the next succeeding day which is not a Saturday or Sunday or such a legal holiday.

22. Value. The Company and the Holder agree that the value of this Warrant on the date of grant is $50.

CODEXIS, INC.

By: _____
Name: _____
Title: _____

Subscription

To: _____ Date: _____

The undersigned hereby subscribes for _____ shares of Common Stock covered by this Warrant. The certificate(s) for such shares shall be issued in the name of the undersigned or as otherwise indicated below:

_____
Signature

_____
Name for Registration

_____
Mailing Address

Net Issue Election Notice

To: _____ Date: _____

The undersigned hereby elects under **Section 4** to surrender the right to purchase _____ shares of Common Stock pursuant to this Warrant. The certificate(s) for such shares issuable upon such net issue election shall be issued in the name of the undersigned or as otherwise indicated below:

_____
Signature

_____
Name for Registration

_____
Mailing Address

Assignment

For value received _____ hereby sells, assigns and transfers unto _____
_____
_____
[Please print or typewrite name and address of Assignee]
the within Warrant, and does hereby irrevocably constitute and appoint _____
its attorney to transfer the within Warrant on the books of the within named Company with full power of substitution on the premises.

Dated: _____

In the Presence of:

_____

NEITHER THIS WARRANT NOR THE SECURITIES ISSUABLE UPON EXERCISE OF THIS WARRANT HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE TRANSFERRED UNLESS COVERED BY AN EFFECTIVE REGISTRATION STATEMENT UNDER SAID ACT, A "NO ACTION" LETTER FROM THE SECURITIES AND EXCHANGE COMMISSION WITH RESPECT TO SUCH TRANSFER, A TRANSFER MEETING THE REQUIREMENTS OF RULE 144 OF THE SECURITIES AND EXCHANGE COMMISSION, OR AN OPINION OF COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE COMPANY TO THE EFFECT THAT ANY SUCH TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

WARRANT TO PURCHASE 9,100 SHARES OF COMMON STOCK

Dated: October 25, 2005

THIS CERTIFIES THAT, for value received, Oxford Finance Corporation, ("Holder") is entitled to subscribe for and purchase Nine Thousand One Hundred (9,100) shares of the fully paid and non-assessable shares of Common Stock ("the Shares") of Codexis, Inc., a Delaware corporation (the "Company"), at the Warrant Price (as hereinafter defined), subject to the provisions and upon the terms and conditions hereinafter set forth. As used herein, the term "Common Stock" shall mean the Company's currently authorized Common Stock, and any stock into which such Common Stock may hereafter be exchanged.

1. Warrant Price. The Warrant Price shall initially be seventy one-hundredths dollars ($.70) per share, subject to adjustment as provided in Section 7 below.

2. Conditions to Exercise. The purchase right represented by this Warrant may be exercised at any time, or from time to time, in whole or in part, during the term commencing on the date hereof and ending on the earlier of:

(a) 5:00 P.M. Eastern Standard time on the seventh annual anniversary of this Warrant Agreement; or

(b) the earlier termination of this Warrant pursuant to Section 3(e).

In the event that, although the Company shall have given notice of a transaction pursuant to subparagraph (b) hereof, the transaction does not close within 60 days after the day specified by the Company, unless otherwise elected by the Holder any exercise of the Warrant subsequent to the giving of such notice shall be rescinded and the Warrant shall again be exercisable until terminated in accordance with this Paragraph 2.

3. Method of Exercise; Payment; Issuance of Shares; Issuance of New Warrant.

(a) Cash Exercise. Subject to Section 2 hereof, the purchase right represented by this Warrant may be exercised by the Holder hereof, in whole or in part, by the surrender of this Warrant (with a duly executed Notice of Exercise in the form attached hereto) at the principal office of the Company (as set forth in Section 19 below) and by payment to the Company, by check, of an amount equal to the then applicable Warrant Price per share multiplied by the number of shares then being purchased. In the event of any exercise of the rights represented by this Warrant, certificates for the shares of stock so purchased shall be in the name of, and delivered to, the Holder hereof, or as such Holder may direct (subject to the terms of transfer contained herein and upon payment by such Holder hereof of any applicable transfer taxes). Such delivery shall be made promptly after exercise of the Warrant and at the Company's

expense and, unless this Warrant has been fully exercised or expired, a new Warrant having terms and conditions substantially identical to this Warrant and representing the portion of the Shares, if any, with respect to which this Warrant shall not have been exercised, shall also be issued to the Holder hereof promptly after exercise of the Warrant.

(b) Net Issue Exercise. In lieu of exercising this Warrant pursuant to Section 3(a), Holder may elect to receive shares equal to the value of this Warrant (or of any portion thereof remaining unexercised) by surrender of this Warrant at the principal office of the Company together with notice of such election, in which event the Company shall issue to Holder the number of shares of the Company's Common Stock computed using the following formula:

$$X = \frac{Y\,(A-B)}{A}$$

Where :

X = the number of shares of Common Stock to be issued to Holder in connection with the applicable net issue exercise.

Y = the number of shares of Common Stock purchasable under this Warrant (at the date of such calculation).

A = the Fair Market Value (defined below) of one share of the Company's Common Stock (at the date of such calculation).

B = Warrant Price (as adjusted to the date of such calculation).

(c) Fair Market Value. For purposes of this Section 3, Fair Market Value of one share of the Company's Common Stock shall mean:

(i) Subject to (iv) below, if the Common Stock is publicly traded, the average, over the ten (10) trading days prior to the date of determination of fair market value, of (x) the average of the closing bid and asked prices of the Common Stock quoted in the Over-The-Counter Market Summary, or (y) the last reported sale price of the Common Stock or the closing price quoted on the Nasdaq National Market System ("NMS") or on any exchange on which the Common Stock is listed, whichever is applicable (with respect to both (x) or (y), as published in The Wall Street Journal; or

(ii) [paragraph intentionally omitted]

(iii) Subject to (iv) below, if the Common Stock is not publicly traded, the per share fair market value of the Common Stock as determined in good faith by the Company's Board of Directors.

(iv) In the event of an exercise in connection with the Company's initial public offering, the per share public offering price as set forth on the cover page of the final prospectus relating to such offering (prior to underwriter discounts, commissions, concessions and expenses).

In the event of 3(c)(iii), above, the Company shall deliver to the Holder a certificate, to be signed by an authorized officer of the Company, setting forth the per share Fair

Market Value of the Common Stock as determined by the Company's Board of Directors. In connection with a proposed Acquisition (as defined in Section 3(e), such certification of the Fair Market Value must be made to Holder at least ten (10) business days prior to the proposed closing of such Acquisition.

(d) Automatic Exercise. To the extent this Warrant is not previously exercised, it shall be automatically exercised in accordance with Sections 3(b) and 3(c) hereof (even if not surrendered) immediately before its expiration.

(e) Treatment of Warrant Upon Acquisition of Company.

(i) Upon the written request of the Company, Holder agrees that, in the event of an Acquisition (as defined below) in which the sole consideration is cash, either (a) Holder shall exercise its conversion or purchase right under this Warrant and such exercise will be deemed effective immediately prior to the consummation of such Acquisition or (b) if Holder elects not to exercise the Warrant, this Warrant will expire upon the closing of such Acquisition. The Company shall provide the Holder with written notice of its request relating to the foregoing (together with such reasonable information as the Holder may request in connection with such contemplated Acquisition giving rise to such notice), which is to be delivered to Holder not less than ten (10) days prior to the closing of the proposed Acquisition.

(ii) Upon written request of the Company, Holder agrees that, in the event of a stock for stock Acquisition of the Company by a publicly traded acquirer if, on the record date for the Acquisition, the fair market value of the Shares (or other securities issuable upon exercise of this Warrant) is equal to or greater than three (3x) times the Warrant Price, Company may require the Warrant to be deemed automatically exercised and the Holder shall participate in the Acquisition as a holder of the Shares (or other securities issuable upon exercise of the Warrant) on the same terms as other holders of the same class of securities of the Company.

(iii) Upon the closing of any Acquisition other than those particularly described in subsections (i) or (ii) above, the successor entity shall assume the obligations of the Warrant, and the Warrant shall be exercisable for the same securities, cash, and property as would be payable for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on the record date for the Acquisition and subsequent closing. The Warrant Price and/or number of Shares shall be adjusted accordingly.

(iv) For the purpose of this Warrant, "Acquisition" means any sale, license, or other disposition of all or substantially all of the assets of the Company, or any reorganization, consolidation, or merger of the Company where the holders of the Company's securities before the transaction beneficially own less than 50% of the outstanding voting securities of the surviving entity after the transaction, other than in connection with an initial public offering.

4. Representations and Warranties of Holder and Restrictions on Transfer Imposed by the Securities Act of 1933

(a) Representations and Warranties of Holder. The Holder represents and warrants to the Company with respect to this purchase as follows:

(i) The Holder has substantial experience in evaluating and investing in private placement transactions of securities of companies similar to the Company so that the Holder is capable of evaluating the merits and risks of its investment in the Company and has the capacity to protect its interests.

(ii) The Holder is acquiring the Warrant and the Shares of Common Stock issuable upon exercise of the Warrant (collectively the "Securities") for investment for its own account and not with a view to, or for resale in connection with, any distribution thereof. The Holder understands that the Securities have not been registered under the Securities Act of 1933, as amended (the "Act") by reason of a specific exemption from the registration provisions of the Act, which depends upon, among other things, the bona fide nature of the investment intent as expressed herein. In this connection, the Holder understands that, in the view of the Securities and Exchange Commission (the "SEC"), the statutory basis for such exemption may be unavailable if this representation was predicated solely upon a present intention to hold the Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities or for a period of one year or any other fixed period in the future.

(iii) The Holder acknowledges that the Securities must be held indefinitely unless subsequently registered under the Act or an exemption from such registration is available. The Holder is aware of the provisions of Rule 144 promulgated under the Act ("Rule 144") which permits limited resale of securities purchased in a private placement subject to the satisfaction of certain conditions, including, in case the securities have been held for more than one but less than two years, the existence of a public market for the shares, the availability of certain public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sale being through a "broker's transaction" or in a transaction directly with a "market maker" (as provided by Rule 144(f)) and the number of shares or other securities being sold during any three-month period not exceeding specified limitations.

(iv) The Holder further understands that at the time the Holder wishes to sell the Securities there may be no public market upon which such a sale may be effected, and that even if such a public market exists, the Company may not be satisfying the current public information requirements of Rule 144 and that in such event, the Holder may be precluded from selling the Securities under Rule 144 unless a) a one-year minimum holding period has been satisfied and b) the Holder was not at the time of the sale nor at any time during the three-month period prior to such sale an affiliate of the Company.

(v) The Holder has had an opportunity to discuss the Company's business, management and financial affairs with its management and an opportunity to review the Company's facilities. The Holder understands that such discussions, as well as the written information issued by the Company, were intended to describe the aspects of the Company's business and prospects which it believes to be material but were not necessarily a thorough or exhaustive description.

(b) Legends. Each certificate representing the Shares issuable upon exercise of this Warrant, or upon any transfer of such Shares (other than a transfer registered under the Act), shall be endorsed with the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE TRANSFERRED UNLESS COVERED BY AN EFFECTIVE REGISTRATION STATEMENT UNDER SAID ACT, A "NO ACTION" LETTER FROM THE SECURITIES AND EXCHANGE COMMISSION WITH RESPECT TO SUCH TRANSFER, A TRANSFER MEETING THE REQUIREMENTS OF RULE 144 OF THE SECURITIES AND EXCHANGE COMMISSION, OR AN OPINION OF COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE COMPANY TO THE EFFECT THAT ANY SUCH TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

The Company need not enter into its stock register a transfer of Securities unless the conditions specified in the foregoing legend are satisfied. The Company may also instruct its transfer agent not to register the transfer of any of the Shares unless the conditions specified in the foregoing legend are satisfied.

(c) Removal of Legend and Transfer Restrictions. The legend relating to the Act endorsed on a certificate pursuant to paragraph 4(b) of this Warrant and the stop transfer instructions with respect to the Securities represented by such certificate shall be removed and the Company shall issue a certificate without such legend to the Holder of the Securities if (i) the Securities are registered under the Act and a prospectus meeting the requirements of Section 10 of the Act is available or (ii) the Holder provides to the Company an opinion of counsel for the Holder in form and substance satisfactory to the Company, or a no-action letter or interpretive opinion of the staff of the SEC reasonably satisfactory to the Company, to the effect that public sale, transfer or assignment of the Securities may be made without registration and without compliance with any restriction such as Rule 144.

5. Condition of Transfer or Exercise of Warrant. It shall be a condition to any transfer or exercise of this Warrant that at the time of such transfer or exercise, the Holder (with respect to any exercises) or the transferee (with respect to any transfer) shall provide the Company with a representation in writing that the Holder or transferee is acquiring this Warrant (as applicable) and the shares of Common Stock to be issued upon exercise, for investment purposes only and not with a view to any sale or distribution, or will provide the Company with a statement of pertinent facts covering any proposed distribution. As a further condition to any transfer of this Warrant or any or all of the shares of Common Stock issuable upon exercise of this Warrant, other than a transfer registered under the Act, the Company must have received a legal opinion, in form and substance satisfactory to the Company and its counsel, reciting the pertinent circumstances surrounding the proposed transfer and stating that such transfer is exempt from the registration and prospectus delivery requirements of the Act.

As further condition to each transfer, the Holder shall surrender this Warrant to the Company and the transferee shall receive and accept a Warrant, of like tenor and date, executed by the Company.

6. [paragraph intentionally omitted]

7. Stock Fully Paid; Reservation of Shares. All Shares, which may be issued upon the exercise of the rights represented by this Warrant, will, upon issuance, be fully paid and non-assessable, and free from all taxes, liens, and charges with respect to the issue thereof. During the period within which the rights represented by this Warrant may be exercised, the Company will at all times have authorized, and reserved for issuance upon exercise of the purchase rights evidenced by this Warrant, a sufficient number of shares of its Common Stock to provide for the exercise of the rights represented by this Warrant.

8. (a) Adjustment for Certain Events. In the event of changes in the outstanding Common Stock by reason of stock dividends, split-ups, recapitalizations, reclassifications, mergers, consolidations, combinations or exchanges of shares, separations, reorganizations, liquidations, or the like, the number and class of shares available under the Warrant in the aggregate and the Warrant Price shall be correspondingly adjusted, as appropriate, by the Board of Directors of the Company. The adjustment shall be such as will give the Holder of this Warrant upon exercise for the same aggregate Warrant Price the total number, class and kind of shares as it would have owned had the Warrant been exercised prior to the event and had it continued to hold such shares until after the event requiring adjustment.

(b) [paragraph intentionally omitted]

9. Notice of Adjustments. Whenever any Warrant Price shall be adjusted pursuant to Section 8 hereof, the Company shall prepare a certificate signed by its chief financial officer setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the method by which such adjustment was calculated, and the Warrant Price and number of shares issuable upon exercise of the Warrant after giving effect to such adjustment, and shall cause copies of such certificate to be mailed (by certified or registered mail, return receipt required, postage prepaid) within thirty (30) days of such adjustment to the Holder of this Warrant as set forth in Section 19 hereof.

10. "Market Stand-Off" Agreement. Holder hereby agrees that for a period of up to 180 days following the effective date of the first registration statement of the Company covering common stock (or other securities) to be sold on behalf of the Company in an underwritten public offering, it will not, to the extent requested by the Company and any underwriter, sell or otherwise transfer or dispose of (other than to designees or transferees who agree to be similarly bound) any of the Shares at any time during such period except common stock included in such registration. Upon request by the underwriters of such offering, Holder agrees to enter into an agreement with such underwriters providing for "market stand-off" or "lockup" restrictions substantially similar to all officers and directors of the Company who hold securities of the Company or options to acquire securities of the Company and all holders of one percent (1%) or more of the Company's capital stock, on an as-converted to Common Stock basis.

11. Transferability of Warrant. This Warrant is transferable on the books of the Company at its principal office by the registered Holder hereof upon surrender of this Warrant properly endorsed, subject to compliance with Section 5 and applicable federal and state securities laws. The Company shall issue and deliver to the transferee a new Warrant representing the Warrant so transferred. Upon any partial transfer, the Company will issue and deliver to Holder a new Warrant with respect to the Warrant not so transferred. Holder shall not have any right to transfer any portion of this Warrant to any direct competitor of the Company.

12. No Fractional Shares. No fractional share of Common Stock will be issued in connection with any exercise hereunder, but in lieu of such fractional share the Company shall make a cash payment therefor upon the basis of the Warrant Price then in effect.

13. Charges, Taxes and Expenses. Issuance of certificates for shares of Common Stock upon the exercise of this Warrant shall be made without charge to the Holder for any United States or state of the United States documentary stamp tax or other incidental expense with respect to the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder.

14. No Stockholder Rights Until Exercise. This Warrant does not entitle the Holder hereof to any voting rights or other rights as a stockholder of the Company prior to the exercise hereof.

15. Registry of Warrant. The Company shall maintain a registry showing the name and address of the registered Holder of this Warrant. This Warrant may be surrendered for exchange or exercise, in accordance with its terms, at such office or agency of the Company, and the Company and Holder shall be entitled to rely in all respects, prior to written notice to the contrary, upon such registry.

16. Loss, Theft, Destruction or Mutilation of Warrant. Upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft, or destruction, of indemnity reasonably satisfactory to it, and, if mutilated, upon surrender and cancellation of this Warrant, the Company will execute and deliver a new Warrant, having terms and conditions substantially identical to this Warrant, in lieu hereof.

17. Miscellaneous.

(a) Issue Date. The provisions of this Warrant shall be construed and shall be given effect in all respect as if it had been issued and delivered by the Company on the date hereof.

(b) Successors. This Warrant shall be binding upon any successors or assigns of the Company.

(c) Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of California.

(d) Headings. The headings used in this Warrant are used for convenience only and are not to be considered in construing or interpreting this Warrant.

(e) Saturdays, Sundays, Holidays. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday or a Sunday or shall be a legal holiday in the State of California, then such action may be taken or such right may be exercised on the next succeeding day not a legal holiday.

18. No Impairment. The Company shall not by any action including, without limitation, amending its certificate of incorporation or by-laws, any reorganization, transfer of assets, consolidation, merger, share exchange dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of the Warrants or impair the ability of the Holder(s) to realize upon the intended economic value hereof, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate to protect the rights of the Holder(s) hereof against impairment.

19. Addresses. Any notice required or permitted hereunder shall be in writing and shall be mailed by overnight courier, registered or certified mail, return receipt required, and postage prepaid, or otherwise delivered by hand or by messenger, addressed as set forth below, or at such other address as the Company or the Holder hereof shall have furnished to the other party.

If to the Company: Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Attn: Finance Director

If to the Holder: Oxford Finance Corporation
133 N. Fairfax Street
Alexandria, VA 22314
Attn: Chief Financial Officer

IN WITNESS WHEREOF, Codexis, Inc. has caused this Warrant to be executed by its officers thereunto duly authorized.

Dated as of October 25, 2005.

Codexis, Inc.

By: /s/ Tassos Gianakakos
Name: Tassos Gianakakos
Title: Senior Vice President

NOTICE OF EXERCISE

TO: _____
_____
_____

1. The undersigned, Oxford Finance Corporation ("Holder") elects to acquire shares of the Common Stock of Codexis, Inc. (the "Company"), pursuant to the terms of the Common Stock Purchase Warrant dated October 25, 2005 (the "Warrant").

2. The Holder exercises its rights under the Warrant as set forth below:

( ) The Holder elects to purchase _____ shares of Common Stock as provided in Section 3(a) and 3(c) of the Warrant and tenders herewith a check in the amount of $_____ as payment of the purchase price.

( ) The Holder elects to convert the purchase rights into shares of Common Stock as provided in Section 3(b) and 3(c) of the Warrant.

3. The Holder surrenders the Warrant with this Notice of Exercise.

4. The Holder represents that it is acquiring the aforesaid shares of Common Stock for investment and not with a view to or for resale in connection with, distribution and that the Holder has no present intention of distributing or reselling the shares.

5. Please issue a certificate representing the shares of Common Stock in the name of the Holder or in such other name as is specified below:

Name: _____

Address: _____

Taxpayer I.D.: _____

Oxford Finance Corporation

By: _____

Name: _____

Title: _____

Date: _____

Exhibit 4.5

THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. NO SALE OR DISPOSITION MAY BE EFFECTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE COMPANY OR WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL FOR THE HOLDER, SATISFACTORY TO THE COMPANY, THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE ACT OR RECEIPT OF A NO-ACTION LETTER FROM THE SECURITIES AND EXCHANGE COMMISSION.

THE SALE OF THESE SECURITIES HAS NOT BEEN QUALIFIED WITH ANY STATE SECURITIES AUTHORITIES. THE RIGHTS OF ALL PARTIES TO THIS WARRANT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED UNLESS THE SALE IS SO EXEMPT.

THIS WARRANT MAY NOT BE EXERCISED EXCEPT IN COMPLIANCE WITH ALL APPLICABLE FEDERAL AND STATE SECURITIES LAWS TO THE REASONABLE SATISFACTION OF THE COMPANY AND LEGAL COUNSEL FOR THE COMPANY.

Void after May 25, 2013

CODEXIS, INC.

STOCK PURCHASE WARRANT

THIS CERTIFIES THAT, for value received, _____ and its registered assigns (hereinafter called the "**Holder**") is entitled to purchase from Codexis, Inc., a Delaware corporation (the "**Company**") whose address is 200 Penobscot Drive, Redwood City, California 94063, at any time after the date specified in Section 1 hereof and ending at 5:00 p.m. Pacific Standard Time on the Expiration Date, as such term is defined in Section 1 hereof, a number of shares of the Company's New Preferred Stock (the "**Warrant Shares**") equal to the quotient obtained by dividing (A) the product of (i) 0.30 and (ii) the Note Amount, by (B) the Effective Price (for purposes herein, the "**Warrant Price**"). This Warrant is a "**Warrant**" as defined in that certain Bridge Loan Agreement (the "**Loan Agreement**"), dated as of May 25, 2006 by and among the Company and the investors set forth therein. This Warrant may be exercised in whole or in part, at the option of the Holder of this Warrant. Unless otherwise defined herein, defined terms in this Warrant shall have the meanings ascribed to them in the Loan Agreement.

1. *Term*. This Warrant shall be exercisable through May 25, 2013 (the "**Expiration Date**").

2. *Method of Exercise; Payment; Issuance of New Warrant*. Subject to Section 1 hereof, the purchase right represented by this Warrant may be exercised by the Holder, in whole or in part, by:

2.1 The surrender of this Warrant (with the notice of exercise form attached hereto as Attachment A and the Investment Representation Statement attached hereto as Attachment B duly executed) at the principal office of the Company; and

2.2 The payment to the Company, by check, wire transfer, forgiveness of indebtedness, or any combination of the foregoing of an amount equal to the then applicable Warrant Price per share multiplied by the number of Warrant Shares then being purchased.

If this Warrant should be exercised in part only, the Company shall, upon surrender of this Warrant, execute and deliver a new Warrant evidencing the rights of the Holder thereof to purchase the balance of the Warrant Shares purchasable hereunder. Upon receipt by the Company of this Warrant and such notice of exercise, together with, if applicable, the aggregate Warrant Price, at such office, or by the stock transfer agent or warrant agent of the Company at its office, the Holder shall be deemed to be the holder of record of the applicable Warrant Shares, notwithstanding that the stock transfer books of the Company shall then be closed or that certificates representing such Warrant Shares shall not then be actually delivered to the Holder. The Company shall pay any and all documentary stamp or similar issue or transfer taxes payable in respect of the issue or delivery of the Warrant Shares.

2.3 Net Exercise.

(a) In addition to and without limiting the rights of the Holder under the terms of this Warrant, the Holder may elect to convert this Warrant or any portion thereof (the "Conversion Right") into Warrant Shares, the aggregate value of which Warrant Shares shall be equal to the value of this Warrant or the portion thereof being converted. The Conversion Right may be exercised by the Holder by surrender of this Warrant at the principal office of the Company together with notice of the Holder's intention to exercise the Conversion Right, in which event the Company shall issue to the Holder a number of Warrant Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where:

X- The number of Warrant Shares to be issued to the holder upon exercise of Conversion Right.

Y- The number of Warrant Shares issuable upon exercise of this Warrant (or such lesser number as are being exercised).

A- The fair market value of one Warrant Share as at the time the Conversion Right is exercised pursuant to this Section 2.

B- Effective Price for one Warrant Share under this Warrant (as adjusted to the date of such calculations).

Notwithstanding the foregoing, the Warrant shall be deemed to have converted into Warrant Shares pursuant to this Section 2.3(a) upon the Expiration Date if not previously exercised or converted before such date.

(b) Fair Market Value. For purposes of Section 2.3, "fair market value of one Warrant Share" shall mean, as of any date:

(i) the last closing price per share of the Company's Common Stock on the principal national securities exchange on which the Common Stock is listed or admitted to trading;

(ii) the last reported sales price per share of the Company's Common Stock on the Nasdaq National Market or the Nasdaq Small-Cap Market (collectively, "Nasdaq") if the Company's Common Stock is not listed or traded on any such exchange;

(iii) the average of the bid and asked price per share as reported in the "pink sheets" published by the National Quotation Bureau, Inc. (the "pink sheets") if the Company's Common Stock is not listed or traded on any exchange or Nasdaq; or

(iv) if such quotations are not available, the fair market value per share of the New Preferred Stock issued in the Next Financing on the date such notice was received by the Company, as reasonably determined in good faith by the Board of Directors of the Company.

3. *Stock Fully Paid; Reservation of Warrant Shares* All shares of stock which may be issued upon the exercise of the rights represented by this Warrant will, upon issuance, be fully paid and nonassessable, and free from all taxes, liens and charges with respect to the issue thereof. During the period within which the rights represented by this Warrant may be exercised, the Company will at all times have authorized and reserved for the purpose of issue upon exercise of the purchase rights evidenced by this Warrant, a sufficient number of shares of its stock to provide for the exercise of the rights represented by this Warrant. In the event that there is an insufficient number of Warrant Shares reserved for issuance pursuant to the exercise of this Warrant, the Company will take appropriate action to authorize an increase in its capital stock to allow for such issuance or similar issuance acceptable to the Holder.

4. *Adjustment of Warrant Price and Number of Warrant Shares* The number and kind of Warrant Shares purchasable upon the exercise of this Warrant and the Warrant Price shall be subject to adjustment from time to time upon the occurrence of certain events, as follows:

4.1 Reclassification; Merger. In case of any reclassification or change of outstanding securities of the class issuable upon exercise of this Warrant (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination), or in case of any consolidation or merger of the Company with or into another corporation (other than a merger with another corporation in which the Company is a continuing corporation and which does not result in any reclassification or change of outstanding securities issuable upon exercise of this Warrant), or any other corporate reorganization in which the Company shall not be the continuing or surviving entity of such consolidation, merger or reorganization, or any transaction in which in excess of 50% of the Company's voting power is transferred, or any sale of all or substantially all of the stock or assets of the Company, the Company shall, as condition precedent to such transaction, execute a new Warrant or cause such successor or purchasing corporation, as the case may be, to execute

a new Warrant, providing that the Holder shall have the right to exercise such new Warrant and upon such exercise to receive, in lieu of each share of stock theretofore issuable upon exercise of this Warrant, the kind and amount of shares of stock, other securities, money and property receivable upon such reclassification, change, merger or acquisition by a holder of one share of stock theretofore issuable upon the exercise of this Warrant. Such new Warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Section 4. The provisions of this Section 4.1 shall similarly apply to successive reclassifications, changes, mergers, and acquisitions.

4.2 Subdivision or Combination of Warrant Shares. If the Company at any time while this Warrant remains outstanding and unexpired shall subdivide or combine its stock, the Warrant Price shall be proportionately decreased in the case of a subdivision or increased in the case of a combination.

4.3 Stock Dividends. If the Company at any time while this Warrant is outstanding and unexpired shall pay a dividend with respect to stock payable in, or make any other distribution with respect to stock (except any distribution specifically provided for in the foregoing Sections 4.1 and 4.2) of, stock, then the Warrant Price shall be adjusted, from and after the date of determination of shareholders entitled to receive such dividend or distribution, to that price determined by multiplying the Warrant Price in effect immediately prior to such date of determination by a fraction (i) the numerator of which shall be the total number of shares of stock outstanding immediately prior to such dividend or distribution, and (ii) the denominator of which shall be the total number of shares of stock outstanding immediately after such dividend or distribution.

4.4 Adjustment of Number of Warrant Shares. Upon each adjustment in the Warrant Price, the number of shares of stock purchasable hereunder shall be adjusted, to the nearest whole share, to the product obtained by multiplying the number of Warrant Shares purchasable immediately prior to such adjustment in the Warrant Price by a fraction, the numerator of which shall be the Warrant Price immediately prior to such adjustment and the denominator of which shall be the Warrant Price immediately thereafter.

5. *Fractional Warrant Shares*. No fractional Warrant Shares will be issued in connection with any exercise hereunder, but in lieu of such fractional shares the Company shall make a cash payment therefor upon the basis of the Warrant Price then in effect.

6. *Compliance with Securities Act; Non-transferability of Warrant; Disposition of Shares of Stock*.

6.1 Compliance with Securities Act. The Holder, by acceptance hereof, agrees that this Warrant and the Warrant Shares are being acquired for investment and that he, she or it will not offer, sell or otherwise dispose of this Warrant or any Warrant Shares except under circumstances which will not result in a violation of the Securities Act of 1933, as amended (the "**Act**"). Upon exercise of this Warrant, the Holder hereof shall confirm in writing, in a form attached hereto asAttachment B, that the Warrant Shares so purchased are being acquired for investment and not with a view toward distribution or resale. In addition, the Holder shall provide such additional information regarding such Holder's financial and investment

background, as the Company may reasonably request, as is relevant for purposes of determining the Holder's suitability with respect to a purchase of the Warrant Shares. This Warrant and all Warrant Shares (unless registered under the Act) shall be stamped or imprinted with a legend in substantially the following form:

> THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. NO SALE OR DISPOSITION MAY BE EFFECTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE COMPANY AND WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL FOR THE HOLDER, SATISFACTORY TO THE COMPANY, THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE ACT OR RECEIPT OF A NO-ACTION LETTER FROM THE SECURITIES AND EXCHANGE COMMISSION.

6.2 This Warrant may not be transferred or assigned in whole or in part without compliance with all applicable federal and state securities laws by the transferor and the transferee (including the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, if such are requested by the Company). Notwithstanding the foregoing, no investment representation letter or opinion of counsel shall be required for any transfer of this Warrant (or any portion thereof) or any shares of New Preferred Stock issued upon exercise hereof (or shares of Common Stock issuable upon conversion thereof) (i) in compliance with customary transactions pursuant to Rule 144 or Rule 144A of the Act, or (ii) by gift, will or intestate succession by the Holder to his or her spouse or lineal descendants or ancestors or any trust for any of the foregoing or by the Holder to its managers, partners, members, affiliates (as defined under Rule 404 promulgated under the Act) or subsidiaries, as applicable; provided, that in each of the foregoing cases, the transferee agrees in writing to be subject to the terms of this Section 6.2. In addition, if the holder of the Warrant (or any portion thereof) or any New Preferred Stock issued upon exercise hereof delivers to the Company an unqualified opinion of counsel that no subsequent transfer of such Warrant or New Preferred Stock shall require registration under the Act, the Company shall, upon such contemplated transfer, promptly deliver new documents/certificates for such Warrant or New Preferred Stock that do not bear the legend set forth in Section 6.1 above. Subject to the provisions of this Warrant with respect to compliance with the Act, title to this Warrant may be transferred by endorsement (by the Holder executing an assignment form) and delivery in the same manner as a negotiable instrument transferable by endorsement and delivery. Notwithstanding the foregoing, with respect to any offer, sale or other disposition of this Warrant or of securities into which this Warrant may be converted or for which it may be exercised, the Holder will give written notice to the Company, describing briefly the manner thereof. Unless the Company reasonably determines that such transfer would violate applicable securities laws, and notifies the Holder thereof within ten (10) business days after receiving notice of the transfer, the Holder may effect such transfer. Each Warrant thus transferred and each certificate representing the securities thus transferred shall bear a legend as to the applicable restrictions on transferability in order to ensure compliance with the Act, unless in the opinion of counsel for the Company, such legend is not required in order to ensure compliance with the Act. The Company may issue stop transfer instructions to its transfer agent in connection with such restrictions.

6.3 Disposition of Warrant Shares. Upon exercise of the Warrant Shares, the Holder will be entitled to any registration rights granted to all holders of the New Preferred Stock issued in the Next Financing. With respect to any offer, sale or other disposition of any Warrant Shares prior to registration of such shares, the Holder and each subsequent Holder of this Warrant agrees to give written notice to the Company prior thereto, describing briefly the manner thereof, together with a written opinion of such Holder's counsel, if reasonably requested by the Company, to the effect that such offer, sale or other disposition may be effected without registration or qualification (under the Act as then in effect or any federal or state law then in effect) of such Warrant Shares and indicating whether or not under the Act certificates for such shares to be sold or otherwise disposed of require any restrictive legend as to applicable restrictions on transferability in order to ensure compliance with the Act; provided, however, that no such opinion of counsel or no-action letter shall be necessary for a transfer without consideration by a Holder which is a partnership to a partner of such partnership, so long as such transfer is made pursuant to the terms of the partnership agreement, or to the transfer by gift, will or intestate succession by the Holder to his or her spouse or lineal descendants or ancestors or any trust for the benefit of any of the foregoing if the transferee agrees in writing to be subject to the terms hereof to the same extent as if he/she were an original Holder hereunder. Notwithstanding the foregoing, such Warrant Shares may be offered, sold or otherwise disposed of in accordance with Rule 144.

7. *Rights of Shareholders.* No Holder of this Warrant shall be entitled to vote or receive dividends or be deemed the holder of stock or any other securities of the Company which may at any time be issuable on the exercise hereof for any purpose, nor shall anything contained herein be construed to confer upon the Holder of this Warrant, as such, any of the rights of a shareholder of the Company or any right to vote for the election of directors or upon any matter submitted to shareholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value or change of stock to no par value, consolidation, merger, conveyance, or otherwise) or to receive notice of meetings, or to receive dividends or subscription rights or otherwise until this Warrant has been exercised and the Warrant Shares shall have become deliverable, as provided herein.

8. *Governing Law*. The terms and conditions of this Warrant and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with California law, without giving effect to principles of conflicts of law.

9. *Miscellaneous*. The headings in this Warrant are for purposes of convenience and reference only, and shall not be deemed to constitute a part hereof. Neither this Warrant nor any term hereof may be changed, waived, discharged or terminated orally, but only by an instrument in writing signed by the Company and the registered Holder. Upon any Acquisition (as defined in the Restated Certificate), or any stock dividend, combination, stock split, reclassification or recapitalization of the capital stock of the Company, or the Company's initial public offering of its Common Stock, the Company shall provide to each Holder at such time, ten (10) days' prior

notice to the closing of such events; provided, however, that the Majority Holders may waive such notice on behalf of all Holders. All notices and other communications from the Company to the Holder shall be delivered by hand or mailed by first class registered or certified mail, postage prepaid, to the address furnished to the Company in writing by the Holder.

10. *Loan Agreement*. This Warrant is a Warrant referred to in the Loan Agreement and is entitled to all the benefits provided therein.

(Remainder of Page Intentionally Left Blank)

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its officers, thereunto duly authorized this 25th day of May, 2006.

CODEXIS INC.

By: _____

SIGNATURE PAGE TO WARRANT

ATTACHMENT A

NOTICE OF EXERCISE

TO: CODEXIS, INC.

1. The undersigned hereby elects to purchase _____ shares of New Preferred Stock of CODEXIS, INC. as defined in and pursuant to the terms of the attached Warrant, and tenders herewith payment of the purchase price of such shares in full, together with all applicable transfer taxes, if any.

1. The undersigned hereby elects to convert the attached Warrant into Warrant Shares in the manner specified in Section 2.3 of the Warrant. This conversion is exercised with respect to _____ of the Shares covered by the Warrant.

[Strike paragraph above that does not apply]

2. Please issue a certificate or certificates representing said shares of stock in the name of the undersigned or in such other name as is specified below:

Name: _____

Address: _____

_____

_____

3. The undersigned represents that the aforesaid shares of stock are being acquired for the account of the undersigned for investment and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or reselling such shares. In support thereof, the undersigned has executed an Investment Representation Statement attached hereto as Attachment B.

WARRANTHOLDER

_____

(signature)

_____

(title)

Date: _____

ATTACHMENT B

INVESTMENT REPRESENTATION STATEMENT

PURCHASER :

COMPANY : CODEXIS, INC.

SECURITY :

AMOUNT :

DATE :

In connection with the purchase of the above-listed securities and underlying stock (the "**Securities**"), I, the Purchaser, represent to the Company the following:

(a) I am purchasing these Securities for my own account for investment purposes only and not with a view to, or for the resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933 ("**Act**").

(b) I understand that the Securities have not been registered under the Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of my investment intent as expressed herein. In this connection, I understand that, in the view of the Securities and Exchange Commission ("**SEC**"), the statutory basis for such exemption may be unavailable if my representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future.

(c) I further understand that the Securities must be held indefinitely unless subsequently registered under the Act or unless an exemption from registration is otherwise available. Moreover, I understand that the Company is under no obligation to register the Securities. In addition, I understand that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required in the opinion of counsel for the Company.

(d) I am aware of the provisions of Rule 144, promulgated under the Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof (or from an affiliate of such issuer), in a non-public offering subject to the satisfaction of certain conditions.

(e) I further understand that at the time I wish to sell the Securities there may be no public market upon which to make such a sale.

WARRANTHOLDER

(signature)

(title)

Date:

Exhibit 4.6

NEITHER THIS WARRANT NOR THE SECURITIES ISSUABLE UPON EXERCISE OF THIS WARRANT HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. SUBJECT TO SECTION 6 BELOW, NO SALE OR DISPOSITION MAY BE EFFECTED EXCEPT IN COMPLIANCE WITH RULE 144 UNDER SAID ACT OR WITHOUT (I) AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO, (II) AN OPINION OF COUNSEL FOR HOLDER, SATISFACTORY TO COMPANY, THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE ACT OR (III) RECEIPT OF A NO-ACTION LETTER FROM THE SECURITIES AND EXCHANGE COMMISSION.

WARRANT TO PURCHASE SHARES OF SERIES D CONVERTIBLE PREFERRED STOCK

September 28, 2007

THIS CERTIFIES THAT, for value received,_____ ("Holder") is entitled to subscribe for and purchase the Specified Number (as defined below) of shares of fully paid and nonassessable Series D Convertible Preferred Stock of **Codexis, Inc.**, a Delaware corporation (the "Company"), at the Warrant Price (as hereinafter defined), subject to the provisions and upon the terms and conditions hereinafter set forth. As used herein, the term "Series D Preferred" shall mean Company's presently authorized Series D Convertible Preferred Stock, $.0001 par value per share, and any stock into which such Series D Preferred may hereafter be converted or exchanged and the term "Warrant Shares" shall mean the shares of Series D Preferred which Holder may acquire pursuant to this Warrant and any other shares of stock into which such shares of Series D Preferred may hereafter be converted or exchanged.

1. Warrant Price and Specified Number.

(a) The "Warrant Price" shall initially be_____ (_____) per share, subject to adjustment as provided in Section 7 below.

(b) The "Specified Number" shall initially be_____ (_____) shares on the date hereof, subject to adjustment as provided in Section 7 below. Further, the "Specified Number" shall increase by _____ (_____) shares for each One Million Dollars ($1,000,000) of additional loans made by the Holder to Company after the date hereof pursuant to that certain Loan and Security Agreement, dated as of the date hereof, by and among the Company, the Holder, the other lenders party thereto, and General Electric Capital Corporation, as agent; provided, however, that in no event shall the "Specified Number" exceed_____(_____) shares.

2. Conditions to Exercise. The purchase right represented by this Warrant may be exercised at any time, or from time to time, in whole or in part during the term commencing on the date hereof and ending at 5:00 P.M. Pacific time on the later of (a) the tenth anniversary of the date of this Warrant and (b) the fifth anniversary of the date of an initial public offering (the "Initial Public Offering") of Company (such later date, the "Expiration Date").

3. Method of Exercise or Conversion; Payment; Issuance of Shares; Issuance of New Warrant.

(a) Cash Exercise. Subject to Section 2 hereof, the purchase right represented by this Warrant may be exercised by Holder hereof, in whole or in part, by the surrender of the original of this Warrant (together with a duly executed Notice of Exercise in substantially the form attached hereto) at the principal office of Company (as set forth in Section 19 below) and by payment to Company, by certified or bank check, or wire transfer of immediately available funds, of an amount equal to the then applicable Warrant Price per share multiplied by the number of Warrant Shares then being purchased. In the event of any exercise of the rights represented by this Warrant, certificates for the shares of stock so purchased shall be in the name of, and delivered to, Holder hereof, or as such Holder may direct (subject to the terms of transfer contained herein and upon payment by such Holder hereof of any applicable transfer taxes). Such delivery shall be made within 30 days after exercise of this Warrant and at Company's expense and, unless this Warrant has been fully exercised or expired, a new Warrant having terms and conditions substantially identical to this Warrant and representing the portion of the Warrant Shares, if any, with respect to which this Warrant shall not have been exercised, shall also be issued to Holder hereof within 30 days after exercise of this Warrant.

(b) Conversion. In lieu of exercising this Warrant as specified in Section 3(a), Holder may from time to time convert this Warrant, in whole or in part, into Warrant Shares by surrender of the original of this Warrant (together with a duly executed Notice of Exercise in substantially the form attached hereto) at the principal office of Company, in which event Company shall issue to Holder the number of Warrant Shares computed using the following formula:

$$X = \frac{Y\,(A-B)}{A}$$

Where:

X = the number of Warrant Shares to be issued to Holder.

Y = the number of Warrant Shares purchasable under this Warrant (at the date of such calculation).

A = the Fair Market Value of one share of Company's Series D Preferred (at the date of such calculation).

B = Warrant Price (as adjusted to the date of such calculation).

(c) Fair Market Value. For purposes of this Section 3, Fair Market Value of one share of Company's Series D Preferred shall mean:

(i) In the event of an exercise in connection with an Initial Public Offering, the per share Fair Market Value for the Series D Preferred shall be the offering price at which the underwriters initially sell common stock of Company ("Common Stock") to the public multiplied by the number of shares of Common Stock into which each share of Series D Preferred is then convertible;

(ii) The average of the closing bid and asked prices of Common Stock quoted in the Over-The-Counter Market Summary, the last reported sale price quoted on the Nasdaq Stock Market or on any other exchange on which the Common Stock is listed, whichever is applicable, as published in the Western Edition of the Wall Street Journal for the three (3) trading days prior to the date of determination of Fair Market Value, multiplied by the number of shares of Common Stock into which each share of Series D Preferred is then convertible;

(iii) In the event of an exercise in connection with a merger, acquisition or other consolidation in which Company is not the surviving entity, the per share Fair Market Value for the Series D Preferred shall be the value to be received per share of Series D Preferred by all holders of the Series D Preferred in such transaction as determined by the Board of Directors; or

(iv) In any other instance, the per share Fair Market Value for the Series D Preferred shall be as determined in the reasonable good faith judgment of Company's Board of Directors.

In the event of 3(c)(iii) or 3(c)(iv), above, Company's Board of Directors shall prepare a certificate, to be signed by an authorized officer of Company, setting forth in reasonable detail the basis for and method of determination of the per share Fair Market Value of the Series D Preferred. The Board of Directors will also certify to Holder that this per share Fair Market Value will be applicable to all holders of Company's Series D Preferred. Such certification must be made to Holder at least thirty (30) business days prior to the proposed effective date of the merger, consolidation, sale, or other triggering event as defined in 3(c)(iii) or 3(c)(iv).

(d) Automatic Exercise. To the extent this Warrant is not previously exercised, it shall be deemed to have been automatically converted in accordance with Sections 3(b) and 3(c) hereof (even if not surrendered) as of immediately before its expiration, involuntary termination or cancellation if the then-Fair Market Value of a Warrant Share exceeds the then-Warrant Price, unless Holder notifies Company in writing to the contrary prior to such automatic exercise.

4. Representations and Warranties of Holder and Company.

(a) Representations and Warranties by Holder. Holder represents and warrants to Company with respect to this purchase as follows:

(i) Evaluation. Holder has substantial experience in evaluating and investing in private placement transactions of securities of companies similar to Company so that Holder is capable of evaluating the merits and risks of its investment in Company and has the capacity to protect its interests.

(ii) Resale. Except for transfers to an affiliate of Holder, Holder is acquiring this Warrant and the Warrant Shares issuable upon exercise of this Warrant (collectively the "Securities") for investment for its own account and not with a view to, or for resale in connection with, any distribution thereof. Holder understands that the Securities have not been registered under the Securities Act of 1933, as amended (the "Act") by reason of a specific exemption from the registration provisions of the Act which depends upon, among other things, the bona fide nature of the investment intent as expressed herein.

(iii) Rule 144. Holder acknowledges that the Securities must be held indefinitely unless subsequently registered under the Act or an exemption from such registration is available. Holder is aware of the provisions of Rule 144 promulgated under the Act.

(iv) Accredited Investor. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

(v) Opportunity To Discuss. Holder has had an opportunity to discuss Company's business, management and financial affairs with its management and an opportunity to review Company's facilities. Holder understands that such discussions, as well as the written information issued by Company, were intended to describe the aspects of Company's business and prospects which Company believes to be material but were not necessarily a thorough or exhaustive description.

(b) Representations and Warranties by Company. Company hereby represents and warrants to Holder that the statements in the following paragraphs of this Section 4(b) are true and correct (a) as of the date hereof and (b) except where any such representation and warranty relates specifically to an earlier date, as of the date of any exercise of this Warrant.

(i) Corporate Organization and Authority. Company (a) is a corporation duly organized, validly existing, and in good standing in its jurisdiction of incorporation, (b) has the corporate power and authority to own and operate its properties and to carry on its business as now conducted and as proposed to be conducted; and (c) is qualified as a foreign corporation in all jurisdictions where such qualification is required.

(ii) Corporate Power. Company has all requisite legal and corporate power and authority to execute, issue and deliver this Warrant, to issue the Warrant Shares issuable upon exercise or conversion of this Warrant, and to carry out and perform its obligations under this Warrant and any related agreements.

(iii) Authorization; Enforceability. All corporate action on the part of Company, its officers, directors and shareholders necessary for the authorization, execution, delivery and performance of its obligations under this Warrant and for the authorization, issuance and delivery of this Warrant and the Warrant Shares

issuable upon exercise of this Warrant has been taken and this Warrant constitutes the legally binding and valid obligation of Company enforceable in accordance with its terms.

(iv) Valid Issuance of Warrant and Warrant Shares. This Warrant has been validly issued and is free of restrictions on transfer other than restrictions on transfer set forth herein and under applicable state and federal securities laws. The Warrant Shares issuable upon conversion of this Warrant, when issued, sold and delivered in accordance with the terms of this Warrant for the consideration expressed herein, will be duly and validly issued, fully paid and nonassessable, and will be free of restrictions on transfer other than restrictions on transfer under this Warrant and under applicable state and federal securities laws. Subject to applicable restrictions on transfer, the issuance and delivery of this Warrant and the Warrant Shares issuable upon exercise or conversion of this Warrant are not subject to any preemptive or other similar rights or any liens or encumbrances except as specifically set forth in Company's Certificate of Incorporation or this Warrant. The offer, sale and issuance of the Warrant Shares, as contemplated by this Warrant, are exempt from the prospectus and registration requirements of applicable United States federal and state security laws, and neither Company nor any authorized agent acting on its behalf has or will take any action hereafter that would cause the loss of such exemption.

(v) No Conflict. The execution, delivery, and performance of this Warrant will not result in (a) any violation of, be in conflict with, or constitute a default under, with or without the passage of time or the giving of notice (1) any provision of Company's Certificate of Incorporation or by-laws; (2) any provision of any judgment, decree, or order to which Company is a party, by which it is bound, or to which any of its material assets are subject; (3) any contract, obligation, or commitment to which Company is a party or by which it is bound; or (4) any statute, rule, or governmental regulation applicable to Company, or (b) the creation of any lien, charge or encumbrance upon any assets of Company.

(vi) Capitalization. The capitalization table of Company attached hereto as Annex A is complete and accurate as of the date hereof (after giving effect to the issuance of this Warrant) and reflects (a) all outstanding capital stock of Company and (b) all outstanding warrants, options, conversion privileges, preemptive rights or other rights or agreements to purchase or otherwise acquire or issue any equity securities or convertible securities of Company. Company has reserved 11,154,802 shares of Common Stock for issuance upon conversion of the Series D Preferred.

5. Legends.

(a) Legend. Each certificate representing the Warrant Shares shall be endorsed with substantially the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). NO SALE OR DISPOSITION MAY BE EFFECTED EXCEPT IN COMPLIANCE WITH THE ACT AND ANY REGULATIONS PROMULGATED THEREUNDER OR WITHOUT (I) AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO, (II) AN OPINION OF COUNSEL FOR HOLDER SATISFACTORY TO THE ISSUER THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE ACT OR (III) RECEIPT OF A NO-ACTION LETTER FROM THE SECURITIES AND EXCHANGE COMMISSION.

Company need not enter into its stock records a transfer of Warrant Shares unless the conditions specified in the foregoing legend are satisfied. Company may also instruct its transfer agent not to allow the transfer of any of the Warrant Shares unless the conditions specified in the foregoing legend are satisfied.

(b) Removal of Legend and Transfer Restrictions. The legend relating to the Act endorsed on a certificate pursuant to paragraph 5(a) of this Warrant shall be removed and Company shall issue a certificate without such legend to Holder if (i) the Securities are registered under the Act and a prospectus meeting the requirements of Section 10 of the Act is available or (ii) Holder provides to Company an opinion of counsel for Holder reasonably satisfactory to Company, a no-action letter or interpretive opinion of the staff of the Securities and Exchange Commission ("SEC") reasonably satisfactory to Company, or other evidence reasonably satisfactory to Company, to the effect that public sale, transfer or assignment of the Securities may be made without registration and without compliance with any restriction such as Rule 144.

6. Condition of Transfer or Exercise of Warrant. It shall be a condition to any transfer or exercise of this Warrant that at the time of such transfer or exercise, Holder (with respect to an exercise) or transferee (with respect to a transfer) shall provide Company with a representation in writing that Holder or transferee is acquiring this Warrant and the shares of Series D Preferred to be issued upon exercise for investment purposes only and not with a view to any sale or distribution, or will provide Company with a statement of pertinent facts covering any proposed distribution. As a further condition to any transfer of this Warrant or any or all of the shares of Series D Preferred issuable upon exercise of this Warrant, other than a transfer registered under the Act, Company may request a legal opinion, in form and substance satisfactory to Company and its counsel, reciting the pertinent circumstances surrounding the proposed transfer and stating that such transfer is exempt from the registration and prospectus delivery requirements of the Act. Company shall not require Holder to provide an opinion of counsel if the transfer is to an affiliate of Holder or without payment or promise of consideration. As further condition to each transfer, at the request of Company, Holder shall surrender this Warrant to Company and the transferee shall receive and accept a Warrant, of like tenor and date, executed by Company.

7. Adjustment for Certain Events. The number and kind of securities purchasable upon the exercise of this Warrant and the Warrant Price shall be subject to adjustment from time to time upon the occurrence of certain events, as follows:

(a) Reclassification, Merger or Sale. (i) In the event of (A) any reclassification or change of securities of the class issuable upon exercise of this Warrant (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination) or (B) (1) any merger of Company with or into another corporation (other than a merger with another corporation in which Company is the acquiring and the surviving corporation and which does not result in any reclassification or change of outstanding securities issuable upon exercise of this Warrant) (herein called a "Merger") or (2) any sale of all or substantially all of the assets of Company (herein called a "Sale"), and if on the record date for such Merger or Sale the fair market value of a share of Series D Preferred (or other securities issuable upon exercise of this Warrant) based on the amount to be paid to holders of the Warrant Shares if the Warrant had been exercised, is less than 300% of the Warrant Price, Company, or such successor or purchasing corporation, as the case may be, shall duly execute and deliver to Holder a new Warrant (in form and substance satisfactory to Holder of this Warrant), or Company shall make appropriate provision without the issuance of a new Warrant, so that Holder shall have the right to receive, at a total purchase price not to exceed that payable upon the exercise of the unexercised portion of this Warrant, and in lieu of the Warrant Shares theretofore issuable upon exercise or conversion of this Warrant, the kind and amount of shares of stock, other securities, money and property receivable upon such reclassification, change, Merger or Sale by a holder of the number of shares of Series D Preferred then purchasable under this Warrant, or in the case of such Merger or Sale in which the consideration paid consists all or in part of assets other than securities of the successor or purchasing corporation, at the option of Holder, the securities of the successor or purchasing corporation having a value at the time of the transaction equivalent to the value of the Warrant Shares purchasable upon exercise of this Warrant at the time of the transaction. Any new Warrant shall provide for adjustments that shall be as nearly equivalent as may be practicable to the adjustments provided for in this Section 7. Subject to Sections 7(a)(ii) and 7(a)(iii) below, the provisions of this subparagraph (a) shall similarly apply to successive reclassifications, changes, Mergers and Sales.

(ii) In the event of a Merger or Sale where, on the record date for such Merger or Sale, the fair market value of a share of Series D Preferred (or other securities issuable upon exercise of this Warrant) based on the amount to be paid to holders of the Warrant Shares if the Warrant had been exercised, is equal to or greater than 300% of the Warrant Price, Holder may either (A) exercise its conversion or purchase right under this Warrant and such exercise will be deemed effective immediately prior to the consummation of such Merger or Sale or (B) subject to Section 3(d) above, permit the Warrant to expire upon the consummation of such Merger or Sale.

(iii) Notwithstanding anything in this Section 7(a) to the contrary, in the event of a Sale where 80% or more of the aggregate consideration for such Sale is comprised of cash, Holder may either (A) exercise its conversion or purchase right under this Warrant and such exercise will be deemed effective immediately prior to the consummation of such Sale or (B) subject to Section 3(d) above, permit the Warrant to expire upon the consummation of such Sale.

(iv) Company shall provide Holder with written notice of any proposed Merger or Sale together with such reasonable information as Holder may request in connection with such contemplated Merger or Sale giving rise to such notice, which is to be delivered to Holder not less than ten (10) business days prior to the closing of the proposed Merger or Sale.

(b) Subdivision or Combination of Shares. If Company at any time while this Warrant remains outstanding and unexpired shall subdivide or combine its outstanding shares of Series D Preferred, the Warrant Price shall be proportionately decreased and the number of Warrant Shares issuable hereunder shall be proportionately increased in the case of a subdivision and the Warrant Price shall be proportionately increased and the number of Warrant Shares issuable hereunder shall be proportionately decreased in the case of a combination.

(c) Stock Dividends and Other Distributions. If Company at any time while this Warrant is outstanding and unexpired shall (i) pay a dividend with respect to Series D Preferred payable in Series D Preferred, then the Warrant Price shall be adjusted, from and after the date of determination of shareholders entitled to receive such dividend or distribution, to that price determined by multiplying the Warrant Price in effect immediately prior to such date of determination by a fraction (A) the numerator of which shall be the total number of shares of Series D Preferred outstanding immediately prior to such dividend or distribution, and (B) the denominator of which shall be the total number of shares of Series D Preferred outstanding immediately after such dividend or distribution; or (ii) make any other distribution with respect to Series D Preferred (except any distribution specifically provided for in Sections 7(a) and 7(b)), then, in each such case, provision shall be made by Company such that Holder shall receive upon exercise of this Warrant a proportionate share of any such dividend or distribution as though it were Holder of the Warrant Shares as of the record date fixed for the determination of the shareholders of Company entitled to receive such dividend or distribution.

(d) Adjustment of Number of Shares. Upon each adjustment in the Warrant Price, the number of Warrant Shares purchasable hereunder shall be adjusted, to the nearest whole share, to the product obtained by multiplying the number of Warrant Shares purchasable immediately prior to such adjustment in the Warrant Price by a fraction, the numerator of which shall be the Warrant Price immediately prior to such adjustment and the denominator of which shall be the Warrant Price immediately thereafter.

(e) Adjustment for Dilutive Issuance. The number of shares of Common Stock issuable upon conversion of the Warrant Shares, shall be subject to adjustment, from time to time in the manner set forth in Company's Certificate of Incorporation as if the Warrant Shares were issued and outstanding on and as of the date of any such required adjustment. The provisions set forth for the Warrant Shares in Company's Certificate of Incorporation relating to the above in effect as of the date hereof may not be amended, modified or waived, without the prior written consent of Holder unless such amendment, modification or waiver affects the rights associated with the Warrant Shares in the same manner as such amendment, modification or waiver affects the rights associated with all other shares of the same series and class as the Warrant Shares.

(f) Adjustment for Pay-to-Play Transaction. In the event that Company's Certificate of Incorporation provides, or is amended to so provide, for the amendment or modification of the rights, preferences or privileges of the Series D Preferred, or the reclassification, conversion or exchange of the Series D Preferred, in the event that a holder thereof fails to participate in an equity financing transaction (a "Pay-to-Play Provision"), and in the event that such Pay-to-Play Provision becomes operative, this Warrant shall automatically and without any action required become exercisable for that number and type of shares of equity securities as would have been issued or exchanged, or would have remained outstanding, in respect of the Warrant Shares issuable hereunder had this Warrant been exercised in full prior to such event, and had Holder participated in the equity financing to the maximum extent permitted.

(g) Adjustments Upon Conversion of Series D Preferred. If all of the Series D Preferred is converted into shares of Common Stock (including without limitation pursuant to the automatic conversion provisions of Company's certificate of incorporation providing for the conversion of the Series D Preferred into Common Stock in connection with a qualified initial public offering of Company's securities), then this Warrant shall automatically become exercisable for that number of shares of Common Stock equal to the number of shares of Common Stock that would have been received if this Warrant had been exercised in full and the shares of Series D Preferred received thereupon had been simultaneously converted into shares of Common Stock immediately prior to such event, and the Warrant Price shall be automatically adjusted to equal the amount obtained by dividing the then existing Warrant Price by the number of shares of Common Stock into which one share of Series D Preferred is converted. For avoidance of doubt, the aggregate Warrant Price shall not be adjusted in connection with any adjustments pursuant to this Section 7(g).

8. Notice of Adjustments. Whenever any Warrant Price or the kind or number of securities issuable under this Warrant shall be adjusted pursuant to Section 7 hereof, Company shall prepare a certificate signed by an officer of Company setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the method by which such adjustment was calculated, and the Warrant Price and number or kind of shares issuable upon exercise of this Warrant after giving effect to such adjustment, and shall cause copies of such certificate to be mailed (by certified or registered mail, return receipt required, postage prepaid) within thirty (30) days of such adjustment to Holder as set forth in Section 19 hereof.

9. Reserved.

10. Transferability of Warrant. This Warrant is transferable on the books of Company at its principal office by the registered Holder hereof upon surrender of this Warrant properly endorsed, subject to compliance with Section 6 and applicable federal and state securities laws. Company shall issue and deliver to the transferee a new Warrant representing the Warrant so transferred. Upon any partial transfer, Company will issue and deliver to Holder a new Warrant with respect to the Warrant not so transferred. Holder shall not have any right to transfer any portion of this Warrant to any direct competitor of Company.

11. Investor and Co-Sale Rights. Company grants to Holder the rights granted to other holders of the Series D Preferred under that certain Third Amended and Restated Investor Rights Agreement dated August 22, 2006 (the "Investor Rights Agreement") and that certain Second Amended and Restated Right of First Refusal and Co-Sale Agreement dated August 22, 2006 (the "ROFR/Co-Sale Agreement") and agrees that Holder shall be added as a party to the Investor Rights Agreement and ROFR/Co-Sale Agreement, and that the Warrant Shares shall be "Registrable Securities" under the Investor Rights Agreement. Holder further agrees to be bound by the terms and conditions of the market standoff agreement, currently section 2.12, of the Investor Rights Agreement, as it may be amended from time to time (but only to the extent that such Investor Rights Agreement is not amended in a manner that treats the Holder differently than any other holder of the Series D Preferred).

12. No Fractional Shares. No fractional share of Series D Preferred will be issued in connection with any exercise or conversion hereunder, but in lieu of such fractional share Company shall make a cash payment therefor upon the basis of the Warrant Price then in effect.

13. Charges, Taxes and Expenses. Issuance of certificates for shares of Series D Preferred upon the exercise or conversion of this Warrant shall be made without charge to Holder for any United States or state of the United States documentary stamp tax or other incidental expense with respect to the issuance of such certificate, all of which taxes and expenses shall be paid by Company, and such certificates shall be issued in the name of Holder.

14. No Shareholder Rights Until Exercise. Except as expressly provided herein, this Warrant does not entitle Holder to any voting rights or other rights as a shareholder of Company prior to the exercise hereof.

15. Registry of Warrant. Company shall maintain a registry showing the name and address of the registered Holder of this Warrant. This Warrant may be surrendered for exchange or exercise, in accordance with its terms, at such office or agency of Company, and Company and Holder shall be entitled to rely in all respects, prior to written notice to the contrary, upon such registry.

16. Loss, Theft, Destruction or Mutilation of Warrant. Upon receipt by Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft, or destruction, of indemnity reasonably satisfactory to it, and, if mutilated, upon surrender and cancellation of this Warrant, Company will execute and deliver a new Warrant, having terms and conditions substantially identical to this Warrant, in lieu hereof.

17. Miscellaneous.

(a) Issue Date. The provisions of this Warrant shall be construed and shall be given effect in all respect as if it had been issued and delivered by Company on the date hereof.

(b) Successors. This Warrant shall be binding upon any successors or assigns of Company.

(c) Headings. The headings used in this Warrant are used for convenience only and are not to be considered in construing or interpreting this Warrant.

(d) Saturdays, Sundays, Holidays. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday or a Sunday or shall be a legal holiday in the State of Connecticut, then such action may be taken or such right may be exercised on the next succeeding day not a legal holiday.

(e) Attorney's Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorney's fees.

18. No Impairment. Company will not, by amendment of its Certificate of Incorporation or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of Holder hereof against impairment. Without limiting the breadth of the foregoing, Company will not cause the Series D Preferred into which this Warrant is exercisable or convertible to be converted into Common Stock unless such conversion is effected as part of the conversion of all Company's outstanding series of Series D Preferred and other senior securities into Common Stock.

19. Addresses. Any notice required or permitted hereunder shall be in writing and shall be mailed by overnight courier, registered or certified mail, return receipt requested, and postage prepaid, or otherwise delivered by hand or by messenger, addressed as set forth below, or at such other address as Company or Holder hereof shall have furnished to the other party in accordance with the delivery instructions set forth in this Section 19.

If to Company: Codexis Inc.
Chief Financial Officer
200 Penobscot Drive
Redwood City, CA 94063
Attention: Mr. Robert Breuil
Phone: (650) 421-8120
Facsimile: (650) 298-5837

Codexis, Inc.
General Counsel
200 Penobscot Drive
Redwood City, CA 94063
Attention: Mr. Doug Sheehy
Phone: (650) 421-8160
Facsimile: (650) 421-8108

If to Holder: _____

If mailed by registered or certified mail, return receipt requested, and postage prepaid, notice shall be deemed to be given five (5) days after being sent, and if sent by overnight courier, by hand or by messenger, notice shall be deemed to be given when delivered (if on a business day, and if not, on the next business day).

20. WAIVER OF JURY TRIAL. EACH OF THE PARTIES HERETO HEREBY WAIVES TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS WARRANT OR THE WARRANT SHARES.

21. GOVERNING LAW. THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, Company has caused this Warrant to be executed by its officer thereunto duly authorized.

CODEXIS, INC.

By: _____
Name: Alan Shaw
Title: President and Chief Executive Officer

Dated as of September 28, 2007.

NOTICE OF EXERCISE

To:

Codexis, Inc.
200 Penobscot Drive
Redwood City, California 04063
Attn: General Counsel

1. The undersigned Warrantholder ("Holder") elects to acquire shares of the Series D Convertible Preferred Stock (the "Series D Preferred") of Codexis, Inc. (the "Company"), pursuant to the terms of the Stock Purchase Warrant dated [_____, 20__] (the "Warrant").

2. Holder exercises its rights under the Warrant as set forth below:

( ) Holder elects to purchase _____ shares of Series D Preferred as provided in Section 3(a) and tenders herewith a check in the amount of $_____ as payment of the purchase price.

( ) Holder elects to convert the purchase rights into shares of Series D Preferred as provided in Section 3(b) of the Warrant.

3. Holder surrenders the Warrant with this Notice of Exercise.

Holder represents that it is acquiring the aforesaid shares of Series D Preferred for investment and not with a view to or for resale in connection with distribution and that Holder has no present intention of distributing or reselling the shares.

Please issue a certificate representing the shares of the Series D Preferred in the name of Holder or in such other name as is specified below:

Name: _____

Address: _____

Taxpayer I.D.: _____

[NAME OF HOLDER]

By: _____
Name: _____
Title: _____

Date: _____ __, 200__

ANNEX A

CAPITALIZATION TABLE

[SEE ATTACHED]

A.

REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (the "**Agreement**") is entered into by and among Codexis, Inc., a Delaware corporation (the "**Company**") and the shareholders of JFC—Jülich Fine Chemicals GmbH ("**JFC**"), Dr. Matthias Arnold, Dr. Thomas Daußmann, Dr. Thomas Drescher, Dr. Karl Rix, Dr. Falk Schneider, Mr. Horst Leutenberg and Mr. Thomas Kalthoff (including their successors and assigns, each a "**Holder**" and collectively, the "**Holders**").

RECITALS

WHEREAS, the Holders and the Company are parties to that certain Stock Purchase Agreement recorded today under the role of deeds [•]/2005 of the notary public Dr. Marc Hermanns, Cologne, Germany (the "**Purchase Agreement**"), pursuant to which the Company is acquiring from the Holders the outstanding shares of capital stock of JFC and in consideration therefore, among other things, the Company has agreed, upon the terms and subject to the conditions of the Purchase Agreement, to issue 312,500 shares (the "**Shares**") of the Company's common stock (the "**Common Stock**") to such Holders; and

WHEREAS, in connection with the consummation of the transaction contemplated by the Purchase Agreement, the parties desire to enter into this Agreement in order to grant "piggyback" registration rights to the Holders as set forth below.

NOW, THEREFORE, in consideration of the representations, warranties, covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1.
GENERAL

1.1 **Definitions**. As used in this Agreement the following terms shall have the following respective meanings:

(a) "**Affiliate**" means shall mean any corporation or other entity that is directly or indirectly controlling, controlled by or under the common control with a party hereto. For the purpose of this definition, "control" shall mean the direct or indirect ownership of at least fifty percent (50%) of the outstanding shares or other voting rights of the subject entity to elect directors or equivalent governing body, or if not meeting the preceding, any entity owned or controlled by or owning or controlling at the maximum control or ownership right permitted in the country where such entity exists.

(b) "**Exchange Act**" means the United States Securities Exchange Act of 1934, as amended

(c) "**Investor Rights Agreement**" shall mean the Second Amended and Restated Investor Rights Agreement, dated July 26, 2004, by and among the Company and the investors listed on Exhibit A thereto, as the same may be amended, modified • or supplemented in accordance with its terms after the date hereof

(d) "**Investors**" shall have the meaning given such term in the investor Rights Agreement.

(e) "**Initial Offering**" means the Company's first firm commitment underwritten public offering of its Common Stock registered under the Securities Act that results in the Company's preferred stock being converted into Common Stock.

(f) "**register**", "**registered**", **and** "**registration**" refer to a registration effected by preparing and filing a registration statement in compliance with the Securities Act, and the declaration or ordering of effectiveness of such registration statement or document.

(g) "**Registrable Securities**" means (a) the Shares and (b) any Common Stock of the Company issued as (or issuable upon the conversion or exercise of any warrant, right or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, such above-described securities. Notwithstanding the foregoing, Registrable Securities shall not include any securities sold by a person to the public either pursuant to a registration statement or Rule 144 or sold in a private transaction in which the transferor's rights under Section 2 of this Agreement are not assigned.

(h) "**Registration Expenses**" shall mean all expenses incurred by the Company in complying with Section 2.1 hereof, including, without limitation, all registration and filing fees, printing expenses, fees and disbursements of counsel for the Company, blue sky fees and expenses and the expense of any special audits incident to or required by any such registration (but excluding the compensation of regular employees of the Company, which shall be paid in any event by the Company).

(i) "**Securities Act**" shall mean the United States Securities Act of 1933, as amended.

(j) "**Selling Expenses**" shall mean all underwriting discounts and selling commissions applicable to the sale, and the fees and disbursements of counsel for the Holders, if any.

SECTION 2.
REGISTRATION RIGHTS

2.1 **Piggyback Registrations**. The Company shall notify all Holders in writing at least fifteen (15) days prior to the filing of any registration statement under the Securities Act for purposes of a public offering of securities of the Company (including, but not limited to, registration statements relating to secondary offerings of securities of the Company, but excluding a registration statement (i) relating to any employee benefit plan or (ii) with respect to any corporate reorganization or transaction under Rule 145 of the Securities Act, including any registration statements related to the resale of securities issued in such a transaction or (iii) related to stock issued upon conversion of debt securities) and will afford each such Holder an opportunity to include in such registration statement all or part of such Registrable Securities held by such Holder. Each Holder desiring to include in any such registration statement all or any part of the Registrable Securities held by it shall, within seven (7) days after the above-described notice from the Company, so notify the Company in writing. Such notice shall state the intended method of disposition of the Registrable Securities by such Holder. If a Holder decides not to include all of its Registrable Securities in any registration statement thereafter filed by the Company, or if the Holder's Registrable Securities are excluded therefrom by the provisions of Section 2.1(a), such Holder shall nevertheless continue to have the right to include any Registrable Securities in any subsequent registration statement or registration statements as may be filed by the Company with respect to offerings of its securities, all upon the terms and conditions set forth herein.

(a) Underwriting. If the registration statement under which the Company gives notice under this Section 2.1 is for an underwritten offering, the Company shall so advise the Holders. In such event, the right of any such Holder to be included in a registration pursuant to this Section 2.1 shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their Registrable Securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by the Company. Notwithstanding any other provision of this Agreement, if the underwriter determines in good faith that marketing factors require a limitation of the number of shares to be underwritten, the number of shares that may be included in the underwriting shall be allocated, first, to the Company; second, to the Investors in accordance with the terms of the Investor Rights Agreement; third, to the Holders on a *pro rata* basis based on the total number of Registrable Securities held by the Holders; and fourth, to any other stockholder of the Company (other than an Investor or a Holder) on a *pro rata* basis. No such reduction shall reduce the amount of securities of the selling Holders included in the registration below twenty-five percent (25%) of the total amount of securities included in such

registration; provided, however, that if such registration does not include shares of any stockholder of the Company other than Investors any or all of the Registrable Securities of the Holders may be excluded in accordance with the immediately preceding sentence. If any Holder disapproves of the terms of any such underwriting, such Holder may elect to withdraw therefrom by written notice to the Company and the underwriter, delivered at least ten (10) business days prior to the effective date of the registration statement. Any Registrable Securities excluded or withdrawn from such underwriting shall be excluded and withdrawn from the registration. For any Holder that is a partnership or corporation, the partners, retired partners and stockholders of such Holder, or the estates and family members of any such partners and retired partners and any trusts for the benefit of any of the foregoing person shall be deemed to be a single "Holder," and any *pro rata* reduction with respect to such "Holder" shall be based upon the aggregate amount of shares carrying registration rights owned by all entities and individuals included in such "Holder," as defined in this sentence.

(b) Right to Terminate Registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.1 prior to the effectiveness of such registration whether or not any Holder has elected to include securities in such registration. The Registration Expenses of such withdrawn registration shall be borne by the Company in accordance with Section 2.2 hereof.

2.2 **Expenses of Registration**. Except as specifically provided herein, all Registration Expenses incurred in connection with any registration, qualification or compliance pursuant to Section 2.1 shall be borne by the Company. All Selling Expenses incurred in connection with any registrations hereunder, shall be borne by the holders of the securities so registered pro rata on the basis of the number of shares so registered.

2.3 **Termination of Registration Rights**. All registration rights granted under this Section 2 shall terminate and be of no further force and effect five (5) years after the date of the Company's Initial Offering. In addition, a Holder's registration rights shall expire if (a) the Company has completed its Initial Offering and is subject to the provisions of the Exchange Act, and (b) the requirements of paragraphs (c), (e), (f) and (h) of Rule 144 promulgated under the Securities Act do not apply to Registrable Securities held by and issuable to such Holder (and its affiliates) as a result of Rule 144(k) promulgated under the Securities Act.

2.4 **Delay of Registration; Furnishing Information**.

(a) No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any such registration as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

(b) It shall be a condition precedent to the obligations of the Company to take any action pursuant to Section 2.1 above that the selling Holders shall furnish to the Company such information regarding themselves, the Registrable Securities held by them and the intended method of disposition of such securities as shall be required to effect the registration of their Registrable Securities.

2.5 **Assignment of Registration Rights**. The rights to cause the Company to register Registrable Securities pursuant to this Section 2 may be assigned by a Holder to a transferee or assignee of Registrable Securities that (a) is a subsidiary, parent, general partner, limited partner, retired partner, member or retired member of a Holder, (b) is a Holder's family member or trust for the benefit of an individual Holder, or (c) acquires at least fifty thousand (50,000) shares of Registrable Securities (as adjusted for stock splits and combinations); or (d) is an Affiliate of such Holder provided, however, that (i) the transferor shall, within ten (10) days after such transfer, furnish to the Company written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned, and (ii) such transferee shall agree to be subject to all restrictions set forth in this Agreement.

2.6 **"Market Stand-Off" Agreement.** Each Holder hereby agrees that such Holder shall not sell, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, any Common Stock (or other securities) of the Company held by such Holder (other than those included in the registration) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Company not to exceed one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act; provided that:

i. such agreement shall apply only to the Company's Initial Offering; and

ii. all executive officers and directors of the Company and holders of at least one percent (1%) of the Company's capital stock (on an as converted basis) and all other persons with registration rights (whether or not pursuant to this Agreement) enter into similar agreements.

2.7 **Agreement to Furnish Information**. Each Holder agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter that are consistent with the Holder's obligations under Section 2.6 or that are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common Stock (or other securities) of the Company, each Holder shall provide, within ten (10) days of such request, such information as may be required by the Company or such representative in connection with the completion of any public offering of the

Company's securities pursuant to a registration statement filed under the Securities Act. The obligations described in Section 2.6 above and this Section 2.7 shall not apply to a registration statement (i) relating to any employee benefit plan or (ii) with respect to any corporate reorganization or transaction under Rule 145 of the Securities Act, including any registration statements related to the resale of securities issued in such a transaction or (iii) related to stock issued upon conversion of debt securities. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of the one hundred eighty (180) day period. Each Holder agrees that any transferee of any shares of Registrable Securities shall be bound by Sections 2.6 and 2.7. The underwriters of the Company's stock are intended third party beneficiaries of Sections 2.6 and 2.7 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

2.8 **Stock Milestone Shares**. In the event that the Company in 2006 issues additional shares of Common Stock to the Holders or any of their transferees as a 2005 stock milestone payment pursuant to Section 2.5(c) of the Purchase Agreement (the "**2005 Stock Milestone Shares**"), the provisions of this Agreement as applicable to the Shares shall also be applicable to such 2005 Stock Milestone Shares.

2.9 **Indemnification**. In the event any Registrable Securities are included in a registration statement under Section 2.1:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each Holder, the partners, officers and directors of each Holder, any underwriter (as defined in the Securities Act) for such Holder and each person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any of the following statements, omissions or violations (collectively a "**Violation**") by the Company: (1) any untrue statement or alleged untrue statement of a material fact contained in such registration statement, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto, (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading, or (iii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act, any state securities law or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities law in connection with the offering covered by such registration statement; and the Company will pay as incurred to each such Holder, partner, officer, director, underwriter or controlling person for any legal or other expenses reasonably incurred by them in connection with investigating or defending

any such loss, claim, damage, liability or action; provided, however, that the indemnity agreement contained in this Section 2.9(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable in any such case for any such loss, claim, damage, liability or action to the extent that it arises out of or is based upon a Violation that occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by such Holder, partner, officer, director, underwriter or controlling person of such Holder.

(b) To the extent permitted by law, each Holder will, if Registrable Securities held by such Holder are included in the securities as to which such registration qualifications or compliance is being effected, indemnify and hold harmless the Company, each of its directors, its officers and each person, if any, who controls the Company within the meaning of the Securities Act, any underwriter and any other Holder selling securities under such registration statement or any of such other Holder's partners, directors or officers or any person who controls such Holder, against any losses, claims, damages or liabilities (joint or several) to which the Company or any such director, officer, controlling person, underwriter or other such Holder, or partner, director, officer or controlling person of such other Holder may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by such Holder under an instrument duly executed by such Holder and stated to be specifically for use in connection with such registration; and each such Holder will pay as incurred any legal or other expenses reasonably incurred by the Company or any such director, officer, controlling person, underwriter or other Holder, or partner, officer, director or controlling person of such other Holder in connection with investigating or defending any such loss, claim, damage, liability or action if it is judicially determined that there was such a Violation; provided, however, that the indemnity agreement contained in this Section 2.9(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; provided further, that in no event shall any indemnity under this Section 2.9 exceed the proceeds from the offering received by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.9 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be

made against any indemnifying party under this Section 2.9, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party shall have the right to retain its own counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action, if materially prejudicial to its ability to defend such action, shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.9, but the omission so to deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.9.

(d) If the indemnification provided for in this Section 2.9 is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any losses, claims, damages or liabilities referred to herein, the indemnifying party, in lieu of indemnifying such indemnified party thereunder, shall to the extent permitted by applicable law contribute to the amount paid or payable by such indemnified party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the Violation(s) that resulted in such loss, claim, damage or liability, as well as any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by a court of law by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission; provided, that in no event shall any contribution by a Holder hereunder exceed the proceeds from the offering received by such Holder.

(e) The obligations of the Company and Holders under this Section 2.9 shall survive completion of any offering of Registrable Securities in a registration statement and the termination of this Agreement. No indemnifying party, in the defense of any such claim or litigation, shall, except with the consent of each indemnified party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such

indemnified party of a release from all liability in respect to such claim or litigation.

2.10 **Rule 144 Reporting**. With a view to making available to the Holders the benefits of certain rules and regulations of the United States Securities and Exchange Commission (the "**Commission**") that may permit the sale of the Registrable Securities to the public without registration, the Company agrees to use its reasonable best efforts to:

(a) Make and keep public information available, as those terms are understood and defined in Commission Rule 144 or any similar or analogous rule promulgated under the Securities Act, at all times after the effective date of the first registration filed by the Company for an offering of its securities to the general public;

(b) File with the Commission, in a timely manner, all reports and other documents required of the Company under the Exchange Act; and

(c) So long as a Holder owns any Registrable Securities, furnish to such Holder forthwith upon request: a written statement by the Company as to its compliance with the reporting requirements of Rule 144 of the Securities Act, and of the Exchange Act (at any time after it has become subject to such reporting requirements); a copy of the most recent annual or quarterly report of the Company; and such other reports and documents as a Holder may reasonably request in availing itself of any rule or regulation of the Commission allowing it to sell any such securities without registration.

SECTION 3.
MISCELLANEOUS

3.1 **Governing Law**. This Agreement shall be governed by and construed under the laws of the State of California, United States of America, as applied to agreements among California residents entered into and to be performed entirely within California.

3.2 **Successors and Assigns**. Except as otherwise expressly provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors, and administrators of the parties hereto and shall inure to the benefit of and be enforceable by each person who shall be a holder of Registrable Securities from time to time; provided, however, that prior to the receipt by the Company of adequate written notice of the transfer of any Registrable Securities specifying the full name and address of the transferee, the Company may deem and treat the person listed as the holder of such shares in its records as the absolute owner and holder of such shares for all purposes, including the payment of dividends or any redemption price.

3.3 **Entire Agreement**. This Agreement constitutes the full and entire understanding and agreement between the parties with regard to the subject matter hereof and no party shall be liable or bound to any other in any manner by any representations, warranties, covenants and agreements except as specifically set forth herein and therein.

3.4 **Severability**. In the event one or more of the provisions of this Agreement should, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provisions of this Agreement, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

3.5 **Amendment and Waiver**.

(a) Except as otherwise expressly provided, this Agreement may be amended or modified only upon the written consent of (i) the Company and (ii) the holders of at least a majority of the Shares.

(b) Except as otherwise expressly provided, the obligations of the Company and the rights of the Holders under this Agreement may be waived only with the written consent of (i) the Company and (ii) the holders of at least a majority of the Shares.

(c) For the purposes of determining the number of Holders entitled to vote or exercise any rights hereunder, the Company shall be entitled to rely solely on the list of record holders of its stock as maintained by or on behalf of the Company.

3.6 **Notices**.

(a) All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the Company or to the Holders' Agent (as defined below under (b)) if to be given to any or all of the Holders, (b) when sent by confirmed facsimile if sent during normal business hours of the Company or the Holders' Agent, respectively; if not, then on the next business day, (c) five (5) days after having been sent to the Company or the Holders' Agent, respectively, by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with an overnight courier, specifying next day delivery to the Company or the Holders' Agent, respectively, with written verification of receipt. All communications shall be sent to the party to be notified, in the case of any or all of the Holders to the Holders' Agent, at the address as set forth below under (c) or at such other address as the Company or the Holders' Agent, as the case may be, may designate by ten (10) days advance written notice to the relevant other party hereto.

(b) The Holders hereby jointly appoint Dr. Thomas Drescher as their agent (the "**Holders' Agent**"), until they notify the Company in writing of the

appointment of another Holder as new Holders' Agent; until receipt of that notification Dr. Drescher will be considered the appointed Holders' Agent for purposes of this Agreement. The Holders authorize Dr. Drescher to receive on their behalf all notices, declarations and documents. The Holders hereby release the Holders' Agent from the restrictions of self dealing (including those restrictions under Sec. 181 of the German Civil Code (*BGB*)).

(c) The initial addresses for service of notices and other declarations to either the Company or the Holders' Agent in accordance with (a) above shall be as follows:

in the case of the **Holders**:

Dr. Thomas Drescher (as *Holders' Agent*)
c/o JFC - Jülich Fine Chemicals GmbH
Prof.-Rehm-Str. 1
52428 Jülich/Germany
FAX: +49 (2461) 980-116;

in the case of the **Company**:

Codexis, Inc.
Attention: Tassos Gianakakos
200 Penobscot Drive
Redwood City, CA 94063 / U.S.A.
FAX: +1 (650) 2985449

3.7 **Titles and Subtitles**. The titles of the sections and subsections of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

3.8 **Aggregation of Stock**. All shares of Registrable Securities held or acquired by Affiliates or persons or entities under common management or control shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

3.9 **Attorneys' Fees**. In the event that any suit or action is instituted to enforce any provision in this Agreement, the prevailing party in such dispute shall be entitled to recover from the losing party all fees, costs and expenses of enforcing any right of such prevailing party under or with respect to this Agreement, including without limitation, such reasonable fees and expenses of attorneys and accountants, which shall include, without limitation, all fees, costs and expenses of appeals.

Cologne, February 11, 2005

/s/ Thomas Daußmann
(Dr. Thomas Daußmann)

/s/ Thomas Drescher
(Dr. Thomas Drescher)

/s/ Matthias Arnold
(Dr. Matthias Arnold)

/s/ Karl Rix
(Dr. Karl Rix)

/s/ Falk Schneider
(Dr. Falk Schneider)

/s/ Horst Leutenberg
(Horst Leutenberg)

/s/ Thomas Kalthoff
(Thomas Kalthoff)

/s/ Roland Maaß
(Codexis, Inc.)

— on the basis of power of attorney dated February 7, 2005

Exhibit 10.1

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXECUTION COPY

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT, dated as of September 28, 2007 (as amended, restated, supplemented or otherwise modified from time to time (this "Agreement")) is among GENERAL ELECTRIC CAPITAL CORPORATION ("GECC"), in its capacity as agent for Lenders (as defined below), together with its successors and assigns in such capacity, "Agent"), OXFORD FINANCE CORPORATION ("Oxford"), the other financial institutions who are or hereafter become parties to this Agreement as lenders (together with GECC and Oxford, collectively the "Lenders", and each individually, a "Lender") and CODEXIS, INC., a Delaware corporation ("Borrower"). Agent has an office at 83 Wooster Heights Road, Fifth Floor, Danbury, CT 06810 (the "Agent's Office"). Borrower's mailing address and chief executive office is 200 Penobscot Drive, Redwood City, CA 94063.

RECITALS

Borrower wishes to borrow funds from time to time from Lenders, and Lenders desire to make loans, advances and other extensions of credit, severally and not jointly, to Borrower from time to time pursuant to the terms and conditions of this Agreement.

AGREEMENT

Borrower, Agent and Lenders agree as follows:

1. DEFINITIONS.

As used in this Agreement, all capitalized terms shall have the definitions as provided herein. Any accounting term used but not defined herein shall be construed in accordance with generally accepted accounting principles in the United States of America, as in effect from time to time ("GAAP") and all calculations shall be made in accordance with GAAP. The term "financial statements" shall include the accompanying notes and schedules. All other terms used but not defined herein shall have the meaning given to such terms in the Uniform Commercial Code as adopted in the State of New York, as amended and supplemented from time to time (the "UCC").

2. LOANS AND TERMS OF PAYMENT.

2.1. **Promise to Pay.** Borrower promises to pay Agent, for the ratable accounts of Lenders, when due pursuant to the terms hereof, the aggregate unpaid principal amount of all loans, advances and other extensions of credit made severally by the Lenders to Borrower, together with interest on the unpaid principal amount of such loans, advances and other extensions of credit at the interest rates set forth herein.

2.2. **Term Loans.**

(a) Commitment. Subject to the terms and conditions hereof, each Lender, severally, but not jointly, agrees to make term loans (each a "Term Loan" and collectively, the "Term Loans") to Borrower from time to time on any Business Day (as defined below) during the period from the Closing Date (as defined below) until March 31, 2008 (the "Commitment Termination Date") in an aggregate principal amount not to exceed such Lender's commitment as identified on Schedule A hereto (such commitment of each Lender as it may be amended to reflect assignments made in accordance with this Agreement or terminated or reduced in accordance with this Agreement, its

"Commitment", and the aggregate of all such commitments, the "Commitments"). Notwithstanding the foregoing, the aggregate principal amount of the Term Loans made hereunder shall not exceed $15,000,000 (the "Total Commitment"). Each Lender's obligation to fund a Term Loan shall be limited to such Lender's Pro Rata Share (as defined below) of such Term Loan. Subject to the terms and conditions hereof, the initial Term Loan shall be made on the Closing Date in an aggregate principal amount equal to $10,000,000 (the "Initial Term Loan"). After the Initial Term Loan, Borrower may request no more than five (5) additional Term Loans and such subsequent Term Loan must be in an amount equal to at least $1,000,000.

(b) Method of Borrowing. When Borrower desires a Term Loan, Borrower will notify Agent (which notice shall be irrevocable) by facsimile (or by telephone, provided that such telephonic notice shall be promptly confirmed in writing, but in any event on or before the following Business Day) on the date that is ten (10) Business Days prior to the day the Term Loan is to be made (or such shorter period of time as Agent may agree). Agent and Lenders may act without liability upon the basis of such written or telephonic notice believed by Agent to be from Borrower's chief executive officer, chief financial officer, general counsel or controller (each of such officers, a "Proper Officer"). Agent and Lenders shall have no duty to verify the authenticity of the signature appearing on any such written notice.

(c) Funding of Term Loans. Promptly after receiving a request for a Term Loan, Agent shall notify each Lender of the contents of such request and such Lender's Pro Rata Share of the requested Term Loan. Upon the terms and subject to the conditions set forth herein, each Lender, severally and not jointly, shall make available to Agent its Pro Rata Share of the requested Term Loan, in lawful money of the United States of America in immediately available funds, to the Collection Account (as defined below) prior to 11:00 a.m. Connecticut time on the specified date. Agent shall, unless it shall have determined that one of the conditions set forth in Section 4.1 or 4.2, as applicable, has not been satisfied, by 4:00 p.m. Connecticut time on such day, credit the amounts received by it in like funds to Borrower by wire transfer to, unless otherwise specified in a Disbursement Letter (as defined below), the following deposit account of Borrower (or such other deposit account as specified in writing by a Proper Officer of Borrower and acceptable to Agent) (the "Designated Deposit Account"):

Bank Name: [*]
Bank Address: [*]
[*]
[*]
[*]
ABA#: [*]
Account #: [*]
Account Name: [*]
Ref: [*]

(d) Notes. The Term Loans of each Lender shall be evidenced by a promissory note substantially in the form of Exhibit A hereto (each a "Note" and, collectively, the "Notes"), and Borrower shall execute and deliver a Note to each Lender. Each Note shall represent the obligation of Borrower to pay to such Lender the amount of such Lender's Commitment or, if less, the aggregate unpaid principal amount of all Term Loans made by such Lender to or on behalf of Borrower pursuant to this Agreement, in each case together with interest thereon as prescribed in Section 2.3(b).

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(e) Agent May Assume Funding. Unless Agent shall have received notice from a Lender prior to the date of any particular Term Loan that such Lender will not make available to Agent such Lender's Pro Rata Share of such Term Loan, Agent may assume that such Lender has made such amount available to it on the date of such Term Loan in accordance with subsection (c) of this Section 2.2, and may (but shall not be obligated to), in reliance upon such assumption, make available a corresponding amount for the account of Borrower on such date. If and to the extent that such Lender shall not have so made such amount available to Agent, such Lender and Borrower severally agree to repay to Agent forthwith on demand such corresponding amount together with interest thereon, for each day from the day such amount is made available to Borrower until the day such amount is repaid to Agent, at (i) in the case of Borrower, a rate per annum equal to the interest rate applicable thereto pursuant to Section 2.3(a), and (ii) in the case of such Lender, a floating rate per annum equal to, for each day from the day such amount is made available to Borrower until such amount is reimbursed to Agent, the weighted average of the rates on overnight federal funds transactions among members of the Federal Reserve System, as determined by Agent in its sole discretion (the "Federal Funds Rate") for the first Business Day and thereafter, at the interest rate applicable to such Term Loan. If such Lender shall repay such corresponding amount to Agent, the amount so repaid shall constitute such Lender's loan included in such Term Loan for purposes of this Agreement.

2.3. **Interest and Repayment.**

(a) Interest. Each Term Loan shall accrue interest in arrears from the date made until such Term Loan is fully repaid at a fixed per annum rate of interest equal to the sum of (i) the greater of (A) the Treasury Rate (as defined below) in effect on the day that is three (3) Business Days prior to the making of such Term Loan as determined by Agent or (B) 4.60%, plus (ii) 4.83%. All computations of interest and fees calculated on a per annum basis shall be made by Agent on the basis of a 360-day year, in each case for the actual number of days occurring in the period for which such interest and fees are payable. Each determination of an interest rate or the amount of a fee hereunder shall be made by Agent and shall be conclusive, binding and final for all purposes, absent manifest error. As used herein, the term "Treasury Rate" means a per annum rate of interest equal to the rate published by the Board of Governors of the Federal Reserve System in Federal Reserve Statistical Release H.15 entitled "Selected Interest Rates" under the heading "U.S. Government Securities/Treasury Constant Maturities" as the three year treasuries constant maturities rate. In the event Release H.15 is no longer published, Agent shall select a comparable publication to determine the U.S. Treasury note yield to maturity.

(b) Payments of Principal and Interest. For each Term Loan, Borrower shall pay to the Agent, for the ratable benefit of the Lenders, (i) six (6) consecutive payments of interest only (payable in arrears) at the rate of interest determined in accordance with Section 2.3(a) on the first day of each calendar month (a "Scheduled Payment Date") commencing on the first day of the second calendar month occurring after the month during which such Term Loan was made and (ii) thirty-six (36) equal consecutive payments of principal and interest (payable in arrears) at the rate of interest determined in accordance with Section 2.3(a) (a "Scheduled Payment") on each Scheduled Payment Date commencing on the first day of the eighth calendar month occurring after the month

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during which such Term Loan was made. The amount of each such payment of principal and interest shall be calculated by the Agent and shall be sufficient to fully amortize the principal and interest due with respect to the applicable Term Loan over such repayment period. Notwithstanding the foregoing, all unpaid principal and accrued interest with respect to a Term Loan is due and payable in full to Agent, for the ratable benefit of Lenders, on the earlier of (A) the first day of the forty-third (43rd) month following the date such Term Loan was made or (B) the date that such Term Loan otherwise becomes due and payable hereunder, whether by acceleration of the Obligations pursuant to Section 8.2 or otherwise (the earlier of (A) or (B), the "Applicable Term Loan Maturity Date"). Each Scheduled Payment, when paid, shall be applied first to the payment of accrued and unpaid interest on the applicable Term Loan and then to unpaid principal balance of such Term Loan. Without limiting the foregoing, all Obligations shall be due and payable on the Applicable Term Loan Maturity Date for the last Term Loan made.

Notwithstanding any provision in this Agreement to the contrary, all unpaid principal and accrued interest with respect to each Term Loan and all other Obligations hereunder shall become due and payable in full on the earlier to occur of (such earlier date, the "Final Maturity Date"): (1) the Applicable Term Loan Maturity Date for the last Term Loan made hereunder or (2) the date that is 91 days before the first date on which any holders of the Series E preferred stock proposed to be issued by Borrower pursuant to Section 7.2(g) shall have any contractual right or rights set forth in Borrower's organizational documents to redeem or demand repurchase of such preferred stock.

(c) Interim Interest Payment. For each Term Loan, Borrower shall make an advance payment of interest on the date of funding such Term Loan for the period from such date to and including the last day of the month in which such Term Loan was so made.

(d) No Reborrowing. Once a Term Loan is repaid or prepaid, it cannot be reborrowed.

(e) Payments. All payments (including prepayments) to be made by Borrower under any Debt Document shall be made in immediately available funds in U.S. dollars, without setoff or counterclaim to the Collection Account (as defined below) before 1:00 p.m. Connecticut time on the date when due. All payments received by Agent after 1:00 p.m. Connecticut time on any Business Day or at any time on a day that is not a Business Day shall be deemed to be received on the next Business Day. Whenever any payment required under this Agreement would otherwise be due on a date that is not a Business Day, such payment shall instead be due on the next Business Day, and additional fees or interest, as the case may be, shall accrue and be payable for the period of such extension. All regularly scheduled payments due to Agent and Lenders under Section 2.3(b) shall be effected by automatic debit of the appropriate funds from Borrower's operating account specified on the EPS Setup Form (as defined below). As used herein, the term "Collection Account" means the following account of Agent (or such other account as Agent shall identify to Borrower in writing):

Bank Name: [*]
Bank Address: [*]
ABA#: [*]
Account Number: [*]
Account Name: [*]
Ref: [*]

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(f) Withholdings and Increased Costs. All payments shall be made free and clear of any taxes, withholdings, duties, impositions or other charges (other than taxes on the overall net income of any Lender and comparable taxes), such that Agent and Lenders will receive the entire amount of any Obligations (as defined below), regardless of source of payment. If Agent or any Lender shall have determined that the introduction of or any change in, after the date hereof, any law, treaty, governmental (or quasi-governmental) rule, regulation, guideline or order reduces the rate of return on Agent or such Lender's capital as a consequence of its obligations hereunder or increases the cost to Agent or such Lender of agreeing to make or making, funding or maintaining any Term Loan, then Borrower shall from time to time upon written demand by Agent or such Lender (with a copy of such demand to Agent) promptly pay to Agent for its own account or for the account of such Lender, as the case may be, additional amounts sufficient to compensate Agent or such Lender for such reduction or for such increased cost; provided that no Lender shall be entitled to payment of any amounts under this Section 2.3(f) unless it has delivered such statement to Borrower within 180 days after the occurrence of the changes or events giving rise to the increased costs to or reduction in amounts received by such Lender. A certificate as to the amount of such reduction or such increased cost submitted by Agent or such Lender (with a copy to Agent) to Borrower shall be conclusive and binding on Borrower, absent manifest error. This provision shall survive the termination of this Agreement.

(g) Loan Records. Each Lender shall maintain in accordance with its usual practice accounts evidencing the Obligations of Borrower to such Lender resulting from each Term Loan of such Lender from time to time, including the amounts of principal and interest payable and paid to such Lender from time to time under this Agreement. Agent shall maintain in accordance with its usual practice a loan account on its books to record the Term Loans and other extensions of credit made by Lenders hereunder, and all payments thereon made by Borrower. The entries made in the such accounts shall, to the extent permitted by applicable law, be prima facie evidence of the existence and amounts of the Obligations recorded therein; provided, however, that no error in such account and no failure of any Lender or Agent to maintain any such account shall affect the obligations of Borrower to repay the Obligations in accordance with their terms.

2.4. **Prepayments.** Borrower can voluntarily prepay, upon 3 Business Days' prior written notice to Agent, any Term Loan in full, but not in part. Upon the date of (a) any voluntary prepayment of a Term Loan in accordance with the immediately preceding sentence or (b) any mandatory prepayment of a Term Loan required under this Agreement (whether by acceleration of the Obligations pursuant to Section 8.2 or otherwise), Borrower shall pay to Agent, for the ratable benefit of the Lenders, a sum equal to (i) all outstanding principal plus any unpaid interest accrued through the date of such prepayment with respect to the such Term Loan, (ii) the Final Payment Fee (as such term is defined in Section 2.7(d)) for such Term Loan, and (iii) a prepayment premium (as yield maintenance for loss of bargain and not as a penalty) equal to: (A) [*] on such principal prepayment amount, if such prepayment is made on or before the one year anniversary of such Term Loan, (B) [*] on such principal prepayment amount, if such prepayment is made after the one year anniversary of such Term Loan but on or before the two year anniversary of such Term Loan, and (C) [*] on such principal prepayment amount, if such prepayment is made after the two year anniversary of such Term Loan but before the Applicable Term Loan Maturity Date for such Term Loan; provided, however, that Borrower shall not be obligated to pay the amounts described in clauses (A), (B) or (C) above in connection with a prepayment in full of the Term Loan and the other Obligations hereunder in the event that either (i) Borrower has requested in writing that the Requisite Lenders consent to a transaction that is not permitted under Section 7.5 and the Requisite Lenders have not consented to such transaction on or prior to the Response Date (as defined below) or (ii)

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Borrower has requested in writing that the Requisite Lenders consent to any amendment, modification or waiver of the Maxygen License Agreement for which the consent of the Requisite Lenders is required under Section 7.11(a) and the Requisite Lenders have not consented to such amendment, modification or waiver on or prior to the Response Date. Borrower shall have no obligation upon any prepayment of any Term Loan hereunder to pay, in addition to the amounts specified in this Section 2.4, any yield maintenance with respect to unaccrued interest that would have accrued through the maturity of a Term Loan had such Term Loan not been prepaid.

2.5. **Late Fees.** If Agent does not receive any Scheduled Payment or other payment under any Debt Document from Borrower within 3 days after its due date, then, at Agent's election, Borrower agrees to pay to Agent for the ratable benefit of all Lenders, a late fee equal to (a) [*] of the amount of such unpaid payment or (b) such lesser amount that, if paid, would not cause the interest and fees paid by Borrower under this Agreement to exceed the Maximum Lawful Rate (as defined below) (the "Late Fee").

2.6. **Default Rate.** All Term Loans and other Obligations shall bear interest, at the option of Agent or upon the request of the Requisite Lenders (as defined below), from and after the occurrence and during the continuation of an Event of Default (as such terms are defined below), at a rate equal to the lesser of (a) [*] above the rate of interest applicable to such Obligations as set forth in Section 2.3(a) immediately prior to the occurrence of the Event of Default and (b) the Maximum Lawful Rate (the "Default Rate"). The application of the Default Rate shall not be interpreted or deemed to extend any cure period or waive any Default or Event of Default or otherwise limit the Agent's or any Lender's right or remedies hereunder. All interest payable at the Default Rate shall be payable on demand.

2.7. **Lender Fees.**

(a) Upfront Payment. Prior to the advance of the Initial Term Loan, in consideration for Lenders' agreement to underwrite the transaction contemplated by this Agreement, Borrower has paid to Agent, for the ratable benefit of Lenders, and Agent hereby acknowledges receipt of, a payment in the amount of $25,000 (the "Upfront Payment"). The Upfront Payment shall be applied towards the fees and expenses of Agent's counsel incurred in connection with the preparation and negotiation of the Debt Documents on or before the Closing Date. Upon application of the Upfront Payment to such fees and expenses, concurrently with the advance of the Initial Term Loan, Borrower shall reimburse Agent for any such fees and expenses in excess of $25,000 (which aggregate amount of fees and expenses of Agent's counsel incurred in connection with the preparation and negotiation of the Debt Documents on or before the Closing Date shall not exceed [*]).

(b) Closing Fee. On the Closing Date, Borrower shall pay to Agent, for the ratable benefit of Lenders, a $50,000 fee which shall be fully earned by Lenders, in accordance with their Pro Rata Shares, and non-refundable when paid.

(c) Unused Line Fee. On the Commitment Termination Date, Borrower shall pay to Agent, for the ratable benefit of Lenders, a fee equal to [*] of the undrawn amount of the Total Commitment as of such date (the "Unused Line Fee"), which fee shall be fully earned by Lenders, in accordance with their Pro Rata Shares, and non-refundable when paid. Notwithstanding the foregoing, a Lender shall not be entitled to receive (and Borrower shall not be obligated to pay) such Lender's Pro Rata Share of the Unused Line Fee to the extent (i) Borrower satisfied all conditions set forth in Section 4.2 with respect to a requested Term Loan and (ii) such Lender failed to advance its Pro Rata Share of such Term Loan.

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(d) Final Payment Fee. Upon the repayment in full of all outstanding principal amounts with respect to any Term Loan (whether voluntarily, scheduled or mandatory or otherwise), Borrower shall pay to Agent, for the ratable accounts of Lenders, a fee equal to [*] of the original principal amount of such Term Loan (the "Final Payment Fee").

2.8. **Maximum Lawful Rate.** Anything herein, any Note or any other Debt Document (as defined below) to the contrary notwithstanding, the obligations of Borrower hereunder and thereunder shall be subject to the limitation that payments of interest shall not be required, for any period for which interest is computed hereunder, to the extent (but only to the extent) that contracting for or receiving such payment by Agent and Lenders would be contrary to the provisions of any law applicable to Agent and Lenders limiting the highest rate of interest which may be lawfully contracted for, charged or received by Agent and Lenders, and in such event Borrower shall pay Agent and Lenders interest at the highest rate permitted by applicable law ("Maximum Lawful Rate"); provided, however, that if at any time thereafter the rate of interest payable hereunder or thereunder is less than the Maximum Lawful Rate, Borrower shall continue to pay interest hereunder at the Maximum Lawful Rate until such time as the total interest received by Agent and Lenders is equal to the total interest that would have been received had the interest payable hereunder been (but for the operation of this paragraph) the interest rate payable since the making of the Initial Term Loan as otherwise provided in this Agreement, any Note or any other Debt Document.

3. CREATION OF SECURITY INTEREST.

3.1. **Grant of Security Interest.** As security for the prompt payment and performance, whether at the stated maturity, by acceleration or otherwise, of all Term Loans and other debt, obligations and liabilities of any kind whatsoever of Borrower to Agent and Lenders under the Debt Documents (whether for principal, interest, fees, expenses, prepayment premiums, indemnities, reimbursements or other sums, and whether or not such amounts accrue after the filing of any petition in bankruptcy or after the commencement of any insolvency, reorganization or similar proceeding, and whether or not allowed in such case or proceeding), absolute or contingent, now existing or arising in the future, including but not limited to the payment and performance of any outstanding Notes, and any renewals, extensions and modifications of such Term Loans (such indebtedness under the Notes, Term Loans and other debt, obligations and liabilities in connection with the Debt Documents are collectively called the "Obligations"), Borrower does hereby grant to Agent, on behalf of itself and Lenders, a security interest in the property listed below (all hereinafter collectively called the "Collateral"):

All of Borrower's personal property of every kind and nature (except for Intellectual Property, as defined in, and to the extent excluded pursuant to, Section 3.3) whether now owned or hereafter acquired by, or arising in favor of, Borrower, and regardless of where located, including, without limitation, all accounts, chattel paper (whether tangible or electronic), commercial tort claims, deposit accounts, documents, equipment, financial assets, fixtures, goods, instruments, investment property, inventory, letter-of-credit rights, letters of credit, securities, supporting obligations, cash, cash equivalents, any other contract rights (including, without limitation, rights under any license agreements), or rights to the payment of money, and general intangibles, and all books and records of Borrower relating thereto, and in and against all additions, attachments, accessories and accessions to such property, all substitutions, replacements or exchanges therefor, all proceeds, insurance claims, products, profits and other rights to payments not otherwise included in the foregoing (with each of the foregoing terms that are defined in the UCC having the meaning set forth in the UCC).

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Notwithstanding anything herein to the contrary, in no event shall the Collateral include or the security interest granted under Section 3.1 hereof attach to:

(a) any lease, license, contract or agreement to which Borrower is a party, and any of its rights or interest thereunder, if and to the extent that a security interest is prohibited by or in violation of (i) any law, rule or regulation applicable to Borrower, or (ii) a term, provision or condition of any such lease, license, contract, property right or agreement (unless such law, rule, regulation, term, provision or condition would be rendered ineffective with respect to the creation of the security interest hereunder pursuant to Sections 9-406, 9-407, 9-408 or 9-409 of the UCC (or any successor provision or provisions) of any relevant jurisdiction or any other applicable law (including the Bankruptcy Code) or principles of equity); provided, however, that the Collateral shall include (and such security interest shall attach) immediately at such time as the contractual or legal prohibition shall no longer be applicable and to the extent severable, shall attach immediately to any portion of such lease, license, contract or agreement not subject to the prohibitions specified in (i) or (ii) above; provided further that the exclusions referred to in clause (a) of this paragraph shall not include any proceeds of any such lease, license, contract or agreement;

(b) more than 65% of the outstanding capital stock of a Controlled Foreign Corporation (as defined in the Internal Revenue Code); or

(c) the equipment specifically listed on Schedule B hereto under "Existing Liens" and financed pursuant to (i) the Loan and Security Agreement, dated as of February 12, 2004, by and between Lighthouse Capital Partners V, L.P. and the Borrower and (ii) Master Security Agreement No. 5081102, dated as of October 25, 2005 by and between Oxford Finance Corporation and the Borrower, and in and against all additions, attachments, accessories, and accessions to such equipment, all substitutions, replacements or exchanges therefore, and all insurance and/or other proceeds thereof.

Borrower hereby represents and covenants that such security interest constitutes a valid, first priority security interest in the presently existing Collateral, and will constitute a valid, first priority security interest in Collateral acquired after the date hereof, in each case with respect to priority only, subject to any Permitted Liens with respect to the Collateral. Borrower hereby covenants that it shall give written notice to Agent promptly upon the acquisition by Borrower or creation in favor of Borrower of any commercial tort claim after the Closing Date.

3.2. **Financing Statements.** Borrower hereby authorizes Agent to file UCC financing statements with all appropriate jurisdictions to perfect Agent's security interest (for the benefit of itself and the Lenders) granted hereby.

3.3. **Grant of Security Interest in Proceeds of Intellectual Property.** The Collateral shall not include any of Borrower's intellectual property, which shall be defined as any and all copyright, trademark, servicemark, patent, design right, software, trade secret and intangible rights of Borrower and any applications, registrations, claims, products, awards, judgments, amendments, renewals, extensions, improvements and insurance claims related thereto (collectively, "Intellectual Property") now owned or hereafter acquired, or any claims for damages by way of any past, present or future infringement of any of the foregoing; provided, however, that the Collateral shall include all cash, royalty fees, other proceeds, accounts and general intangibles that consist of rights of payment to or on behalf of Borrower or proceeds

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from the sale, licensing or other disposition of all or any part of, or rights in, the Intellectual Property by or on behalf of Borrower (Rights to Payment"). Notwithstanding the foregoing, to the extent it is necessary under applicable law in any bankruptcy or insolvency proceeding involving Borrower for Agent (on behalf of itself and Lenders) to have a security interest in the underlying Intellectual Property in order for Agent to have (i) a security interest in the Rights to Payment and (ii) a security interest in any payments with respect to Rights to Payment that are received after the commencement of such bankruptcy or insolvency proceeding, then the Collateral shall automatically, and effective as of the date hereof, include the Intellectual Property only to the extent necessary to permit attachment and perfection of Agent's security interest (on behalf of itself and Lenders) in the Rights to Payment and any payments in respect thereof that are received after the commencement of any bankruptcy or insolvency proceeding. Agent hereby agrees on behalf of itself and the Lenders that, if Agent obtains a security interest in the Intellectual Property pursuant to the immediately preceding sentence, Agent will not exercise any remedies (under the UCC or otherwise) with respect to the Intellectual Property (other than remedies with respect to Rights to Payment or any other proceeds of the Intellectual Property). For the avoidance of doubt, none of the provisions of this Section 3.3 shall be construed to provide Lenders with a consent or other blocking right in connection with licenses granted by Borrower in accordance with the terms and conditions of Section 7.3.

3.4. **Termination of Security Interest.** Subject to Section 10.9, Agent's lien on the Collateral (on behalf of itself and Lenders) shall continue until all of the Obligations are repaid in full in cash and all of the Commitments hereunder are terminated or fulfilled (the "Termination Date"). Upon the Termination Date, Agent shall, at Borrower's sole cost and expense and without any recourse, representation or warranty, release its liens in the Collateral, and all rights remaining therein, if any, shall revert to Borrower.

4. CONDITIONS OF CREDIT EXTENSIONS

4.1. **Conditions Precedent to Initial Term Loan.** No Lender shall be obligated to make the Initial Term Loan, or to take, fulfill, or perform any other action hereunder, until the following have been delivered to the Agent (the date on which the Lenders make the Initial Term Loan after all such conditions shall have been satisfied in a manner satisfactory to Agent or waived in accordance with this Agreement, the "Closing Date"):

(a) a counterpart of this Agreement duly executed by Borrower;

(b) a certificate executed by the Secretary of Borrower, the form of which is attached hereto asExhibit B (the "Secretary's Certificate"), providing verification of incumbency and attaching (i) Borrower's board resolutions approving the transactions contemplated by this Agreement and the other Debt Documents and (ii) Borrower's governing documents;

(c) Notes duly executed by Borrower in favor of each applicable Lender;

(d) filed copies of UCC financing statements, collateral assignments, and terminations statements, with respect to the Collateral, as Agent shall request;

(e) certificates of insurance evidencing the insurance coverage, and satisfactory additional insured and lender loss payable endorsements, in each case as required pursuant to Section 6.4 herein;

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(f) current UCC lien, judgment, bankruptcy and tax lien search results demonstrating that there are no other security interests or liens on the Collateral, other than Permitted Liens (as defined below);

(g) a Warrant in favor of each Lender, duly executed by Borrower, substantially in the form provided by Agent;

(h) a certificate of good standing of Borrower from the jurisdiction of Borrower's organization and a certificate of foreign qualification from each jurisdiction where Borrower's failure to be so qualified could reasonably be expected to have a Material Adverse Effect (as defined below), in each case as of a recent date acceptable to Agent;

(i) a landlord consent and/or bailee letter in favor of Agent executed by the landlord or bailee, as applicable, for any third party location where (i) Borrower's principal place of business, (ii) any of Borrower's books or records or (iii) Collateral with an aggregate value in excess of $25,000 is located, a form of which is attached hereto as Exhibit C-1 and Exhibit C-2, as applicable ("Access Agreement");

(j) a legal opinion of Borrower's counsel, in form and substance satisfactory to Agent;

(k) a completed EPS set-up form, a form of which is attached hereto as Exhibit E (the "EPS Setup Form");

(l) a completed perfection certificate, duly executed by Borrower, a form of which Agent previously delivered to Borrower (the "Perfection Certificate");

(m) one or more Account Control Agreements (as defined below), in form and substance reasonably acceptable to Agent, duly executed by Borrower and the applicable depository or financial institution, for each deposit and securities account (other than accounts used exclusively for payroll and withholding tax purposes) listed on the Perfection Certificate;

(n) a pledge agreement, in form and substance satisfactory to Agent, executed by Borrower and pledging to Agent, for the benefit of itself and the Lenders, a security interest in (a) 100% of the shares of the outstanding capital stock, of any class, of each Subsidiary (as defined below) of Borrower that is incorporated under the laws of any State of the United States or the District of Columbia; (b) shares of the outstanding capital stock of any class of each Subsidiary of Borrower that is not incorporated under the laws of any State of the United States or the District of Columbia that constitute 65% of the total combined voting power of all capital stock of all classes of such Subsidiary and (c) any and all Indebtedness owing to Borrower (the "Pledge Agreement");

(o) a disbursement instruction letter, in form and substance satisfactory to Agent, executed by Borrower, Agent and each Lender (the "Disbursement Letter");

(p) a guaranty and security agreement (the "Guaranty"), in form and substance satisfactory to Agent, executed by Wasabi Acquisition LLC, a Delaware limited liability company (in such capacity, the "Guarantor") and guaranteeing the payment and performance of the Obligations and granting a lien in the collateral described therein (the "Guarantor Collateral");

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(q) all other documents and instruments as Agent may reasonably deem necessary or appropriate to effectuate the intent and purpose of this Agreement (together with the Agreement, the Notes, the Perfection Certificate, the Pledge Agreement, the Secretary's Certificate, the Disbursement Letter and all other agreements, instruments, documents and certificates executed and/or delivered to or in favor of Agent from time to time in connection with this Agreement or the transactions contemplated hereby (excluding the Warrant), the "Debt Documents"); and

(r) Agent and Lenders shall have received the fees required to be paid by Borrower, if any, in the respective amounts specified in Section 2.7, and Borrower shall have reimbursed Agent and Lenders for all fees, costs and expenses of closing presented as of the date of this Agreement.

4.2. **Conditions Precedent to All Term Loans.** No Lender shall be obligated to make any Term Loan, including the Initial Term Loan, unless the following additional conditions have been satisfied:

(a) (i) all representations and warranties in Section 5 below shall be true as of the date of such Term Loan; (ii) no Event of Default or any other event, which with the giving of notice or the passage of time, or both, would constitute an Event of Default (such event, a "Default"), has occurred or begun, irrespective of any cure periods therefor, or will result from the making of any Term Loan, without the waiver of Lenders at their sole discretion, and (iii) Agent shall have received a certificate from a Proper Officer of Borrower confirming each of the foregoing;

(b) Agent shall have received the redelivery or supplemental delivery of the items set forth in the following sections to the extent circumstances have changed since the Initial Term Loan: Sections 4.1(b), (e), (f), (g), (h), (i), (j), (l) and (o);

(c) with respect to each Term Loan other than the Initial Term Loan, Agent shall have received evidence satisfactory to Agent that Borrower has, at the time of and after giving effect to such Term Loan, either (a) a Cash Burn Amount (defined below) that is greater than zero, or (b) unrestricted cash and Cash Equivalents (as defined below) as shown on the consolidated balance sheet of Borrower and its consolidated Subsidiaries (collectively, "Balance Sheet Cash") in an amount equal to or greater than the product of (A) negative twelve (-12) times (B) the Cash Burn Amount (as defined below); and

(d) Agent shall have received such other documents, agreements, instruments or information as Agent shall reasonably request.

As used herein, the term "Cash Burn Amount" means, with respect to Borrower and its consolidated Subsidiaries, as of any date of determination and based on the financial statements most recently delivered to Agent and the Lenders in accordance with this Agreement, the difference between:

(1) the quotient of (i) the sum of, without duplication, (A) net income (loss), plus (B) depreciation and amortization, minus (C) non-financed capital expenditures, in each case of clauses (A), (B) and (C), for the immediately preceding twelve month period on a trailing basis, divided by (ii) twelve,

minus

(2) the quotient of (i) the current portion of interest bearing liabilities due and payable in the immediately succeeding 12 months divided by (ii) twelve.

At such times that the Cash Burn Amount is zero or a positive number, Borrower will be deemed to be "Cashflow Positive" for purposes of this Agreement. Conversely, at any time that the Cash Burn Amount is a negative number, Borrower will be deemed to be "Cashflow Negative" for purposes of this Agreement.

5. REPRESENTATIONS AND WARRANTIES OF BORROWER.

Borrower represents, warrants and covenants to Agent and each Lender that:

5.1. **Due Organization and Authorization.** Borrower's exact legal name is as set forth in the preamble of this Agreement and Borrower is, and will remain, duly organized, existing and in good standing under the laws of the State of Delaware, has its chief executive office at the location specified in the preamble, and is, and will remain, duly qualified and licensed in every jurisdiction wherever necessary to carry on its business and operations, except where the failure to be so qualified and licensed could not reasonably be expected to have a Material Adverse Effect. This Agreement and the other Debt Documents have been duly authorized, executed and delivered by Borrower and constitute legal, valid and binding agreements enforceable in accordance with their terms. The execution, delivery and performance by Borrower of each Debt Document executed or to be executed by it is in each case within Borrower's powers.

5.2. **Required Consents.** Except for the filing of a Form D with respect to the issuance of the Warrants, no filing, registration, qualification with, or approval, consent or withholding of objections from, any governmental authority or instrumentality or any other entity or person is required with respect to the entry into, or performance by Borrower of, any of the Debt Documents, except any already obtained.

5.3. **No Conflicts.** The entry into, and performance by Borrower of, the Debt Documents will not (a) violate any of the organizational documents of Borrower, (b) violate any law, rule, regulation, order, award or judgment applicable to Borrower, or (c) result in any breach of or constitute a default under, or result in the creation of any lien, claim or encumbrance on any of Borrower's property (except for liens in favor of Agent, on behalf of itself and Lenders) pursuant to, any indenture, mortgage, deed of trust, bank loan, credit agreement, or other Material Agreement (as defined below) to which Borrower is a party. As used herein, "Material Agreement" shall mean (i) any agreement or contract to which Borrower or any of its Subsidiaries is a party and involving the receipt or payment of amounts in the aggregate exceeding [*] per year, (ii) any agreement or contract to which Borrower or any of its Subsidiaries is a party the termination of which could reasonably be expected to have a Material Adverse Effect and (iii) each agreement relating to the Subordinated Indebtedness (as defined below). A description of all Material Agreements as of the Closing Date is set forth on Schedule B hereto.

5.4. **Litigation.** There are no actions, suits, proceedings or, to Borrower's knowledge, investigations pending against or affecting Borrower before any court, federal, state, provincial, municipal or other governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, or any basis thereof, which involves the possibility of any judgment or liability that could reasonably be expected to have a Material Adverse Effect, or which questions the validity of the Debt Documents, or the other documents required thereby or any action to be taken pursuant to any of the foregoing, nor does Borrower have reason to believe that any such actions, suits, proceedings or investigations are threatened. As used in this Agreement, the term "Material Adverse Effect" shall mean a material adverse effect on any of (a) the operations, business, assets, properties or condition (financial

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or otherwise) of Borrower, individually, or Borrower and its Subsidiaries (as defined below), collectively, but excluding [*] (b) the ability of Borrower to perform any of its obligations under any Debt Document to which it is a party, (c) the legality, validity or enforceability of any Debt Document, (d) the rights and remedies of Agent or Lenders under any Debt Document or (e) the validity, perfection or priority of any lien in favor of Agent, on behalf of itself and Lenders, on any of the Collateral.

5.5. **Financial Statements.** All financial statements delivered to Agent and Lenders pursuant to Section 6.3 have been prepared materially in accordance with GAAP (subject, in the case of unaudited financial statements, to the absence of footnotes and normal year-end and audit adjustments), and since the date of the most recent audited financial statement, no event has occurred which has had or could reasonably be expected to have a Material Adverse Effect. There has been no material adverse deviation from the most recent annual operating plan of Borrower delivered to Agent and Lenders in accordance with Section 6.3.

5.6. **Use of Proceeds.** The proceeds of the Term Loans shall be used for working capital and general corporate purposes.

5.7. **Collateral.** Borrower is, and will remain, the sole and lawful owner, and in possession of, the Collateral, and has the sole right and lawful authority to grant the security interest described in this Agreement. The Collateral is, and will remain, free and clear of all liens, claims and encumbrances of any kind whatsoever, except for (a) liens in favor of Agent, on behalf of itself and Lenders, to secure the Obligations, (b) liens (i) with respect to the payment of taxes, assessments or other governmental charges or (ii) of suppliers, carriers, materialmen, warehousemen, workmen or mechanics and other similar liens, in each case imposed by law and arising in the Ordinary Course of Business, and securing amounts that are not yet due or that are being contested in good faith by appropriate proceedings diligently conducted and with respect to which adequate reserves or other appropriate provisions are maintained on the books of Borrower or its Subsidiaries in accordance with GAAP and which do not involve, in the judgment of Agent, any risk of the sale, forfeiture or loss of any of the Collateral (a "Permitted Contest"), (c) zoning restrictions, easements, rights of way, encroachments or other restrictions on the use of, and other minor defects or irregularities in title with respect to, any real property of Borrower or its Subsidiaries so long as the same do not materially impair the use of such real property by Borrower or such Subsidiary, (d) purported liens evidenced by the filing of precautionary UCC financing statements relating solely to operating leases of personal property entered into in the Ordinary Course of Business, (e) liens in favor of customs and revenue authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods, (f) liens existing on the date hereof and set forth on Schedule B hereto, (g) liens securing Indebtedness (as defined below) permitted under Section 7.2(c) below, provided that (i) such liens exist prior to the acquisition of, or attach substantially simultaneous with, or within 20 days after the, acquisition, repair, improvement or construction of, such property financed by such Indebtedness and (ii) such liens do not extend to any property of Borrower or its Subsidiaries other than the property (and proceeds thereof) acquired or built, or the improvements or repairs, financed by such Indebtedness, and (h) licenses described in Section 7.3(b) below (all of such liens described in the foregoing clauses (a) through (h) are called "Permitted Liens"). "Ordinary Course of Business" means, with respect to Borrower and its Subsidiaries, the operation of the business of Borrower and its Subsidiaries consistent with Borrower's business plan as of the Closing Date, it being understood and acknowledged by the Lenders that the business of Borrower and/or its Subsidiaries involves entering into corporate collaborations in the fields of energy, chemicals, carbon management and pharmaceuticals pursuant to exclusive and non-exclusive licenses of Intellectual Property.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5.8. **Compliance with Laws.** Borrower is and will remain in full compliance in all material respects with all laws, statutes, ordinances, rules and regulations applicable to it including, without limitation, (a) for so long as Borrower is a private company, ensuring that no person who owns, directly, or indirectly, 20% or more of the capital stock of Borrower is or shall be (i) listed on the Specially Designated Nationals and Blocked Person List maintained by the Office of Foreign Assets Control ("OFAC"), Department of Treasury, and/or any other similar lists maintained by OFAC pursuant to any authorizing statute, Executive Order or regulation or (ii) a person designated under Section 1(b), (c) or (d) of Executive Order No. 13224 (September 23, 2001), any related enabling legislation or any other similar Executive Orders, (b) compliance with all applicable Bank Secrecy Act ("BSA") laws, regulations and government guidance on BSA compliance and on the prevention and detection of money laundering violations, (c) meeting the minimum funding requirements of the United States Employee Retirement Income Security Act of 1974 (as amended, "ERISA") with respect to any employee benefit plans subject to ERISA, (d) Borrower is not an "investment company" or a company "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940 and (e) Borrower is not engaged principally, or as one of the important activities, in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulations T, U and X of the Board of Governors of the Federal Reserve System (the "Federal Reserve Board").

5.9. **Intellectual Property.** The Intellectual Property is and will remain free and clear of all liens, claims and encumbrances of any kind whatsoever, except for Permitted Liens described in clauses (b)(i) and (e) of Section 5.7. Borrower has not and will not enter into any other agreement or financing arrangement in which a negative pledge in Borrower's Intellectual Property is granted to any other party except for exclusive licenses in existence as of the date hereof or entered into in compliance with the terms and conditions of Section 7.3(d). As of the Closing Date and each date a Term Loan is advanced to Borrower, Borrower does not have any interest in, or title to any Intellectual Property except as disclosed in the Perfection Certificate. Borrower owns or has rights to use all Intellectual Property material to the conduct of its business as now or heretofore conducted by it or proposed to be conducted by it, without any actual or claimed infringement upon the rights of third parties. Borrower is in full compliance in all material respects with all provisions of (a) that certain License Agreement between Maxygen, Inc. ("Maxygen") and Borrower dated March 28, 2002 (as heretofore amended, supplemented or otherwise modified from time to time, the "Maxygen License Agreement") and (b) that certain License and Collaboration Agreement between Maxygen and Novozymes, Inc. dated September 17, 1997, as assigned by Maxygen to Borrower, and as amended from time to time pursuant to the terms and conditions of this Agreement. Borrower has no knowledge of any material breach by Maxygen under the Maxygen License Agreement.

5.10. **Solvency.** Both immediately before and immediately after giving effect to each Term Loan, the transactions contemplated herein, and the payment and accrual of all transaction costs in connection with the foregoing, Borrower is and will be Solvent. As used herein, "Solvent" means, with respect to Borrower on a particular date, that on such date (a) the fair value of the property of Borrower is greater than the total amount of liabilities, including contingent liabilities (excluding the non-current portion of facility leases), of Borrower; (b) the present fair salable value of the assets of Borrower is not less than the amount that will be required to pay the probable liability of Borrower on its debts as they become absolute and matured; (c) Borrower does not intend to, and does not believe that it will, incur debts or liabilities beyond Borrower's ability to pay as such debts and liabilities mature; (d) Borrower is not engaged in a business or transaction, and is not about to engage in a business or transaction, for which Borrower's property would constitute an unreasonably small capital; and (e) is not "insolvent" within the meaning of Section 101 (32) of the United States Bankruptcy Code (11 U.S.C. § 101, et. seq.), as amended. The amount of contingent liabilities (such as litigation, guaranties and pension plan liabilities) at any time shall be computed as the amount that, in light of all the facts and circumstances existing at the time, represents the amount that can be reasonably be expected to become an actual or matured liability.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5.11. **Taxes; Pension.** All tax returns, reports and statements, including information returns, required by any governmental authority to be filed by Borrower and its Subsidiaries have been filed with the appropriate governmental authority and except as set forth in Section 10 of the Perfection Certificate delivered on or prior to the Closing Date all taxes, levies, assessments and similar charges have been paid prior to the date on which any fine, penalty, interest or late charge may be added thereto for nonpayment thereof (or any such fine, penalty, interest, late charge or loss has been paid), excluding taxes, levies, assessments and similar charges or other amounts which are the subject of a Permitted Contest. Proper and accurate amounts have been withheld by Borrower from its respective employees for all periods in compliance with applicable laws and such withholdings have been timely paid to the respective governmental authorities. Borrower has paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and Borrower has not withdrawn from participation in, and has not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower in excess of $50,000 in the aggregate, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental authority.

5.12. **Full Disclosure.** Borrower hereby confirms that all of the information disclosed on the Perfection Certificate is true, correct and complete as of the date of this Agreement and true, correct and complete in all material respects as of the date of each Term Loan. No representation, warranty or other statement made by or on behalf of Borrower contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained therein not misleading, it being recognized by Agent and Lenders that the projections and forecasts provided by Borrower in good faith and based upon reasonable and stated assumptions are not to be viewed as facts and that actual results during the period or periods covered by any such projections and forecasts may differ from the projected or forecasted results.

6. AFFIRMATIVE COVENANTS.

6.1. **Good Standing.** Borrower shall maintain its and each of its Subsidiaries' existence and good standing in its jurisdiction of organization and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Effect. Borrower shall maintain, and shall cause each of its Subsidiaries to maintain, in full force all licenses, approvals and agreements, the loss of which could reasonably be expected to have a Material Adverse Effect. "Subsidiary" means, with respect to Borrower, any entity the management of which is, directly or indirectly controlled by, or of which an aggregate of more than 50% of the outstanding voting capital stock (or other voting equity interest) is, at the time, owned or controlled, directly or indirectly by, Borrower or one or more Subsidiaries of Borrower.

6.2. **Notice to Agent.** Borrower shall provide Agent with (a) notice of the occurrence of any Default or Event of Default, promptly (but within 3 Business Days) after the date any "officer" (as defined in Rule 16a-1 promulgated under the Securities Exchange Act of 1934, as amended) or a Proper Officer (each such "officer" or such Proper Officer, an "Executive Officer") of Borrower becomes aware of the occurrence of any such event the occurrence of any such event, (b) copies of all statements, reports and notices made available generally by Borrower to its securityholders or to any holders of Subordinated Indebtedness (as defined below), all notices sent to Borrower by the holders of such Subordinated Indebtedness, and all reports, registration statements and prospectuses filed with the Securities and Exchange Commission ("SEC") (excluding notices filed by Borrower on behalf of officers and directors pursuant to Section 16 of the Securities Exchange Act of 1934) or any securities exchange or governmental authority exercising a similar function, promptly, but in any event within 5 days of delivering or receiving such information to or from such persons, (c) a report of any legal actions pending or threatened against Borrower or any Subsidiary that could reasonably be expected to result in damages

or costs to Borrower or any Subsidiary of [*] or more promptly upon (but within 3 Business Days after) receipt of notice thereof, (d) within 45 days of the end of each calendar quarter, a list of any new applications or registrations that Borrower has made or filed in respect of any Intellectual Property or a change in status of any outstanding application or registration during the immediately preceding calendar quarter, and (e) copies of all material statements, reports and notices delivered to or by Borrower in connection with the Maxygen License Agreement promptly but in any event within 3 Business Days of delivering or receiving such information.

6.3. **Financial Statements.** If Borrower is a private company, it shall deliver to Agent and Lenders (a) unaudited consolidated and, if available, consolidating balance sheets, statements of operations and cash flow statements within 45 days of each month end, in a form acceptable to Agent and certified by Borrower's chief executive officer or chief financial officer, (b) an updated capitalization table of Borrower in the form that Borrower uses with its existing investors within (i) 5 Business Days after the date of each funding of a Term Loan hereunder and (ii) 45 days after each quarter end and (c) beginning with the fiscal year ending December 31, 2008, its complete annual audited consolidated and, if available, consolidating financial statements prepared under GAAP and certified by an independent certified public accountant selected by Borrower and satisfactory to Agent (it being understood that any "Big Four" accounting firm shall be acceptable to Agent) within 120 days of the fiscal year end or, if sooner, at such time as Borrower's Board of Directors receives the certified audit; provided, however, that Borrower shall deliver the certified audits for the fiscal years ending December 31, 2006 and December 31, 2007 to Agent and Lenders on or prior to the earlier of (x) the date that is 5 days after the date on which Borrower receives the respective certified audit and (y) June 30, 2008. If Borrower is a publicly held company, it shall provide to Agent and Lenders (A) quarterly unaudited consolidated and, if available, consolidating balance sheets, statements of operations and cash flow statements that have been reviewed in accordance with standards of the Public Accounting Oversight Board (United States) by a recognized firm of certified public accounts, and (B) annual audited consolidated and, if available, consolidating balance sheets, statements of operations and cash flows certified by a recognized firm of certified public accountants. The financial statements described in the foregoing clauses (A) and (B) shall be delivered within 5 Business Days after the statements are provided to Borrower in reviewed/certified form by such public accountants, and if Agent requests, Borrower shall deliver to Agent and Lenders monthly unaudited and unreviewed consolidated balance sheets, statements of operations and cash flow statements within 30 days after the end of each month. All such statements are to be materially prepared using GAAP (subject, in the case of unaudited financial statements, to the absence of footnotes and normal year-end and audit adjustments) and, if Borrower is a publicly held company, are to be materially in compliance with applicable SEC requirements. All financial statements delivered pursuant to this Section 6.3 shall be accompanied by a compliance certificate, signed by the chief financial officer of Borrower, in the form attached hereto as Exhibit D. Borrower shall deliver to Agent and Lenders (i) as soon as available and in any event not later than 30 days after the end of each fiscal year of Borrower, an annual operating plan for Borrower, on a consolidated and, if available, consolidating basis, approved by the Board of Directors of Borrower, for the current fiscal year, in form and substance satisfactory to Agent and (ii) such budgets, sales projections, or other financial information as Agent or any Lender may reasonably request from time to time generally prepared by Borrower in the Ordinary Course of Business. Lenders and Agent hereby acknowledge that until all of the information contained in the financial statements provided by Borrower pursuant to this section is fully disclosed in Borrower's public filings with the SEC, such information will remain both material and non-public; for the avoidance of doubt, forward-looking statements, including but not limited to the annual operating plan and sales projections that Borrower will provide to Lenders and Agent pursuant to this section, will be material and non-public information until Borrower has filed with the SEC financial statements reporting results for all of the time periods covered by such plans and projections. The Borrower hereby agrees that, notwithstanding any repayment of the Term Loans or termination of this Agreement, so long as Borrower is a private company Borrower shall continue to deliver to each Lender the documents required under this Section 6.3 until each of the Warrants have either expired by their terms or been exercised. The provisions of the immediately preceding sentence shall survive the termination of this Agreement.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6.4. **Insurance.** Borrower, at its expense, shall maintain, and shall cause each Subsidiary to maintain, insurance (including, without limitation, comprehensive general liability, hazard, and business interruption insurance) with respect to all of its properties and businesses (including, the Collateral), in such amounts and covering such risks as is carried generally in accordance with sound business practice by companies in similar businesses similarly situated and in any event with deductible amounts, insurers and policies that shall be reasonably acceptable to Agent. Borrower shall deliver to Agent within fourteen (14) days after the Closing Date certificates of insurance evidencing such coverage, together with endorsements to such policies naming Agent as a lender loss payee or additional insured, as appropriate, in form and substance satisfactory to Agent (except that Agent shall not be named as loss payee with respect to insurance covering equipment described in clause (c) of Section 3.1 hereof). Each policy shall provide that coverage may not be canceled or altered by the insurer except upon 10 days prior written notice to Agent and shall not be subject to co-insurance (except for retentions and deductibles that are customarily set forth in such policies). Borrower appoints Agent as its attorney-in-fact to make, settle and adjust all claims under and decisions with respect to Borrower's policies of insurance, and to receive payment of and execute or endorse all documents, checks or drafts in connection with insurance payments only to the extent necessary to satisfy all Obligations hereunder. Agent shall not act as Borrower's attorney-in-fact unless an Event of Default has occurred and is continuing. The appointment of Agent as Borrower's attorney in fact is a power coupled with an interest and is irrevocable until all of the Obligations are indefeasibly paid in full. Proceeds of insurance shall be applied, at the option of Agent, to repair or replace the Collateral or to reduce any of the Obligations.

6.5. **Taxes.** Borrower shall, and shall cause each Subsidiary that is incorporated under the laws of any State of the United States or the District of Columbia to, timely file all tax reports and pay and discharge all federal taxes and material state and local taxes, assessments and governmental charges or levies imposed upon it, or its income or profits or upon its properties or any part thereof, before the same shall be in default and before the date on which penalties attach thereto except to the extent such taxes, assessments or governmental charges or levies are the subject of a Permitted Contest.

6.6. **Agreement with Landlord/Bailee.** Borrower shall obtain and maintain such Access Agreement(s) with respect to any real property on which (a) Borrower's principal place of business, (b) any of Borrower's books or records or (c) Collateral with an aggregate value in excess of $25,000 is located (other than real property owned by Borrower) as Agent may require.

6.7. **Protection of Intellectual Property.** Borrower shall take all necessary actions to: (a) protect, defend and maintain the validity and enforceability of its Intellectual Property to the extent material to the conduct of its business now or heretofore conducted by it or proposed to be conducted by it, (b) promptly advise Agent in writing of material infringements of its Intellectual Property of which any Executive Officer of Borrower has knowledge and, should the Intellectual Property be material to Borrower's business and should Borrower have enforcement rights with respect to such Intellectual Property, promptly sue for infringement, misappropriation or dilution and to recover any and all damages for such infringement, misappropriation or dilution, (c) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Agent's written consent, and (d) notify Agent reasonably promptly (but in any event within 3 Business Days) if it knows or has reason to know that any application or registration relating to any patent, trademark or copyright (now or hereafter existing) material to its business may become abandoned or dedicated, or if any adverse determination or development (including the institution of, or any such determination or development in, any proceeding in the United States Patent and Trademark Office, the United States Copyright Office or any court) regarding Borrower's ownership of any Intellectual Property material to its business, its right

to register the same, or to keep and maintain the same. Borrower shall remain liable under each of its Intellectual Property licenses pursuant to which it is a licensee ("Licenses") to observe and perform all of the conditions and obligations to be observed and performed by it thereunder. None of Agent or any Lender shall have any obligation or liability under any such License by reason of or arising out of this Agreement, the granting of a lien, if any, in such License or the receipt by Agent (on behalf of itself and Lenders) of any payment relating to any such License. None of Agent or any Lender shall be required or obligated in any manner to perform or fulfill any of the obligations of Borrower under or pursuant to any License, or to make any payment, or to make any inquiry as to the nature or the sufficiency of any payment received by it or the sufficiency of any performance by any party under any License, or to present or file any claims, or to take any action to collect or enforce any performance or the payment of any amounts which may have been assigned to it or which it may be entitled at any time or times.

6.8. **Special Collateral Covenants.**

(a) Until the occurrence of any Event of Default, Borrower shall remain in possession of the Collateral at the location(s) specified on the Perfection Certificate; except that Agent, on behalf of itself and Lenders, shall have the right to possess (i) any chattel paper or instrument that constitutes a part of the Collateral, and (ii) any other Collateral in which Agent's security interest (on behalf of itself and Lenders) may be perfected only by possession. Agent may inspect (and representatives of any Lender may accompany Agent on any such inspection) any of the Collateral during normal business hours, and in the absence of a Default or an Event of Default, with reasonable frequency and after giving Borrower reasonable prior notice. If Agent asks, Borrower will promptly notify Agent in writing of the location of any Collateral.

(b) Borrower shall (i) use the Collateral only in its trade or business, (ii) maintain all of the Collateral in good operating order and repair, normal wear and tear excepted, and (iii) use and maintain the Collateral only in compliance with manufacturers' recommendations and all applicable laws.

(c) Agent and Lenders do not authorize and Borrower agrees it shall not (i) part with possession of any of the Collateral (except to Agent (on behalf of itself and Lenders), for maintenance and repair or for a Permitted Disposition), or (ii) remove any of the Collateral from the continental United States.

(d) Borrower shall pay promptly when due all taxes, license fees, assessments and public and private charges levied or assessed on any of the Collateral, on its use, or on this Agreement or any of the other Debt Documents. At its option, Agent may discharge taxes, liens, security interests or other encumbrances at any time levied or placed on the Collateral and may pay for the maintenance, insurance and preservation of the Collateral and effect compliance with the terms of this Agreement or any of the other Debt Documents. Borrower agrees to reimburse Agent, on demand, all reasonable costs and expenses incurred by Agent in connection with such payment or performance and agrees that such reimbursement obligation shall constitute Obligations.

(e) Borrower shall, at all times, keep accurate and complete records of the Collateral that has an acquisition cost of $2,500 or more, and Agent shall have the right to (i) inspect and make copies of all of Borrower's books and records relating to the Collateral during normal business hours and (ii) contact Borrower's accountants, and in the absence of a Default or an Event of Default, after giving Borrower reasonable prior notice.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(f) Borrower agrees and acknowledges that any third person who may at any time possess all or any portion of the Collateral shall be deemed to hold, and shall hold, the Collateral as the agent of, and as pledge holder for, Agent (on behalf of itself and Lenders). Agent may at any time give notice to any third person described in the preceding sentence that such third person is holding the Collateral as the agent of, and as pledge holder for, Agent (on behalf of itself and Lenders).

6.9. **Further Assurances.** Borrower shall, upon request of Agent, furnish to Agent such further information, execute and deliver to Agent such documents and instruments (including, without limitation, UCC financing statements) and shall do such other acts and things as Agent may at any time reasonably request relating to the perfection or protection of the security interest created by this Agreement or for the purpose of carrying out the intent of this Agreement and the other Debt Documents.

6.10. **Additional Subsidiaries.** Promptly (and in any event within thirty (30) days) after the formation or acquisition of any Subsidiary of Borrower, Borrower shall cause to be executed and delivered to Agent the following: (i) by such new Subsidiary other than a Foreign Subsidiary (as hereinafter defined), a Guaranty pursuant to which such Subsidiary shall guarantee the payment and performance of all of the Obligations and pursuant to which Agent, for the benefit of itself and the Lenders, shall be granted a first priority (subject to Permitted Liens) and perfected security interest in all assets of such Subsidiary of the same types constituting "Collateral" under Section 3.1 hereof to secure the Obligations, (ii) by the Borrower or any Guarantor (as applicable) that is such Subsidiary's direct parent company, an amendment to the Pledge Agreement delivered on the Closing Date or a new Pledge Agreement substantially in the form of the Pledge Agreement delivered on the Closing Date (or otherwise in form and substance reasonably satisfactory to Lender), as applicable, and pursuant to which either (1) all of the capital stock of such new Subsidiary (if such Subsidiary is not a Foreign Subsidiary) or (2) 65% of the capital stock of such new Subsidiary (if such Subsidiary is a Foreign Subsidiary) shall be pledged to Agent, for the benefit of the Lenders, on a first priority and perfected basis to secure the Obligations, and (iii) by the Borrower, such other related documents (including closing certificates, legal opinions and other similar documents) as Agent may reasonably request, all in form and substance reasonably satisfactory to Agent; provided, however, that this Section 6.10 shall not operate as a consent to any formation or acquisition of a Subsidiary that is not expressly permitted under this Agreement.

7. NEGATIVE COVENANTS

7.1. **Liens.** Borrower shall not, and shall not permit any Subsidiary to, create, incur, assume or permit to exist any lien, security interest, claim or encumbrance or grant any negative pledges on any Collateral or Intellectual Property, except Permitted Liens, and with respect to Intellectual Property, except as contemplated by Section 7.3(d).

7.2. **Indebtedness.** Borrower shall not, and shall not permit any Subsidiary to, directly or indirectly create, incur, assume, permit to exist, guarantee or otherwise become or remain directly or indirectly liable with respect to, any Indebtedness (as hereinafter defined), except for the following:

(a) the Obligations;

(b) Indebtedness existing on the date hereof and set forth on Schedule B to this Agreement and any modification, replacement, refinancing, refunding, renewal or extension thereof, provided that the principal amount thereof does not exceed the principal amount thereof immediately prior to such modification, replacement, refinancing, refunding, renewal or extension plus other reasonable amounts paid and fees and expenses incurred in connection with such modification, replacement, refinancing, refunding, renewal or extension;

(c) Indebtedness incurred on or after the Closing Date consisting of non-real estate capitalized lease obligations and non-real estate purchase money Indebtedness, in each case incurred by Borrower or any of its Subsidiaries to finance the acquisition, repair, improvement or construction of fixed or capital assets of such person, provided that (i) the aggregate outstanding principal amount of all such Indebtedness incurred on or after the Closing Date under this clause (c) at any time does not exceed (1) at any time that Borrower is Cash Flow Positive, an amount equal to twenty percent (20%) of Balance Sheet Cash of the Borrower at such time, and (2) at any time that Borrower is Cash Flow Negative, an amount equal to the lesser of (A) $5,000,000 and (B) twenty percent (20%) of Balance Sheet Cash of the Borrower at such time, and (ii) the principal amount of such Indebtedness does not exceed the lower of the cost or fair market value of the property so acquired or built or of such repairs or improvements financed with such Indebtedness (each measured at the time of such acquisition, repair, improvement or construction is made);

(d) unsecured Indebtedness in an aggregate amount not to exceed (i) at any time that Borrower is Cash Flow Positive, an amount equal to twenty percent (20%) of Balance Sheet Cash of the Borrower at such time, and (ii) at any time that Borrower is Cash Flow Negative, an amount equal to the lesser of (1) $2,000,000 and (2) twenty percent (20%) of Balance Sheet Cash of the Borrower at such time, provided that all unsecured Indebtedness under this clause (d) is subordinated to the Obligations on terms and conditions reasonably acceptable to Agent ("Subordinated Indebtedness");

(e) the incurrence of any Indebtedness by any Subsidiary of Borrower to Borrower, or the incurrence of any Indebtedness of Borrower to any Subsidiary of Borrower, provided that (i) Borrower and any such Subsidiary shall have executed and delivered to Borrower, or such Subsidiary, as applicable, a demand note (each, an "Intercompany Note") to evidence such intercompany loans or advances owing at any time by such Subsidiary to Borrower or by Borrower to such Subsidiary, which Intercompany Note shall be in form and substance reasonably satisfactory to Agent and in the case of any Intercompany Note evidencing a loan or advance by Borrower or any Guarantor to the Borrower or any Subsidiary, as applicable, shall be pledged and delivered to Agent pursuant to the Pledge Agreement as additional Collateral for the Obligations, (ii) any and all Indebtedness of Borrower or any Guarantor to any Subsidiary of Borrower shall be subordinated to the Obligations pursuant to the subordination terms set forth in each Intercompany Note, (iii) the aggregate principal amount of any Indebtedness issued under this clause (e) in any fiscal quarter and owing to Borrower or any Guarantor by those Subsidiaries of Borrower organized under the laws of a jurisdiction other than any state of the United States or the District of Columbia (such Subsidiaries, the "Foreign Subsidiaries"), when added to the aggregate amount of any investments by Borrower or any Guarantor in the Foreign Subsidiaries made in such fiscal quarter pursuant to Section 7.7(d)(v), shall not exceed the amount equal to twenty percent (20%) of the Balance Sheet Cash of the Borrower as of the first day of the fiscal quarter in which such loan or advance is made, and (iv) no Default or Event of Default would occur both before and after giving effect to any such Indebtedness;

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(f) Indebtedness of Foreign Subsidiaries under working capital lines of credit or similar credit facilities, provided that such Indebtedness is not guaranteed by Borrower or Guarantor;

(g) Indebtedness consisting of Series E preferred stock of the Borrower that are subject to mandatory redemption or repurchase rights, provided that: (i) the mandatory redemption or repurchase rights of such preferred stock are not exercisable by the holders of such preferred stock until 91 days after the Applicable Term Loan Maturity Date for the last Term Loan advanced hereunder, (ii) such preferred stock is issued within six (6) months after the Closing Date, (iii) such preferred stock is issued at an offering price of not less than $5.50 per share (as adjusted from time to time for stock splits, stock combinations, stock dividends and the like), and (iv) such preferred stock is issued for aggregate cash proceeds to the Borrower of not more than $60,000,000; and

(h) Indebtedness consisting of the repurchase and redemption rights of shares of Series D Preferred Stock of the Borrower issued in connection with the exercise of the Warrants.

As used in this Agreement, the term "Indebtedness" shall mean, with respect to any person, at any date, without duplication, (1) all obligations of such person for borrowed money, (2) all obligations of such person evidenced by bonds, debentures, notes or other similar instruments, or upon which interest payments are customarily made, (3) all obligations of such person to pay the deferred purchase price of property or services, but excluding obligations to trade creditors incurred in the Ordinary Course of Business and not past due by more than 90 days, (4) all capital lease obligations of such person, (5) the principal balance outstanding under any synthetic lease, tax retention operating lease, off-balance sheet loan or similar off-balance sheet financing product, (6) all obligations of such person to purchase securities (or other property) which arise out of or in connection with the issuance or sale of the same or substantially similar securities (or property), (7) all contingent or non-contingent obligations of such person to reimburse any bank or other person in respect of amounts paid under a letter of credit or similar instrument, (8) all equity securities of such person subject to repurchase or redemption otherwise than at the sole option of such person, (9) all "earnouts" and similar payment obligations of such person, (10) all indebtedness secured by a lien on any asset of such person, whether or not such indebtedness is otherwise an obligation of such person, (11) all obligations of such person under any foreign exchange contract, currency swap agreement, interest rate swap, cap or collar agreement or other similar agreement or arrangement designed to alter the risks of that person arising from fluctuations in currency values or interest rates, in each case whether contingent or matured, and (12) all obligations or liabilities of others guaranteed by such person. Without limiting the generality of the immediately preceding sentence, "Indebtedness" shall not include (A) any obligations owing under operating leases for real property leased by Borrower or any of its Subsidiaries or (B) any landlord-financed tenant improvements that are capitalized into such operating leases.

7.3. **Dispositions.** Borrower shall not, and shall not permit any Subsidiary to, convey, sell, rent, lease, sublease, mortgage, license, transfer or otherwise dispose of (collectively, "Transfer") any of the Collateral or any Intellectual Property, except for the following (collectively, "Permitted Dispositions"): (a) sales of Inventory in the Ordinary Course of Business, (b) non-exclusive licenses for the use of Borrower's Intellectual Property, in each case in the Ordinary Course of Business, (c) dispositions by Borrower or any of its Subsidiaries of tangible assets for cash and fair value that are no longer used or useful in the business of Borrower or such Subsidiary so long as (i) no Default or Event of Default exists at the time of such disposition or would be caused after giving effect thereto and (ii) the fair market value of all such assets disposed of does not exceed $50,000 in the aggregate during any calendar year, and (d) exclusive licenses for the use of Borrower's Intellectual Property, so long as, with respect to each such exclusive license, (i) no Default of Event of Default exists at the time of such Transfer, (ii) the license

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constitutes an arms-length transaction made in the Ordinary Course of Business and the terms of which, on their face, do not provide for a sale or assignment of any Intellectual Property, (iii) the Borrower delivers no later than 10 days prior to execution of definitive documents, written notice and a brief summary as of such date of the terms of the license to Agent, (iv) the Borrower delivers to Agent copies of the final executed licensing documents in connection with the license promptly upon consummation of the license, and (v) all royalties, milestone payments or other proceeds arising from the licensing agreement are paid to a deposit account that is governed by an Account Control Agreement.

7.4. **Change in Name, Location or Executive Office; Change in Business; Change in Fiscal Year.** Borrower shall not, and shall not permit any Subsidiary to, (a) change its name or its state of organization, (b) relocate its chief executive office without 30 days prior written notification to Agent, (c) engage in any business other than or reasonably related or incidental to the businesses currently engaged in by Borrower or any of its Subsidiaries, or (d) change its fiscal year end. Borrower shall not, and taken together with its Subsidiaries as a whole shall not, cease to conduct business substantially in the manner conducted by Borrower or any of its Subsidiaries as of the date of this Agreement.

7.5. **Mergers or Acquisitions.** Borrower shall not merge or consolidate, or permit any Subsidiary to merge or consolidate, with or into any other person or entity (other than mergers of a Subsidiary into Borrower in which Borrower is the surviving entity) or acquire, or permit any Subsidiary to acquire, all or substantially all of the capital stock or property of another person or entity. Notwithstanding the foregoing, Borrower any of its Subsidiaries may acquire all or substantially all of the assets or stock of another person or entity (such person or entity, the "Target") so long as (a) Agent and each Lender shall receive at least ten (10) Business Days' prior written notice of such proposed acquisition, which notice shall include a reasonably detailed description of such proposed acquisition; (b) such acquisition shall only comprise a business, or those assets of a business, substantially of the type engaged in by Borrower or its Subsidiaries as of the Closing Date, or in the fields of energy, chemicals, carbon management and pharmaceuticals or natural extensions thereof or technologies related thereto; (c) such acquisition shall be consensual and shall have been approved by Target's board of directors or similar governing body (as applicable); (d) that portion of the purchase price paid and/or payable in cash and Cash Equivalents in connection with all acquisitions during the term of this Agreement (less any cash or Cash Equivalents acquired from Target, but including all transaction costs and all Indebtedness, liabilities and contingent obligations incurred or assumed in connection therewith or otherwise reflected in a consolidated balance sheet of Borrower and Target) shall not exceed the greater of (1) [*] and (2) [*] percent ([*]) of the net cash proceeds from all public offerings of common stock of the Borrower; (e) if at the time of and after giving effect to such acquisition Borrower is, or on a pro forma basis will become, Cash Flow Negative, Agent shall have received evidence satisfactory to Agent that Borrower has, at the time of and after giving effect to such acquisition, Balance Sheet Cash in an amount equal to or greater than the product of (i) negative eighteen times (ii) the Cash Burn Amount; (f) the business and assets acquired in such Permitted Acquisition shall be free and clear of all liens (other than Permitted Liens); (g) at or prior to the closing of any permitted acquisition (other than an acquisition by a Foreign Subsidiary or by Borrower or Guarantor of a Foreign Subsidiary), Agent will be granted a first priority perfected lien (subject to Permitted Liens) in all assets acquired pursuant thereto or in the assets and stock of Target, and Borrower or Guarantor (as applicable) and Target shall have executed such documents and taken such actions as may be required by Agent in connection therewith; (h) on or prior to the date of such acquisition, Agent shall have received, in form and substance reasonably satisfactory to Agent, copies of the acquisition agreement and related agreements and instruments, and all opinions, certificates, lien search results and other documents reasonably requested by Agent; and (i) at the time of such acquisition and after giving effect thereto, no Default or Event of Default has occurred and is continuing.

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7.6. **Restricted Payments.** Borrower shall not, and shall not permit any Subsidiary to, (a) declare or pay any dividends or make any other distribution or payment on account of or redeem, retire, defease or purchase any capital stock (other than (i) the payment of dividends to Borrower or any Guarantor, (ii) absent the occurrence and the continuance of a Default or Event of Default before and after giving effect to any such payment, the payment of dividends with respect to the Series B Preferred Stock and the Series D Preferred Stock, so long as such dividends do not exceed $500,000 in the aggregate during any calendar year, (iii) the distribution of dividends payable solely in capital stock of the Borrower, and (iv) absent the occurrence and the continuance of a Default or Event of Default before and after giving effect to any such repurchase payment, the repurchase of shares, options or warrants thereof from employees, former employees, directors, former directors, consultants, former consultants, advisors or former advisors and their permitted transferees or estates, of Borrower or any of its Subsidiaries upon their death, termination of their employment or service period or retirement, so long as such repurchase payments do not exceed $250,000 in the aggregate during any calendar year, and (iv) dividends payable exclusively in the capital stock of the Borrower), (b) make any payment in respect of management fees or consulting fees (or similar fees) to any equityholder or other affiliate of Borrower other than (i) fees for general and administrative services provided to Borrower and its Subsidiaries by Maxygen in an aggregate amount not to exceed [*] during any calendar year and (ii) royalties or other payments in connection with Intellectual Property licenses from Maxygen in an amount not to exceed the amounts calculated to be paid under the Maxygen License Agreement as may be amended pursuant to Section 7.11, (c) be a party to or bound by an agreement that restricts a Subsidiary from paying dividends or otherwise distributing property to Borrower, (d) make any payments of intercompany Indebtedness that is owing by Borrower or any Guarantor (except as provided in the subordination terms of the applicable Intercompany Note then in effect with respect to such intercompany Indebtedness) or (e) purchase or make any payment on or with respect to any Subordinated Indebtedness, except as expressly permitted by the subordination terms thereof that have been approved by Agent.

7.7. **Investments.** Borrower shall not, and shall not permit any Subsidiary to, directly or indirectly (a) acquire or own, or make any loan, advance or capital contribution (an "Investment") in or to any person or entity, (b) acquire any Subsidiary (other than pursuant to the terms and conditions of Section 7.5 and upon the satisfaction of each of the conditions set forth in Section 6.10) or create any Subsidiary (unless each of the conditions set forth in Section 6.10 are satisfied), or (c) engage in any joint venture or partnership with any other person or entity, other than, with respect to each of the foregoing clauses (a), (b) and (c): (i) Investments existing on the date hereof and set forth on Schedule B to this Agreement, (ii) Investments in cash and Cash Equivalents (as defined below), (iii) Investments by way of intercompany loans to the extent permitted under Section 7.2(d), (iv) loans or advances to employees of Borrower or any of its Subsidiaries to finance travel, entertainment and relocation expenses and other ordinary business purposes in the ordinary course of business as presently conducted, provided that the aggregate outstanding principal amount of all loans and advances permitted pursuant to this clause (iv) shall not exceed $25,000 at any time, (v) capital contributions by the Borrower or any Guarantor to the Borrower or any Guarantor; and (vi) capital contributions by Borrower or any Guarantor to the Foreign Subsidiaries (A) in an aggregate amount in any fiscal quarter which, when added to the aggregate amount of any loans made by Borrower or any Guarantor to the Foreign Subsidiaries in such fiscal quarter pursuant to Section 7.2(e), shall not exceed twenty percent (20%) of the Balance Sheet Cash of the Borrower as of the first day of the fiscal quarter in which such investment is made and (B) so long as no Default or Event of Default would occur both before and after giving effect to any such capital contribution. The term "Cash Equivalents" means (u) any readily-marketable securities (i) issued by, or directly, unconditionally and fully guaranteed or insured by the United States federal government or (ii) issued by any agency of the United States federal government the obligations of which are fully backed by the full faith and credit of the United States federal government, (v) any readily-marketable direct obligations issued by any other agency of the United States federal government, any state of the United States or any political subdivision of any such state or any public instrumentality thereof, in each

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case having a rating of at least "A-1" from S&P or at least "P-1" from Moody's, (w) any commercial paper rated at least A-1" by S&P or "P-1" by Moody's and issued by any entity organized under the laws of any state of the United States, (x) any U.S. dollar-denominated time deposit, insured certificate of deposit, overnight bank deposit or bankers' acceptance issued or accepted by (i) Agent or (ii) any commercial bank that is (A) organized under the laws of the United States, any state thereof or the District of Columbia, (B) "adequately capitalized" (as defined in the regulations of its primary federal banking regulators) and (C) has Tier 1 capital (as defined in such regulations) in excess of $250,000,000, (y) shares of any United States money market fund that (i) has substantially all of its assets invested continuously in the types of investments referred to in clause (u), (v), (w) or (x) above with maturities as set forth in the proviso below, (ii) has net assets in excess of $500,000,000 and (iii) has obtained from either S&P or Moody's the highest rating obtainable for money market funds in the United States; provided, however, that the maturities of all obligations specified in any ofclauses (u), (v), (w) and (x) above shall not exceed 365 days, and (z) in the case of Investments by any Foreign Subsidiary, Cash Equivalents shall also include (i) direct obligations of the sovereign nation (or any agency thereof) in which such Foreign Subsidiary is organized and is conducting business or where such Investment is made, or in obligations fully and unconditionally guaranteed by such sovereign nation (or any agency thereof), in each case maturing within 365 days after such date and having, at the time of the acquisition thereof, a rating equivalent to at least A-1 from S&P and at least P-1 from Moody's, (ii) investments of the type and maturity described in clauses (u) through (y) above of foreign obligors, which Investments or obligors (or the parents of such obligors) have ratings described in such clauses or equivalent ratings from comparable foreign rating agencies, (iii) shares of money market mutual or similar funds which invest exclusively in assets otherwise satisfying the requirements of this definition (including this proviso) and (iv) other short-term investments utilized by Foreign Subsidiaries in accordance with normal investment practices for cash management in investments analogous to the foregoing investments in clauses (u) through (y).

7.8. **Transactions with Affiliates.** Borrower shall not, and shall not permit any Subsidiary to, directly or indirectly enter into or permit to exist any transaction with any Affiliate (as defined below) of Borrower or any Subsidiary except for transactions that are in the Ordinary Course of Business, upon fair and reasonable terms that are no more favorable to such Affiliate of Borrower or such Subsidiary than would be obtained in an arm's length transaction. Without limiting the generality of the immediately preceding sentence, the following transactions and agreements shall be deemed to be in compliance with this Section 7.8: (1) the Maxygen License Agreement (as amended or modified from time to time in accordance with the terms and conditions of this Agreement) and (2) any agreements between the Borrower and Shell entered into from time to time after the Closing Date and relating to either (A) an equity investment by Shell in the Borrower and the grant by the Borrower of investor rights to Shell (including without limitation, one or more board of director seats and/or attendant rights) and (B) a licensing and/or joint venture arrangement related to one or more of the following fields: [*]. As used herein, "Affiliate" shall mean, with respect to Borrower or any Subsidiary, (a) each person that, directly or indirectly, owns or controls 5% or more of the stock or membership interests having ordinary voting power in the election of directors or managers of Borrower or any Subsidiary, and (b) each person that controls, is controlled by or is under common control with Borrower or any Subsidiary.

7.9. **Compliance.** Borrower shall not, and shall not permit any Subsidiary to (a) fail to comply in all material respects with the laws and regulations described in clauses (a) through and including (d) of Section 5.8 herein, (b) use any portion of the Term Loans to purchase or carry margin stock (within the meaning of Regulation U of the Federal Reserve Board) or (c) fail to comply with or violate any other law or regulation, the failure or violation of which law or regulation described in this clause (c) could reasonably be expected to have a Material Adverse Effect, or permit any Subsidiary to do any of the foregoing.

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7.10. **Deposit Accounts and Securities Accounts.** Other than with respect to deposit accounts used solely to fund payroll and withholding taxes, Borrower will not directly or indirectly maintain or establish any deposit account or securities account, unless Agent, Borrower and the depository institution or securities intermediary at which the account is or will be maintained enter into a deposit account control agreement or securities account control agreement, as the case may be (an "Account Control Agreement"), in form and substance satisfactory to Agent (which agreement shall provide that such depository institution or securities intermediary shall comply with all instructions of Agent without further consent of Borrower, including, without limitation, an instruction by Agent to follow a notice of exclusive control or similar notice (such notice, a "Notice of Exclusive Control")), prior to or concurrently with the establishment of such deposit account or securities account (or in the case of any such deposit account or securities account maintained as of the date hereof, prior to or concurrently with the entering into this Agreement). Agent may give a Notice of Exclusive Control with respect to any deposit account or securities account at any time at which an Event of Default has occurred and is continuing.

7.11. **Amendments to Certain Material Agreements**. Borrower shall not amend, modify or waive any provision of (a) the Maxygen License Agreement (unless the net effect of such amendment, modification or waiver of the Maxygen License Agreement in the reasonable business judgment of the Borrower is not materially adverse to Borrower and its Subsidiaries taken as a whole) or (b) any document relating to any of the Subordinated Indebtedness, in each case without the prior written consent of Agent and the Requisite Lenders.

8. DEFAULT AND REMEDIES.

8.1. **Events of Default.** Borrower shall be in default under this Agreement and each of the other Debt Documents if (each of the following, an 'Event of Default"):

(a) Borrower shall fail to pay (i) any principal when due, or (ii) any interest, fees or other Obligations (other than as specified in clause (i) within a period of 3 Business Days after the due date thereof (other than on the Applicable Term Loan Maturity Date));

(b) Borrower or, to the extent such obligations are incorporated into the Guaranty, Guarantor breaches any of its obligations under Section 6.1 (solely as it relates to maintaining its existence), Section 6.2, Section 6.3, Section 6.4 or Article 7;

(c) Borrower or, subject to Section 8.1(b), Guarantor breaches any of their other respective obligations under any of the Debt Documents or the Warrant and fails to cure such breach within 30 days after the earlier of (i) the date on which an Executive Officer of Borrower or Guarantor, as applicable, becomes aware, or but for such officer's gross negligence should have become aware, of such failure and (ii) the date on which notice shall have been given to Borrower from Agent;

(d) any warranty, representation or statement made or deemed made by or on behalf of Borrower or Guarantor in any of the Debt Documents or otherwise in connection with any of the Obligations in writing shall be false or misleading in any material respect;

(e) any of the Collateral or the Guarantor Collateral with a value in excess of $50,000 in the aggregate is subjected to attachment, execution, levy, seizure or confiscation in any legal proceeding or otherwise, and such attachment, execution, levy, seizure or confiscation continues unremedied for a period of 20 days;

(f) one or more judgments, orders or decrees shall be rendered against Borrower or Guarantor that exceeds by more than $150,000 any insurance coverage applicable thereto (to the extent the relevant insurer has been notified of such claim and has not denied coverage therefor) and either (i) enforcement proceedings shall have been commenced by any creditor upon any such judgment, order or decree or (ii) such judgment, order or decree shall not have been vacated or discharged for a period of 30 consecutive days and there shall not be in effect (by reason of a pending appeal or otherwise) any stay of enforcement thereof;

(g) [intentionally omitted];

(h) (i) Borrower or any Subsidiary shall generally not pay its debts as such debts become due, shall admit in writing its inability to pay its debts generally, shall make a general assignment for the benefit of creditors, or shall cease doing business as a going concern, (ii) any proceeding shall be instituted by or against Borrower or any Subsidiary seeking to adjudicate it a bankrupt or insolvent or seeking liquidation, winding up, reorganization, arrangement, adjustment, protection, relief, composition of it or its debts or any similar order, in each case under any law relating to bankruptcy, insolvency or reorganization or relief of debtors or seeking the entry of an order for relief or the appointment of a custodian, receiver, trustee, conservator, liquidating agent, liquidator, other similar official or other official with similar powers, in each case for it or for any substantial part of its property and, in the case of any such proceedings instituted against (but not by or with the consent of) Borrower or such Subsidiary, either such proceedings shall remain undismissed or unstayed for a period of 60 days or more or any action sought in such proceedings shall occur or (iii) Borrower or any Subsidiary shall take any corporate or similar action or any other action to authorize any action described in clause (i) or (ii) above;

(i) Borrower or Guarantor files any amendment or termination statement relating to a filed financing statement describing the Collateral or the Guarantor Collateral;

(j) an event or development occurs which has a Material Adverse Effect;

(k) (i) any provision of any Debt Document shall fail to be valid and binding on, or enforceable against, Borrower, (ii) any Debt Document purporting to grant a security interest to secure any Obligation shall fail to create a valid and enforceable security interest on any Collateral with a value in excess of $25,000 in the aggregate purported to be covered thereby or such security interest shall fail or cease to be a perfected lien with the priority required in the relevant Debt Document or (iii) any subordination provision set forth in any document evidencing or relating to the Subordinated Indebtedness shall, in whole or in part, terminate or otherwise fail or cease to be valid and binding on, or enforceable against, or any agent for or holder of the Subordinated Indebtedness (or such person shall so state in writing), or Borrower shall state in writing that any of the events described in clause (i), (ii) or (iii) above shall have occurred;

(l) (i) Borrower or any Subsidiary defaults under any Specified Agreement (after any applicable grace period contained therein), (ii) (A) Borrower or any Subsidiary fails to make (after any applicable grace period) any payment when due (whether due because of

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scheduled maturity, required prepayment provisions, acceleration, demand or otherwise) on any Indebtedness of Borrower or such Subsidiary and, in each case, such failure relates to Indebtedness having a principal amount of $500,000 or more ("Material Indebtedness"), (B) any other event shall occur or condition shall exist under any contractual obligation relating to any such Material Indebtedness, if the effect of such event or condition is to accelerate, or to permit the acceleration of, the maturity of such Material Indebtedness or (C) any such Material Indebtedness shall become or be declared to be due and payable, or be required to be prepaid, redeemed, defeased or repurchased (other than by a regularly scheduled required prepayment), prior to the stated maturity thereof or prior to the first date on which the same could be mandatorily redeemed, or (iii) Borrower or any Subsidiary fails to make any payment when due (after any applicable grace period) or otherwise materially defaults under any obligation for payments due under any lease agreement for real property (after any grace period contained therein) which requires payments by the Borrower or such Subsidiary in excess of $1,000,000 in any fiscal year; "Specified Agreement" shall mean (1) while the Borrower is a private company, any Material Agreement to which Borrower or any Subsidiary is a party and involving the receipt or payment of amounts in the aggregate exceeding $1,000,000 per year and (2) while the Borrower is a public company, any commercial agreement with a third party which is or would be deemed a "material contract" (as such term is defined in Item 601 of Regulation S-K promulgated under the United States securities laws) of the Borrower or its Subsidiaries; or

(m) (i) any of the chief executive officer, the chief financial officer or the chief scientific officer of Borrower as of the date hereof shall cease to be involved in the day to day operations (including research development) or management of the business of Borrower, and a successor of such officer reasonably acceptable to Agent is not appointed on terms reasonably acceptable to Agent within 90 days of such cessation or involvement, (ii) the acquisition, directly or indirectly, by any person or group (as such term is used in Section 13(d)(3) of the Exchange Act) of more than forty percent (40%) of the voting power of the voting stock of Borrower by way of merger or consolidation or otherwise (other than in connection with an initial public offering of Borrower), (iii) during any period of twelve consecutive calendar months, individuals who at the beginning of such period constituted the board of directors of Borrower (together with any new directors whose election by the board of directors of Borrower or whose nomination for election by the stockholders of Borrower was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of such period or whose election or nomination for election was previously so approved) cease for any reason other than death or disability to constitute a majority of the directors then in office (other than in connection with an initial public offering of Borrower), (iv) Borrower ceases to own and control, directly or indirectly, (A) 100% of the economic and voting rights associated with the outstanding voting capital stock (or other voting equity interest) of each Subsidiary of Borrower that is incorporated under the laws of any State of the United States or the District of Columbia and (B) with respect to Subsidiaries of Borrower that are not incorporated under the laws of any State of the United States or the District of Columbia, the maximum allowable ownership percentage of economic and voting rights allowable under applicable law, or (v) the occurrence of any "change of control" or any term of similar effect under any Subordinated Indebtedness document.

8.2. **Lender Remedies.** Upon the occurrence of any Event of Default, Agent may, and at the written request of the Requisite Lenders shall, terminate the Commitments with respect to further Term Loans and declare any or all of the Obligations to be immediately due and payable, without demand or

notice to Borrower and the accelerated Obligations shall bear interest at the Default Rate pursuant to Section 2.6, provided that, upon the occurrence of any Event of Default specified in Section 8.1(h) above, the Obligations shall be automatically accelerated. After the occurrence of an Event of Default, Agent shall have (on behalf of itself and Lenders) all of the rights and remedies of a secured party under the UCC, and under any other applicable law. Without limiting the foregoing, Agent shall have the right to, and at the written request of the Requisite Lenders shall, (a) notify any account debtor of Borrower or any obligor on any instrument which constitutes part of the Collateral to make payments to Agent (for the benefit of itself and Lenders), (b) with or without legal process, enter any premises where the Collateral may be and take possession of and remove the Collateral from the premises or store it on the premises, (c) sell the Collateral at public or private sale, in whole or in part, and have the right to bid and purchase at such sale, or (d) lease or otherwise dispose of all or part of the Collateral, applying proceeds from such disposition to the Obligations in accordance with Section 8.4. If requested by Agent, Borrower shall promptly assemble the Collateral and make it available to Agent at a place to be designated by Agent. Agent may also render any or all of the Collateral unusable at Borrower's premises and may dispose of such Collateral on such premises without liability for rent or costs. Any notice that Agent is required to give to Borrower under the UCC of the time and place of any public sale or the time after which any private sale or other intended disposition of the Collateral is to be made shall be deemed to constitute reasonable notice if such notice is given in accordance with this Agreement at least 10 days prior to such action. Effective only upon the occurrence and during the continuance of an Event of Default, Borrower hereby irrevocably appoints Agent (and any of Agent's designated officers or employees) as Borrower's true and lawful attorney to: (i) take any of the actions specified above in this paragraph; (ii) endorse Borrower's name on any checks or other forms of payment or security that may come into Agent's possession; (iii) settle and adjust disputes and claims respecting the accounts directly with account debtors, for amounts and upon terms which Agent determines to be reasonable; and (iv) do such other and further acts and deeds in the name of Borrower that Agent may deem necessary or desirable to enforce its rights in or to any of the Collateral or to perfect or better perfect Agent's security interest (on behalf of itself and Lenders) in any of the Collateral. The appointment of Agent as Borrower's attorney in fact is a power coupled with an interest and is irrevocable until the Termination Date.

8.3. **Additional Remedies.** In addition to the remedies provided in Section 8.2 above, Borrower hereby grants to Agent (on behalf of itself and Lenders) and any transferee of Collateral, for purposes of exercising its remedies as provided herein, an irrevocable, nonexclusive license (exercisable without payment of royalty or other compensation to Borrower and subject to any exclusive licenses granted in compliance with the terms and conditions of Section 7.3(d)) to use, license or sublicense any Intellectual Property now owned or hereafter acquired by Borrower, and wherever the same may be located, and including in such license access to all media in which any of the licensed items may be recorded or stored and to all computer software and programs used for the compilation or printout thereof.

8.4. **Application of Proceeds.** Proceeds from any Transfer of the Collateral or the Intellectual Property (other than Permitted Dispositions) and all payments made or proceeds of Collateral received by Agent during the continuance of an Event of Default may be applied in Agent's sole discretion: (a) first, to pay all fees, costs, indemnities, reimbursements and expenses then due to Agent under the Debt Documents in its capacity as Agent under the Debt Documents, (b) second, to pay all fees, costs, indemnities, reimbursements and expenses then due to Lenders under the Debt Documents in accordance with their respective Pro Rata Shares, until paid in full, (c) third, to pay all interest on the Term Loans then due to Lenders in accordance with their respective Pro Rata Shares, until paid in full (other than interest accrued after the commencement of any proceeding referred to in Section 8.1(h) if a claim for such interest is not allowable in such proceeding), (d) fourth, to pay all principal on the Term Loans then due to Lenders in accordance with their respective Pro Rata Shares, until paid in full (e) fifth, to pay all other Obligations then due to Lenders in accordance with their respective Pro Rata Shares, until paid in full (including, without limitation, all interest accrued after the commencement of any proceeding referred to in Section 8.1(h) whether or not a claim for such interest is allowable in such proceeding), and (f) sixth, to Borrower or as otherwise required by law. Borrower shall remain fully liable for any deficiency.

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9. THE AGENT.

9.1. **Appointment of Agent.**

(a) Each Lender hereby appoints GECC (together with any successor Agent pursuant to Section 9.9) as Agent under the Debt Documents and authorizes the Agent to (a) execute and deliver the Debt Documents and accept delivery thereof on its behalf from Borrower, (b) take such action on its behalf and to exercise all rights, powers and remedies and perform the duties as are expressly delegated to the Agent under such Debt Documents and (c) exercise such powers as are reasonably incidental thereto. The provisions of this Article 9 are solely for the benefit of Agent and Lenders and none of Borrower nor any other person shall have any rights as a third party beneficiary of any of the provisions hereof. In performing its functions and duties under this Agreement and the other Debt Documents, Agent shall act solely as an agent of Lenders and does not assume and shall not be deemed to have assumed any obligation toward or relationship of agency or trust with or for Borrower or any other person. Agent shall have no duties or responsibilities except for those expressly set forth in this Agreement and the other Debt Documents. The duties of Agent shall be mechanical and administrative in nature and Agent shall not have, or be deemed to have, by reason of this Agreement, any other Debt Document or otherwise a fiduciary or trustee relationship in respect of any Lender. Except as expressly set forth in this Agreement and the other Debt Documents, Agent shall not have any duty to disclose, and shall not be liable for failure to disclose, any information relating to Borrower or any of its Subsidiaries that is communicated to or obtained by GECC or any of its affiliates in any capacity.

(b) Without limiting the generality of clause (a) above, Agent shall have the sole and exclusive right and authority (to the exclusion of the Lenders), and is hereby authorized, to (i) act as the disbursing and collecting agent for the Lenders with respect to all payments and collections arising in connection with the Debt Documents (including in any other bankruptcy, insolvency or similar proceeding), and each person making any payment in connection with any Debt Document to any Lender is hereby authorized to make such payment to Agent, (ii) file and prove claims and file other documents necessary or desirable to allow the claims of Agent and Lenders with respect to any Obligation in any proceeding described in any bankruptcy, insolvency or similar proceeding (but not to vote, consent or otherwise act on behalf of such Lender), (iii) act as collateral agent for Agent and each Lender for purposes of the perfection of all liens created by the Debt Documents and all other purposes stated therein, (iv) manage, supervise and otherwise deal with the Collateral, (v) take such other action as is necessary or desirable to maintain the perfection and priority of the liens created or purported to be created by the Debt Documents, (vi) except as may be otherwise specified in any Debt Document, exercise all remedies given to Agent and the other Lenders with respect to the Collateral, whether under the Debt Documents, applicable law or otherwise and (vii) execute any amendment, consent or waiver under the Debt Documents on behalf of any Lender that has consented in writing to such amendment, consent or waiver; provided, however, that Agent hereby appoints, authorizes and directs each Lender to act as collateral sub-agent for Agent and the Lenders for purposes of the perfection of all liens with respect to the Collateral, including any deposit account maintained by Borrower with, and cash and cash equivalents held by, such Lender, and

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may further authorize and direct the Lenders to take further actions as collateral sub-agents for purposes of enforcing such liens or otherwise to transfer the Collateral subject thereto to Agent, and each Lender hereby agrees to take such further actions to the extent, and only to the extent, so authorized and directed. Agent may, upon any term or condition it specifies, delegate or exercise any of its rights, powers and remedies under, and delegate or perform any of its duties or any other action with respect to, any Debt Document by or through any trustee, co-agent, employee, attorney-in-fact and any other person (including any Lender). Any such person shall benefit from this Article 9 to the extent provided by Agent.

(c) If Agent shall request instructions from Requisite Lenders or all affected Lenders with respect to any act or action (including failure to act) in connection with this Agreement or any other Debt Document, then Agent shall be entitled to refrain from such act or taking such action unless and until Agent shall have received instructions from Requisite Lenders or all affected Lenders, as the case may be, and Agent shall not incur liability to any person by reason of so refraining. Agent shall be fully justified in failing or refusing to take any action hereunder or under any other Debt Document (a) if such action would, in the opinion of Agent, be contrary to law or any Debt Document, (b) if such action would, in the opinion of Agent, expose Agent to any potential liability under any law, statute or regulation or (c) if Agent shall not first be indemnified to its satisfaction against any and all liability and expense which may be incurred by it by reason of taking or continuing to take any such action. Without limiting the foregoing, no Lender shall have any right of action whatsoever against Agent as a result of Agent acting or refraining from acting hereunder or under any other Debt Document in accordance with the instructions of Requisite Lenders or all affected Lenders, as applicable.

9.2. **Agent's Reliance, Etc.** Neither Agent nor any of its affiliates nor any of their respective directors, officers, agents, employees or representatives shall be liable for any action taken or omitted to be taken by it or them hereunder or under any other Debt Documents, or in connection herewith or therewith, except for damages caused by its or their own gross negligence or willful misconduct as finally determined by a court of competent jurisdiction. Without limiting the generality of the foregoing, Agent: (a) may treat the payee of any Note as the holder thereof until such Note has been assigned in accordance with Section 10.1; (b) may consult with legal counsel, independent public accountants and other experts, whether or not selected by it, and shall not be liable for any action taken or omitted to be taken by it in good faith in accordance with the advice of such counsel, accountants or experts; (c) shall not be responsible or otherwise incur liability for any action or omission taken in reliance upon the instructions of the Requisite Lenders, (d) makes no warranty or representation to any Lender and shall not be responsible to any Lender for any statements, warranties or representations made in or in connection with this Agreement or the other Debt Documents; (e) shall not have any duty to inspect the Collateral (including the books and records) or to ascertain or to inquire as to the performance or observance of any provision of any Debt Document, whether any condition set forth in any Debt Document is satisfied or waived, as to the financial condition of Borrower or as to the existence or continuation or possible occurrence or continuation of any Default or Event of Default and shall not be deemed to have notice or knowledge of such occurrence or continuation unless it has received a notice from Borrower or any Lender describing such Default or Event of Default clearly labeled "notice of default"; (f) shall not be responsible to any Lender for the due execution, legality, validity, enforceability, effectiveness, genuineness, sufficiency or value of, or the attachment, perfection or priority of any lien created or purported to be created under or in connection with, any Debt Document or any other instrument or document furnished pursuant hereto or thereto; and (g) shall incur no liability under or in respect of this Agreement or the other Debt Documents by acting upon any notice, consent, certificate or other instrument or writing (which may be by telecopy, telegram, cable or telex) believed by it to be genuine and signed or sent or otherwise authenticated by the proper party or parties.

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9.3. **GECC and Affiliates.** GECC shall have the same rights and powers under this Agreement and the other Debt Documents as any other Lender and may exercise the same as though it were not Agent; and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated, include GECC in its individual capacity. GECC and its affiliates may lend money to, invest in, and generally engage in any kind of business with, Borrower, any of Borrower's Subsidiaries, any of their Affiliates and any person who may do business with or own securities of Borrower, any of Borrower's Subsidiaries or any such Affiliate, all as if GECC were not Agent and without any duty to account therefor to Lenders. GECC and its affiliates may accept fees and other consideration from Borrower for services in connection with this Agreement or otherwise without having to account for the same to Lenders. Each Lender acknowledges the potential conflict of interest between GECC as a Lender holding disproportionate interests in the Term Loans and GECC as Agent, and expressly consents to, and waives, any claim based upon, such conflict of interest.

9.4. **Lender Credit Decision.** Each Lender acknowledges that it has, independently and without reliance upon Agent or any other Lender and based on the financial statements referred to in Section 6.3 and such other documents and information as it has deemed appropriate, made its own credit and financial analysis of Borrower and its own decision to enter into this Agreement. Each Lender also acknowledges that it will, independently and without reliance upon Agent or any other Lender and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under this Agreement. Each Lender acknowledges the potential conflict of interest of each other Lender as a result of Lenders holding disproportionate interests in the Term Loans, and expressly consents to, and waives, any claim based upon, such conflict of interest.

9.5. **Indemnification.** Lenders shall and do hereby indemnify Agent (to the extent not reimbursed by Borrower and without limiting the obligations of Borrower hereunder), ratably according to their respective Pro Rata Shares from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever that may be imposed on, incurred by, or asserted against Agent in any way relating to or arising out of this Agreement or any other Debt Document or any action taken or omitted to be taken by Agent in connection therewith; provided that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements resulting from Agent's gross negligence or willful misconduct as finally determined by a court of competent jurisdiction. Without limiting the foregoing, each Lender agrees to reimburse Agent promptly upon demand for its Pro Rata Share of any out-of-pocket expenses (including reasonable counsel fees) incurred by Agent in connection with the preparation, execution, delivery, administration, modification, amendment or enforcement (whether through negotiations, legal proceedings or otherwise) of, or legal advice in respect of rights or responsibilities under, this Agreement and each other Debt Document, to the extent that Agent is not reimbursed for such expenses by Borrower. The provisions of this Section 9.5 shall survive the termination of this Agreement.

9.6. **Successor Agent.** Agent may resign at any time by giving not less than 30 days' prior written notice thereof to Lenders and Borrower. Upon any such resignation, the Requisite Lenders shall have the right to appoint a successor Agent. If no successor Agent shall have been so appointed by the Requisite Lenders and shall have accepted such appointment within 30 days after the resigning Agent's giving notice of resignation, then the resigning Agent may, on behalf of Lenders, appoint a successor Agent, which shall be a Lender, if a Lender is willing to accept such appointment, or otherwise shall be a commercial bank or financial institution or a subsidiary of a commercial bank or financial institution if such commercial bank or financial institution is organized under the laws of the United States of America

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or of any State thereof and has a combined capital and surplus of at least $300,000,000. If no successor Agent has been appointed pursuant to the foregoing, within 30 days after the date such notice of resignation was given by the resigning Agent, such resignation shall become effective and the Requisite Lenders shall thereafter perform all the duties of Agent hereunder until such time, if any, as the Requisite Lenders appoint a successor Agent as provided above. Upon the acceptance of any appointment as Agent hereunder by a successor Agent, such successor Agent shall succeed to and become vested with all the rights, powers, privileges and duties of the resigning Agent. Upon the earlier of the acceptance of any appointment as Agent hereunder by a successor Agent or the effective date of the resigning Agent's resignation, the resigning Agent shall be discharged from its duties and obligations under this Agreement and the other Debt Documents, except that any indemnity rights or other rights in favor of such resigning Agent shall continue. After any resigning Agent's resignation hereunder, the provisions of this Section 9 shall inure to its benefit as to any actions taken or omitted to be taken by it while it was acting as Agent under this Agreement and the other Debt Documents.

9.7. **Setoff and Sharing of Payments.** In addition to any rights now or hereafter granted under applicable law and not by way of limitation of any such rights, upon the occurrence and during the continuance of any Event of Default and subject to Section 9.8(e), each Lender is hereby authorized at any time or from time to time upon the direction of Agent, without notice to Borrower or any other person, any such notice being hereby expressly waived, to offset and to appropriate and to apply any and all balances held by it at any of its offices for the account of Borrower (regardless of whether such balances are then due to Borrower) and any other properties or assets at any time held or owing by that Lender or that holder to or for the credit or for the account of Borrower against and on account of any of the Obligations that are not paid when due. Any Lender exercising a right of setoff or otherwise receiving any payment on account of the Obligations in excess of its Pro Rata Share thereof shall purchase for cash (and the other Lenders or holders shall sell) such participations in each such other Lender's or holder's Pro Rata Share of the Obligations as would be necessary to cause such Lender to share the amount so offset or otherwise received with each other Lender or holder in accordance with their respective Pro Rata Shares of the Obligations. Borrower agrees, to the fullest extent permitted by law, that (a) any Lender may exercise its right to offset with respect to amounts in excess of its Pro Rata Share of the Obligations and may sell participations in such amounts so offset to other Lenders and holders and (b) any Lender so purchasing a participation in the Term Loans made or other Obligations held by other Lenders or holders may exercise all rights of offset, bankers' lien, counterclaim or similar rights with respect to such participation as fully as if such Lender or holder were a direct holder of the Term Loans and the other Obligations in the amount of such participation. Notwithstanding the foregoing, if all or any portion of the offset amount or payment otherwise received is thereafter recovered from the Lender that has exercised the right of offset, the purchase of participations by that Lender shall be rescinded and the purchase price restored without interest. The term "Pro Rata Share" means, with respect to any Lender at any time, the percentage obtained by dividing (x) the Commitment of such Lender then in effect (or, if such Commitment is terminated, the aggregate outstanding principal amount of the Term Loans owing to such Lender) by (y) the Total Commitment then in effect (or, if the Total Commitment is terminated, the outstanding principal amount of the Term Loans owing to all Lenders).

9.8. **Advances; Payments; Non-Funding Lenders; Information; Actions in Concert.**

(a) Advances; Payments. If Agent receives any payment for the account of Lenders on or prior to 1:00 p.m. Connecticut time on any Business Day, Agent shall pay to each applicable Lender such Lender's Pro Rata Share of such payment on such Business Day. If Agent receives any payment for the account of Lenders after 1:00 p.m. Connecticut time on any Business Day, Agent shall pay to each applicable Lender such Lender's Pro Rata Share of such payment on the next Business Day. To the extent that any Lender has failed to fund any such payments and Term Loans (a "Non-Funding Lender"), Agent shall be entitled to set off the funding short-fall against that Non-Funding Lender's Pro Rata Share of all payments received from Borrower.

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(b) Return of Payments.

(i) If Agent pays an amount to a Lender under this Agreement in the belief or expectation that a related payment has been or will be received by Agent from Borrower and such related payment is not received by Agent, then Agent will be entitled to recover such amount (including interest accruing on such amount at the Federal Funds Rate for the first Business Day and thereafter, at the rate otherwise applicable to such Obligation) from such Lender on demand without setoff, counterclaim or deduction of any kind.

(ii) If Agent determines at any time that any amount received by Agent under this Agreement must be returned to Borrower or paid to any other person pursuant to any insolvency law or otherwise, then, notwithstanding any other term or condition of this Agreement or any other Debt Document, Agent will not be required to distribute any portion thereof to any Lender. In addition, each Lender will repay to Agent on demand any portion of such amount that Agent has distributed to such Lender, together with interest at such rate, if any, as Agent is required to pay to Borrower or such other person, without setoff, counterclaim or deduction of any kind.

(c) Non-Funding Lenders. The failure of any Non-Funding Lender to make any Term Loan or any payment required by it hereunder shall not relieve any other Lender (each such other Lender, an "Other Lender") of its obligations to make such Term Loan, but neither any Other Lender nor Agent shall be responsible for the failure of any Non-Funding Lender to make a Term Loan or make any other payment required hereunder. Notwithstanding anything set forth herein to the contrary, a Non-Funding Lender shall not have any voting or consent rights under or with respect to any Debt Document or constitute a "Lender" (or be included in the calculation of "Requisite Lender" hereunder) for any voting or consent rights under or with respect to any Debt Document. At Borrower's request, Agent or a person reasonably acceptable to Agent shall have the right with Agent's consent and in Agent's sole discretion (but shall have no obligation) to purchase from any Non-Funding Lender, and each Non-Funding Lender agrees that it shall, at Agent's request, sell and assign to Agent or such person, all of the Commitments and all of the outstanding Term Loans of that Non-Funding Lender for an amount equal to the principal balance of all Term Loans held by such Non-Funding Lender and all accrued interest and fees with respect thereto through the date of sale, such purchase and sale to be consummated pursuant to an executed Assignment Agreement (as defined below).

(d) Dissemination of Information. Agent shall use reasonable efforts to provide Lenders with any notice of Default or Event of Default received by Agent from, or delivered by Agent to Borrower, with notice of any Event of Default of which Agent has actually become aware and with notice of any action taken by Agent following any Event of Default; provided that Agent shall not be liable to any Lender for any failure to do so, except to the extent that such failure is attributable to Agent's gross negligence or willful misconduct as finally determined by a court of competent jurisdiction. Lenders acknowledge that Borrower is required to provide financial statements to Lenders in accordance with Section 6.3 hereto and agree that Agent shall have no duty to provide the same to Lenders.

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(e) Actions in Concert. Anything in this Agreement to the contrary notwithstanding, each Lender hereby agrees with each other Lender that no Lender shall take any action to protect or enforce its rights arising out of this Agreement, the Notes or any other Debt Documents (including exercising any rights of setoff) without first obtaining the prior written consent of Agent and Requisite Lenders, it being the intent of Lenders that any such action to protect or enforce rights under this Agreement and the Notes shall be taken in concert and at the direction or with the consent of Agent and Requisite Lenders.

10. MISCELLANEOUS.

10.1. **Assignment.** Subject to the terms of this Section 10.1, any Lender may make an assignment to an assignee of, or sell participations in, at any time or times, the Debt Documents, its Commitment, Term Loans or any portion thereof or interest therein, including any Lender's rights, title, interests, remedies, powers or duties thereunder. Any assignment by a Lender shall: (i) except in the case of an assignment to a Qualified Assignee (as defined below), require the consent of each Lender (which consent shall not be unreasonably withheld, conditioned or delayed), (ii) in the case of an assignment to an entity that is not a Qualified Assignee (as defined below), require the consent of Borrower (which consent shall not be unreasonably withheld, conditioned or delayed), (iii) require the execution of an assignment agreement in form and substance reasonably satisfactory to, and acknowledged by, Agent (an "Assignment Agreement"); (iv) be conditioned on such assignee Lender representing to the assigning Lender and Agent that it is purchasing the applicable Commitment and/or Term Loans to be assigned to it for its own account, for investment purposes and not with a view to the distribution thereof; (v) be in an aggregate amount of not less than $1,000,000, unless such assignment is made to an existing Lender or an affiliate of an existing Lender or is of the assignor's (together with its affiliates') entire interest of the Term Loans or is made with the prior written consent of Agent; and (vi) include a payment to Agent of an assignment fee of $3,500. In the case of an assignment by a Lender under this Section 10.1, the assignee shall have, to the extent of such assignment, the same rights, benefits and obligations as all other Lenders hereunder. The assigning Lender shall be relieved of its obligations hereunder with respect to its Commitment and Term Loans, as applicable, or assigned portion thereof from and after the date of such assignment. Borrower hereby acknowledges and agrees that any assignment shall give rise to a direct obligation of Borrower to the assignee and that the assignee shall be considered to be a "Lender". In the event any Lender assigns or otherwise transfers all or any part of the Commitments and Obligations, Agent shall so notify Borrower and Borrower shall, upon the request of Agent, execute new Notes in exchange for the Notes, if any, being assigned. Agent may amend Schedule A to this Agreement to reflect assignments made in accordance with this Section.

As used herein, "Qualified Assignee" means (a) any Lender and any affiliate of any Lender and (b) any commercial bank, savings and loan association or savings bank or any other entity which is an "accredited investor" (as defined in Regulation D under the Securities Act) which extends credit or buys loans as one of its businesses, including insurance companies, mutual funds, lease financing companies and commercial finance companies, in each case, which has a rating of BBB or higher from S&P and a rating of Baa2 or higher from Moody's at the date that it becomes a Lender and in each case of clauses (a) and (b), which, through its applicable lending office, is capable of lending to Borrower without the imposition of any withholding or similar taxes; provided that no person proposed to become a Lender after the Closing Date and determined by Agent to be acting in the capacity of a vulture fund or distressed debt purchaser shall be a Qualified Assignee, and no person or Affiliate of such person proposed to become a Lender after the Closing Date and that holds any subordinated debt or stock issued by Borrower shall be a Qualified Assignee.

10.2. **Notices.** All notices, requests or other communications given in connection with this Agreement shall be in writing, shall be addressed to the parties at their respective addresses set forth on

the signature pages hereto below such parties' name or in the most recent Assignment Agreement executed by any Lender (unless and until a different address may be specified in a written notice to the other party delivered in accordance with this Section), and shall be deemed given (a) on the date of receipt if delivered by hand, (b) on the date of sender's receipt of confirmation of proper transmission if sent by facsimile transmission, (c) on the next Business Day after being sent by a nationally-recognized overnight courier, and (d) on the fourth Business Day after being sent by registered or certified mail, postage prepaid. As used herein, the term "Business Day" shall mean and include any day other than Saturdays, Sundays, or other days on which commercial banks in New York, New York are required or authorized to be closed.

10.3. **Correction of Debt Documents.** Agent may correct patent errors and fill in all blanks in this Agreement or the Debt Documents consistent with the agreement of the parties.

10.4. **Performance.** Time is of the essence of this Agreement. This Agreement shall be binding, jointly and severally, upon all parties described as the "Borrower" and their respective successors and assigns, and shall inure to the benefit of Agent, Lenders, and their respective successors and assigns.

10.5. **Payment of Fees and Expenses.** Borrower agrees to pay or reimburse upon demand for all reasonable fees, costs and expenses incurred by Agent and Lenders in connection with (a) the investigation, preparation, negotiation, execution, administration of, or any amendment, modification, waiver or termination of, this Agreement or any other Debt Document, (b) the administration of any transaction contemplated hereby or thereby and (c) the enforcement, assertion, defense or preservation of Agent's and Lenders' rights and remedies under this Agreement or any other Debt Document, in each case of clauses (a) through (c), including, without limitation, reasonable attorney's fees and expenses, reasonable fees of consultants, auditors and appraisers and UCC and other corporate search and filing fees and wire transfer fees; provided that Borrower's reimbursement of the fees and expenses of Agent's counsel incurred in connection with the preparation and negotiation of the Debt Documents on or before the Closing Date shall be subject to the limitations set forth in Section 2.7(a). Borrower further agrees that such fees, costs and expenses shall constitute Obligations. This provision shall survive the termination of this Agreement.

10.6. **Indemnity.** Borrower shall and does hereby indemnify and defend Agent, Lenders, and their respective successors and assigns, and their respective directors, officers, employees, consultants, attorneys, agents and affiliates (each an "Indemnitee") from and against all liabilities, losses, damages, expenses, penalties, claims, actions and suits (including, without limitation, related attorneys' fees) of any kind whatsoever arising, directly or indirectly, which may be imposed on, incurred by or asserted against such Indemnitee as a result of or in connection with this Agreement, the other Debt Documents or any of the transactions contemplated hereby or thereby (the "Indemnified Liabilities"); provided that Borrower shall have no obligation to any Indemnitee hereunder with respect to any Indemnified Liabilities to the extent such Indemnified Liabilities arise from the gross negligence, willful misconduct, or bad faith of that Indemnitee or arise from the material breach of the obligations of such Indemnitee hereunder by such Indemnitee, in each case as determined by the final non-appealable judgment of a court of competent jurisdiction. This provision shall survive the termination of this Agreement.

10.7. **Rights Cumulative.** Agent's and Lenders' rights and remedies under this Agreement or otherwise arising are cumulative and may be exercised singularly or concurrently. Neither the failure nor any delay on the part of Agent or any Lender to exercise any right, power or privilege under this Agreement shall operate as a waiver, nor shall any single or partial exercise of any right, power or privilege preclude any other or further exercise of that or any other right, power or privilege. NONE OF AGENT OR ANY LENDER SHALL BE DEEMED TO HAVE WAIVED ANY OF ITS RESPECTIVE RIGHTS UNDER THIS AGREEMENT OR UNDER ANY OTHER AGREEMENT, INSTRUMENT OR

PAPER SIGNED BY BORROWER UNLESS SUCH WAIVER IS EXPRESSED IN WRITING AND SIGNED BY AGENT, REQUISITE LENDERS OR ALL LENDERS, AS APPLICABLE. A waiver on any one occasion shall not be construed as a bar to or waiver of any right or remedy on any future occasion.

10.8. **Entire Agreement; Amendments, Waivers.**

(a) This Agreement and the other Debt Documents constitute the entire agreement between the parties with respect to the subject matter hereof and thereof and supersede all prior understandings (whether written, verbal or implied) with respect to such subject matter. Section headings contained in this Agreement have been included for convenience only, and shall not affect the construction or interpretation of this Agreement.

(b) Except for actions expressly permitted to be taken by Agent, no amendment, modification, termination or waiver of any provision of this Agreement or any other Debt Document, or any consent to any departure by Borrower therefrom, shall in any event be effective unless the same shall be in writing and signed by Agent, Borrower and Lenders having more than (x) 60% of the aggregate Commitments of all Lenders or (y) if such Commitments have expired or been terminated, 60% of the aggregate outstanding principal amount of the Term Loans (the "Requisite Lenders"); provided, however, that so long as a party that is a Lender hereunder on the Closing Date does not assign any portion of its Commitment or Term Loan, such Lender shall be deemed to be a Requisite Lender. Except as set forth in clause (c) below, all such amendments, modifications, terminations or waivers requiring the consent of any Lenders shall require the written consent of Requisite Lenders.

(c) No amendment, modification, termination or waiver of any provision of this Agreement or any other Debt Document shall, unless in writing and signed by Agent and each Lender directly affected thereby: (i) increase or decrease any Commitment of any Lender or increase or decrease the Total Commitment (which shall be deemed to affect all Lenders), (ii) reduce the principal of or rate of interest on any Obligation or the amount of any fees payable hereunder, (iii) postpone the date fixed for any payment of principal of or interest on any Term Loan, or any fees hereunder, (iv) release all or substantially all of the Collateral, except as otherwise expressly permitted in the Debt Documents, (v) subordinate the lien granted in favor of the Agent securing the Obligations, (vi) release Borrower from its obligations hereunder and under the other Debt Documents or any guarantor from its guaranty of the Obligations or (vi) amend, modify, terminate or waive Section 8.4 or 10.8(b) or (c).

(d) Notwithstanding any provision in this Section 10.8 to the contrary, no amendment, modification, termination or waiver affecting or modifying the rights or obligations of Agent hereunder shall be effective unless signed by Borrower, Agent and Requisite Lenders.

(e) Subject to the terms and conditions of this Section 10.8, if Agent receives a written notice from Borrower requesting the consent of the Requisite Lenders to a proposed acquisition by Borrower that is not permitted under Section 7.5 or requesting the consent of the Requisite Lenders to a proposed amendment, modification or waiver of the Maxygen License Agreement to the extent required under Section 7.11(a), then, on or before the 15th day after the date on which Agent receives such notice (the "Response

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Date"), Agent shall advise Borrower in writing whether the consent of the Requisite Lenders to such acquisition or such amendment, modification or waiver has been obtained (the "Response"); provided that if Borrower does not receive a Response from Agent on or prior to the Response Date, Agent and all Lenders shall be deemed to have not consented to such acquisition or such amendment, modification or waiver.

10.9. **Binding Effect.** This Agreement shall continue in full force and effect until the Termination Date; provided, however, that the provisions of Sections 2.3(f), 9.5, 10.5, 10.6 and 10.13 and the other indemnities contained in the Debt Documents shall survive the Termination Date. The surrender, upon payment or otherwise, of any Note or any of the other Debt Documents evidencing any of the Obligations shall not affect the right of Agent to retain the Collateral for such other Obligations as may then exist or as it may be reasonably contemplated will exist in the future. This Agreement and the grant of the security interest in the Collateral pursuant to Section 3.1 shall automatically be reinstated if Agent or any Lender is ever required to return or restore the payment of all or any portion of the Obligations (all as though such payment had never been made).

10.10. **Use of Logo.** Borrower authorizes each Lender to use its name, logo and/or trademark without notice to or consent by Borrower, in connection with certain promotional materials that such Lender may disseminate to the public. The promotional materials may include, but are not limited to, brochures, video tape, internet website, press releases, advertising in newspaper and/or other periodicals, lucites, and any other materials relating the fact that such Lender has a financing relationship with Borrower and such materials may be developed, disseminated and used without Borrower's review. Nothing herein obligates Lenders to use Borrower's name, logo and/or trademark, in any promotional materials of Agent. Borrower shall not, and shall not permit any of its Affiliates to, issue any press release or other public disclosure (other than any document filed with any governmental authority relating to a public offering of the securities of Borrower) using the name, logo or otherwise referring to General Electric Capital Corporation, GE Healthcare Financial Services, Inc. or of any of their affiliates, the Debt Documents or any transaction contemplated herein or therein without at least two (2) Business Days prior written notice to and the prior written consent of Agent unless, and only to the extent that, Borrower or such affiliate is required to do so under applicable law and then, only after consulting with Agent prior thereto.

10.11. **Waiver of Jury Trial.** EACH OF BORROWER, AGENT AND LENDERS UNCONDITIONALLY WAIVE ANY AND ALL RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, ANY OF THE OTHER DEBT DOCUMENTS, ANY OF THE INDEBTEDNESS SECURED HEREBY, ANY DEALINGS AMONG BORROWER, AGENT AND/OR LENDERS RELATING TO THE SUBJECT MATTER OF THIS TRANSACTION OR ANY RELATED TRANSACTIONS, AND/OR THE RELATIONSHIP THAT IS BEING ESTABLISHED AMONG BORROWER, AGENT AND/OR LENDERS. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT. THIS WAIVER IS IRREVOCABLE. THIS WAIVER MAY NOT BE MODIFIED EITHER ORALLY OR IN WRITING. THE WAIVER ALSO SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS TO THIS AGREEMENT, ANY OTHER DEBT DOCUMENTS, OR TO ANY OTHER DOCUMENTS OR AGREEMENTS RELATING TO THIS TRANSACTION OR ANY RELATED TRANSACTION. THIS AGREEMENT MAY BE FILED AS A WRITTEN CONSENT TO A TRIAL BY THE COURT.

10.12. **Governing Law.** THIS AGREEMENT, THE OTHER DEBT DOCUMENTS AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER AND THEREUNDER SHALL IN ALL RESPECTS BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH, THE

INTERNAL LAWS OF THE STATE OF NEW YORK (WITHOUT REGARD TO THE CONFLICT OF LAWS PRINCIPLES OF SUCH STATE), INCLUDING ALL MATTERS OF CONSTRUCTION, VALIDITY AND PERFORMANCE, REGARDLESS OF THE LOCATION OF THE COLLATERAL. IF ANY ACTION ARISING OUT OF THIS AGREEMENT OR ANY OTHER DEBT DOCUMENT IS COMMENCED BY AGENT IN THE STATE COURTS OF THE STATE OF NEW YORK OR IN THE U.S. DISTRICT COURT FOR THE DISTRICT OF NEW YORK, BORROWER HEREBY CONSENTS TO THE JURISDICTION OF ANY SUCH COURT IN ANY SUCH ACTION AND TO THE LAYING OF VENUE IN THE STATE OF NEW YORK. ANY PROCESS IN ANY SUCH ACTION SHALL BE DULY SERVED IF MAILED BY REGISTERED MAIL, POSTAGE PREPAID, TO BORROWER AT ITS ADDRESS DESCRIBED IN SECTION 10.2, OR IF SERVED BY ANY OTHER MEANS PERMITTED BY APPLICABLE LAW.

10.13. **Confidentiality**. All of the financial statements and reports furnished by Borrower to Agent under Section 6.3 hereof shall be deemed confidential and shall not be disclosed by Agent and Lenders to any other persons except as provided herein. Agent and Lenders acknowledge that after the Borrower is a publicly traded company, such financial statements and reports may be material non-public information as more fully described in Section 6.3. In addition, any other information from time to time delivered to Agent and/or the Lenders by Borrower which is identified as confidential and which is not in the public domain shall be held by Agent or such Lender as confidential; provided that Agent and each Lender may make disclosure of such information (i) to its independent accountants and legal counsel (which persons shall be likewise bound by the provisions of this Section 10.13), (ii) pursuant to statutory and regulatory requirements, (iii) pursuant to any mandatory court order or subpoena or in connection with any legal process, (iv) pursuant to any written agreement hereafter made between Agent, any Lender and Borrower to which such information relates, which agreement permits such disclosure, (v) as necessary in connection with the exercise of any remedy by Agent or any Lender under the Debt Documents, (vi) consisting of general portfolio information that does not identify Borrower or any of its Subsidiaries, (vii) which was heretofore been publicly disclosed or is otherwise available to such Agent and/or Lender on a non-confidential basis from a source that is not, to its knowledge, subject to a confidentiality agreement with Borrower, (viii) in connection with any litigation to which Agent or any Lender or its affiliates is a party, or (ix) subject to an agreement containing provisions substantially the same as those set forth in this Section 10.13, to any assignee of or participant in, or prospective assignee of or participant in, any of the Obligations; provided that Agent shall use reasonable efforts to provide written notice to Borrower of any disclosures of such information made by Agent pursuant to the immediately preceding clauses (ii), (iii) or (viii) so long as Agent is not prohibited from delivering such notice pursuant to any of the matters described in such clauses.

10.14. **Counterparts.** This Agreement may be executed in any number of counterparts and by different parties in separate counterparts, each of which when so executed shall be deemed to be an original and all of which when taken together shall constitute one and the same agreement. Delivery of an executed signature page of this Agreement by facsimile transmission or electronic transmission shall be as effective as delivery of a manually executed counterpart hereof.

[*Signature Page Follows****]***

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, Borrower, Agent and Lenders, intending to be legally bound hereby, have duly executed this Agreement in one or more counterparts, each of which shall be deemed to be an original, as of the day and year first aforesaid.

BORROWER:

CODEXIS, INC.

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President and Chief Executive Officer

Address For Notices:

Codexis Inc.
Chief Financial Officer
200 Penobscot Drive
Redwood City, CA 94063
Attention: [*]
Phone: [*]
Facsimile: [*]

Codexis, Inc.
General Counsel
200 Penobscot Drive
Redwood City, CA 94063
Attention: [*]
Phone: [*]
Facsimile: [*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

AGENT AND LENDER:

GENERAL ELECTRIC CAPITAL CORPORATION

By: /s/ Scott R. Towers
Name: Scott R. Towers
Title: Duly Authorized Signatory

Address For Notices:

General Electric Capital Corporation
c/o GE Healthcare Financial Services, Inc., LSF
83 Wooster Heights Road, Fifth Floor
Danbury, Connecticut 06810
Attention: [*]
Phone: [*]
Facsimile: [*]

With a copy to:

General Electric Capital Corporation
c/o GE Healthcare Financial Services, Inc.
Two Bethesda Metro Center, Suite 600
Bethesda, Maryland 20814
Attention: [*]
Phone: [*]
Facsimile: [*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

LENDER:

OXFORD FINANCE CORPORATION

By: /s/ T.A. Lex
Name: T.A. Lex
Title: COO

Address For Notices:

Oxford Finance Corporation
133 North Fairfax Street
Alexandria, VA 22314
Attention: [*]
Phone: [*]
Facsimile: [*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE A
COMMITMENTS

Name of Lender	Commitment of such Lender	Pro Rata Share
General Electric Capital Corporation	$ 7,500,000	50%
Oxford Finance Corporation	$ 7,500,000	50%
TOTAL	$ 15,000,000	100%

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE B
DISCLOSURES

[To be scheduled by Borrower]

Existing Liens

Debtor	Secured Party	Collateral	State and Jurisdiction	Filing Date and Number (include original file date and continuations, amendments, etc.)

Existing Indebtedness

Debtor	Creditor	Amount of Indebtedness outstanding as of _____ __, ____	Maturity Date

Existing Investments

Debtor	Type of Investment	Date	Amount Outstanding as of _____

Material Contracts

1.

2.

3.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT A

FORM OF PROMISSORY NOTE

[September __, 2007]

FOR VALUE RECEIVED, CODEXIS, INC., a Delaware corporation located at the address stated below ("Borrower"), promises to pay to the order of [**Lender**] or any subsequent holder hereof (each, a "Lender"), the principal sum of _____ and ____/100 Dollars (**$**_____) or, if less, the aggregate unpaid principal amount of all Term Loans made by Lender to or on behalf of Borrower pursuant to the Agreement (as hereinafter defined). All capitalized terms, unless otherwise defined herein, shall have the respective meanings assigned to such terms in the Agreement.

This Promissory Note is issued pursuant to that certain Loan and Security Agreement, dated as of**[August __, 2007]**, among Borrower, General Electric Capital Corporation, as agent and lender, **[the other lenders signatory thereto] [, and Lender]** (as amended, restated, supplemented or otherwise modified from time to time, the "Agreement"), is one of the Notes referred to therein, and is entitled to the benefit and security of the Debt Documents referred to therein, to which Agreement reference is hereby made for a statement of all of the terms and conditions under which the loans evidenced hereby were made.

The principal amount of the indebtedness evidenced hereby shall be payable in the amounts and on the dates specified in the Agreement. Interest thereon shall be paid until such principal amount is paid in full at such interest rates and at such times as are specified in the Agreement. The terms of the Agreement are hereby incorporated herein by reference.

All payments shall be applied in accordance with the Agreement. The acceptance by Lender of any payment which is less than payment in full of all amounts due and owing at such time shall not constitute a waiver of Lender's right to receive payment in full at such time or at any prior or subsequent time. The payment of any Scheduled Payment prior to its due date shall result in a corresponding increase in the portion of the Scheduled Payment credited to the remaining unpaid principal balance.

All amounts due hereunder and under the other Debt Documents are payable in the lawful currency of the United States of America. Borrower hereby expressly authorizes Lender to insert the date value as is actually given in the blank space on the face hereof and on all related documents pertaining hereto.

This Note is secured as provided in the Agreement and the other Debt Documents. Reference is hereby made to the Agreement and the other Debt Documents for a description of the properties and assets in which a security interest has been granted, the nature and extent of the security interest, the terms and conditions upon which the security interest was granted and the rights of the holder of the Note in respect thereof.

Time is of the essence hereof. If Lender does not receive from Borrower payment in full of any Scheduled Payment or any other sum due under this Note or any other Debt Document within 3 days after its due date, Borrower agrees to pay the Late Fee in accordance with the Agreement. Such Late Fee will be immediately due and payable, and is in addition to any other costs, fees and expenses that Borrower may owe as a result of such late payment.

This Note may be voluntarily prepaid only as permitted under Section 2.4 of the Agreement. After a Default or an Event of Default, this Note shall bear interest at a rate per annum equal to the Default Rate pursuant to Section 2.6 of the Agreement.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Borrower and all parties now or hereafter liable with respect to this Note, hereby waive presentment, demand for payment, notice of nonpayment, protest, notice of protest, notice of dishonor, and all other notices in connection herewith, as well as filing of suit (if permitted by law) and diligence in collecting this Note or enforcing any of the security hereof, and agree to pay (if permitted by law) all expenses incurred in collection, including reasonable attorneys' fees and expenses.

THIS NOTE SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.

No variation or modification of this Note, or any waiver of any of its provisions or conditions, shall be valid unless such variation or modification is made in accordance with Section 10.8 of the Agreement. Any such waiver, consent, modification or change shall be effective only in the specific instance and for the specific purpose given.

IN WITNESS WHEREOF, Borrower has duly executed this Note as of the date first above written.

CODEXIS, INC.

By: _____
Name: _____
Title: _____
Federal Tax ID #: _____
Address: 200 Penobscot Drive
Redwood City, CA 94063

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT B

SECRETARY'S CERTIFICATE OF AUTHORITY

[DATE]

Reference is made to the Loan and Security Agreement, dated as of **[September __, 2007]** (as amended, restated, supplemented or otherwise modified from time to time, the "Agreement"), among Codexis, Inc., a Delaware corporation (the "Borrower"), General Electric Capital Corporation, a Delaware corporation ("GECC"), as a lender and as agent (in such capacity, together with its successors and assigns in such capacity, "Agent"), and the other lenders signatory thereto from time to time (GECC and such other lenders, the "Lenders"). Capitalized terms used but not defined herein are used with the meanings assigned to such terms in the Agreement.

I, **[_____]**, do hereby certify that:

(i) I am the duly elected, qualified and acting **[**Assistant**]** Secretary of Borrower;

(ii) attached hereto as Exhibit A is a true, complete and correct copies of Borrower's Certificate of Incorporation and the Bylaws, each of which is in full force and effect on and as of the date hereof;

(iii) each of the following named individuals is a duly elected or appointed, qualified and acting Proper Officer of Borrower who holds the offices set opposite such individual's name, and such individual is authorized to sign the Debt Documents and all other notices, documents, instruments and certificates to be delivered pursuant thereto, and the signature written opposite the name and title of such officer is such officer's genuine signature:

Name	Title	Signature
Alan Shaw	Chief Executive Officer	_____
Robert S. Breuil	Chief Financial Officer	_____
Douglas T. Sheehy	General Counsel	_____
Brian P. Dowd	Controller	_____

(iv) attached hereto as Exhibit B are true, complete and correct copies of resolutions adopted by the Board of Directors of Borrower (the "Board") authorizing the execution, delivery and performance of the Debt Documents to which Borrower is a party, which resolutions were duly adopted by the Board on **[DATE]** and all such resolutions are in full force and effect on the date hereof in the form in which adopted without amendment, modification, rescission or revocation;

(iv) the foregoing authority shall remain in full force and effect, and Agent and each Lender shall be entitled to rely upon same, until written notice of the modification, rescission or revocation of same, in whole or in part, has been delivered to Agent and each Lender, but no such modification, rescission or revocation shall, in any event, be effective with respect to any documents executed or actions taken in reliance upon the foregoing authority before said written notice is delivered to Agent and each Lender; and

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(v) no Default or Event of Default exists under the Agreement, and all representations and warranties of Borrower in the Debt Documents are true and correct in all respects on and as of the date hereof, except to the extent such representations and warranties expressly relate to an earlier date, in which case such representations and warranties were true and correct in all respects on and as of such earlier date.

[Signature page follows]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, I have hereunto set my hand as of the first date written above

Name: _____

Title: **[Assistant]** Secretary

The undersigned does hereby certify on behalf of Borrower that he is the duly elected or appointed, qualified and acting **[TITLE]** of Borrower and that **[NAME FROM ABOVE]** is the duly elected or appointed, qualified and acting **[Assistant]** Secretary of Borrower, and that the signature set forth immediately above is his genuine signature.

Name: _____

Title: _____

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EXHIBIT B TO SECRETARY'S CERTIFICATE OF AUTHORITY

FORM OF RESOLUTIONS

BOARD RESOLUTIONS

_____, 2007

WHEREAS, Codexis, Inc., a Delaware corporation ("Borrower") has requested that General Electric Capital Corporation, a Delaware corporation ("GECC"), as agent (in such capacity, the "Agent") and lender, and certain other lenders (GECC and such other lenders, collectively, the "Lenders") provide a credit facility in an original principal amount not to exceed $15,000,000 (the "Credit Facility"); and

WHEREAS, the terms of the Credit Facility are set forth in a loan and security agreement by and among Borrower, Agent, and the Lenders and certain related agreements, documents and instruments described in detail below; and

WHEREAS, the Board of Directors of Borrower (the "Directors") deems it advisable and in the best interests of Borrower to execute, deliver and perform its obligations under those transaction documents described and referred to below.

NOW, THEREFORE, be it

RESOLVED, that the Credit Facility be, and it hereby is, approved; and further

RESOLVED, that the form of Loan and Security Agreement (the "Loan and Security Agreement"), by and among Borrower, Agent and the Lenders, as presented to the Directors, be and it hereby is, approved and the Chief Executive Officer, Chief Financial Officer, General Counsel and/or Controller of Borrower (collectively, the "Proper Officers") be, and each of them hereby is, authorized and directed on behalf of Borrower to execute and deliver to Agent the Loan and Security Agreement, in substantially the form as presented to the Directors, with such changes as the Proper Officers may approve, such approval to be conclusively evidenced by execution and delivery thereof; and further

RESOLVED, that the form of Promissory Note (the "Note"), as presented to the Directors, be, and it hereby is, approved and the Proper Officers be, and each of them hereby is, authorized and directed on behalf of Borrower to execute and deliver to Lender one or more promissory Notes, in substantially the form as presented to the Directors, with such changes as the Proper Officers may approve, such approval to be conclusively evidenced by execution and delivery thereof; and further

RESOLVED, that the form of Pledge Agreement (the "Pledge Agreement"), by and among Borrower, Agent and the Lenders, as presented to the Directors, be and it hereby is, approved and the Proper Officers be, and each of them hereby is, authorized and directed on behalf of Borrower to execute and deliver to Agent the Pledge Agreement, in substantially the form as presented to the Directors, with such changes as the Proper Officers may approve, such approval to be conclusively evidenced by execution and delivery thereof; and further

RESOLVED, that issuance of a warrant to the Lenders substantially in the form of the Warrant as presented to the Directors (each, a "Warrant"), and the sale and issuance of preferred stock upon exercise of the Warrant as described therein, be, and hereby is, approved and the Proper Officers be, and each of them hereby is, authorized and directed on behalf of Borrower to execute and deliver to the Lenders the Warrants, in substantially the form as presented to the Directors, with such changes as the Proper Officers may approve, such approval to be conclusively evidenced by execution and delivery thereof; and further

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RESOLVED, that the Proper Officers be, and each of them hereby is, authorized and directed to execute and deliver any and all other agreements, certificates, security agreements, financing statements, indemnification agreements, instruments and documents (together with the Loan and Security Agreement, the Notes, and the Pledge Agreement, the "Debt Documents") and take any and all other further action, in each case, as may be required or which they may deem appropriate, on behalf of Borrower, in connection with the Loan and Security Agreement and carrying into effect the foregoing resolutions, transactions and matters contemplated thereby; and further

RESOLVED, that Borrower is hereby authorized to perform its obligations under the Debt Documents, including, without limitation, the borrowing of any advances made under the Loan and Security Agreement and the granting of any security interest in Borrower's assets contemplated thereby to secure Borrower's obligations in connection therewith; and further

RESOLVED, that in addition to executing any documents approved in the preceding resolutions, the Secretary or any Assistant Secretary of Borrower may attest to such Debt Documents, the signature thereon or the corporate seal of Borrower thereon; and further

RESOLVED, that any actions taken by the Proper Officers prior to the date of these resolutions in connection with the transactions contemplated by these resolutions are hereby ratified and approved; and further

RESOLVED, that these resolutions shall be valid and binding upon Borrower.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT C-1

FORM OF LANDLORD CONSENT

[Landlord]
[Address]

[_____, ____]

Ladies and Gentlemen:

General Electric Capital Corporation (together with its successors and assigns, if any, "Agent") and certain other lenders (the "Lenders") have entered into, or is about to enter into, a Loan and Security Agreement, dated as of **[September __, 2007]** (as amended, restated, supplemented or otherwise modified from time to time, the "Agreement") with Codexis, Inc., a Delaware corporation ("Borrower"), pursuant to which Borrower has granted, or will grant, to Agent, on behalf of itself and the Lenders, a security interest in certain assets of Borrower, including, without limitation, all of Borrower's cash, cash equivalents, accounts, books and records, goods, inventory, machinery, equipment, furniture and trade fixtures (such as equipment bolted to floors), together with all addition, substitutions, replacements and improvements to, and proceeds, including, insurance proceeds, of the foregoing, but excluding building fixtures (such as plumbing, lighting and HVAC systems (collectively, the "Collateral"). Some or all of the Collateral is, or will be, located at certain premises known as [_____] in the City or Town of **[**_____, County of _____ and State of _____**]** ("Premises"), and Borrower occupies the Premises pursuant to a lease, dated as of **[DATE]**, between Borrower, as tenant, and you, **[NAME]**, as **[owner/landlord/mortgagee/realty manager]** (as amended, restated, supplemented or otherwise modified from time to time, the "Lease").

By your signature below, you hereby agree (and we shall rely on your agreement) that: (i) the Lease is in full force and effect and you are not aware of any existing defaults thereunder, (ii) the Collateral is, and shall remain, personal property regardless of the method by which it may be, or become, affixed to the Premises; (iii) you agree to use your best efforts to provide Agent with written notice of any default by Borrower under the Lease resulting in a termination of the Lease ("Default Notice") and Agent shall have the right, but not the obligation to cure such default within 15 days following Agent's receipt of such Default Notice, (iv) your interest in the Collateral and any proceeds thereof (including, without limitation, proceeds of any insurance therefor) shall be, and remain, subject and subordinate to the interests of Agent and you agree not to levy upon any Collateral or to assert any landlord lien, right of distraint or other claim against the Collateral for any reason; (v) Agent, and its employees and agents, shall have the right, from time to time, to enter into the Premises for the purpose of inspecting the Collateral; and (vi) Agent, and its employees and agents, shall have the right, upon any default by Borrower under the Agreement, to enter into the Premises and to remove or otherwise deal with the Collateral, including, without limitation, by way of public auction or private sale (provided that, if Agent conducts a public auction or private sale of the Collateral at the Premises, Agent shall use reasonable efforts to notify Landlord first and to hold such auction or sale in a manner that would not unduly disrupt Landlord's or any other tenant's use of the Premises). Agent agrees to repair or reimburse you for any physical damage actually caused to the Premises by Agent, or its employees or agents, during any such removal or inspection (other than ordinary wear and tear), provided that it is understood by the parties hereto that Agent shall not be liable for any diminution in value of the Premises caused by the removal or absence of the Collateral therefrom. You hereby acknowledge that Agent shall have no obligation to remove or dispose of the Collateral from the Premises and no action by Agent pursuant to this Consent shall be deemed to be an assumption by Agent of any obligation under the Lease and, except as provided in the immediately preceding sentence, Agent shall not have any obligation to you.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

You hereby acknowledge and agree that Borrower's granting of a security interest in the Collateral in favor of Agent, on behalf of itself and the Lenders, shall not constitute a default under the Lease nor permit you to terminate the Lease or re-enter or repossess the Premises or otherwise be the basis for the exercise of any remedy available to you.

This Consent and the agreements contained herein shall be binding upon, and shall inure to the benefit of, any successors and assigns of the parties hereto (including any transferees of the Premises). This Consent shall terminate upon the indefeasible payment of Borrower's indebtedness in full in immediately available funds and the satisfaction in full of Borrower's performance of its obligations under the Agreement and the related documents.

This Consent and any amendments, waivers, consents or supplements hereto or in connection herewith may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed an original, but all such counterparts together shall constitute but one and the same instrument; signature pages may be detached from multiple separate counterparts and attached to a single counterpart so that all signature pages are physically attached to the same document. Delivery of an executed signature page of this Consent or any delivery contemplated hereby by facsimile or electronic transmission shall be as effective as delivery of a manually executed counterpart thereof.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

We appreciate your cooperation in this matter of mutual interest.

GENERAL ELECTRIC CAPITAL CORPORATION, as Agent

By: _____
Name: _____
Title: _____

General Electric Capital Corporation
c/o GE Healthcare Financial Services, Inc., LSF
83 Wooster Heights Road, Fifth Floor
Danbury, Connecticut 06810
Attention: [*]
Phone: [*]
Facsimile: [*]

With a copy to:
General Electric Capital Corporation
c/o GE Healthcare Financial Services, Inc.
Two Bethesda Metro Center, Suite 600
Bethesda, Maryland 20814
Attention: [*]
Phone: [*]
Facsimile: [*]

AGREED TO AND ACCEPTED BY:

_____, as **[owner/landlord/mortgagee/realty manager]**

By: _____
Name: _____
Title: _____

Address:

AGREED TO AND ACCEPTED BY:

CODEXIS, INC., as Borrower

By: _____
Name: _____
Title: _____

Interest in the Premises (check applicable box)

- ☐ Owner
- ☐ Mortgagee
- ☐ Landlord
- ☐ Realty Manager

Address:

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT C-2

FORM OF BAILEE CONSENT

[Letterhead of GE Capital]

_____ __, 200_

[NAME OF BAILEE]
_____
_____

Dear Sirs:

Re: Codexis, Inc. (the "Borrower")

Please accept this letter as notice that we have entered into or may enter into financing arrangements with the Borrower under which the Borrower has granted to us continuing security interests in substantially all personal property and assets of the Borrower and the proceeds thereof, including, without limitation, certain equipment owned by the Borrower held by you at the manufacturing facility (the "Premises") owned by you and located at **[**_____**]**(the "Personal Property").

Please acknowledge that as a result of such arrangements, you are holding all of the Personal Property solely for our benefit and subject only to the terms of this letter and our instructions; provided, however, that until further written notice from us, you are authorized to use and/or release any and all of the Personal Property in your possession as directed by the Borrower in the ordinary course of business. The foregoing instructions shall continue in effect until we modify them in writing, which we may unilaterally do without any consent or approval from the Borrower. Upon receipt of our instructions, you agree that (a) you will release the Personal Property only to us or our designee; (b) you will cooperate with us in our efforts to assemble, sell (whether by public or private sale), take possession of, and remove all of the Personal Property located at the Premises; (c) you will permit the Personal Property to remain on the Premises for forty-five (45) days after your receipt of our instructions or at our option, to have the Personal Property removed from the Premises within a reasonable time, not to exceed forty-five (45) days after your receipt of our instructions; (d) you will not hinder our actions in enforcing our liens on the Personal Property; and (e) after receipt of our instructions, you will abide solely by our instructions with respect to the Personal Property, and not those of the Borrower.

You hereby waive and release in our favor: (a) any contractual lien, security interest, charge or interest and any other lien which you may be entitled to whether by contract, or arising at law or in equity against any Personal Property; (b) any and all rights granted under any present or future laws to levy or distrain for rent or any other charges which may be due to you against the Personal Property; and (c) any and all other claims, liens, rights of offset, deduction, counterclaim and demands of every kind which you have or may hereafter have against the Personal Property.

You agree that (i) you have not and will not commingle the Personal Property with any other property of a similar kind owned or held by you in any manner such that the Personal Property is not readily identifiable, (ii) you have not and will not issue any negotiable or non-negotiable documents or instruments relating to the Personal Property, and (iii) the Personal Property is not and will not be deemed to be fixtures.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Notwithstanding the foregoing, all of your charges of any nature whatsoever shall continue to be charged to and paid by the Borrower and we shall not be liable for such charges.

You hereby authorize us to file at any time such financing statements naming you as the debtor/bailee, Borrower as the secured party/bailor, and us as the Borrower's assignee, indicating as the collateral goods of the Borrower now or hereafter in your custody, control or possession and proceeds thereof, and including any other information with respect to the Borrower required under the Uniform Commercial Code for the sufficiency of such financing statement or for it to be accepted by the filing office of any applicable jurisdiction (and any amendments or continuations with respect thereto).

The arrangement as outlined herein is to continue without modification, until we have given you written notice to the contrary.

EACH OF THE PARTIES HERETO HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS LETTER.

Any notice(s) required or desired to be given hereunder shall be directed to the party to be notified at the address stated herein.

The terms and conditions contained herein are to be construed and enforced in accordance with the laws of the State of Connecticut.

This terms and conditions contained herein shall inure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

The Borrower has signed below to indicate its consent to and agreement with the foregoing arrangements, terms and conditions. By your signature below, you hereby agree to be bound by the terms and conditions of this letter.

Very truly yours,

GENERAL ELECTRIC CAPITAL CORPORATION

By: _____
Name: _____
Title: Duly Authorized Signatory

General Electric Capital Corporation
c/o GE Healthcare Financial Services, Inc., LSF
83 Wooster Heights Road, Fifth Floor
Danbury, Connecticut 06810
Attention: [*]
Phone: [*]
Facsimile: [*]

With a copy to:

General Electric Capital Corporation
c/o GE Healthcare Financial Services, Inc.
Two Bethesda Metro Center, Suite 600
Bethesda, Maryland 20814
Attention: [*]
Phone: [*]
Facsimile: [*]

Agreed to:

CODEXIS, INC.

By: _____
Name: _____
Title: _____
Address: _____
_____
_____

[NAME OF BAILEE]

By: _____
Name: _____
Title: _____
Address: _____
_____
_____

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT D

COMPLIANCE CERTIFICATE

[DATE]

Reference is made to the Loan and Security Agreement, dated as of **[September __, 2007]** (as amended, restated, supplemented or otherwise modified from time to time, the "Agreement"), among Codexis, Inc., a Delaware corporation (the "Borrower"), General Electric Capital Corporation, a Delaware corporation ("GECC"), in its capacity as agent (in such capacity, together with its successors and assigns, in such capacity, the "Agent") and lender, and the other lenders signatory thereto (GECC and such other lenders, the "Lenders"). Capitalized terms used but not defined herein are used with the meanings assigned to such terms in the Agreement.

I, **[_____]**, do hereby certify that:

(i) I am the duly elected, qualified and acting **[TITLE]** of Borrower;

(ii) attached hereto as Exhibit A are **[the monthly financial statements]/[annual audited financial statements]/[quarterly financial statements]** as required under Section 6.3 of the Agreement and that such financial statements are materially prepared in accordance with GAAP (subject, in the case of unaudited financial statements, to the absence of footnotes and normal year-end and audit adjustments) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes;

(iii) no Default or Event of Default has occurred under the Agreement which has not been previously disclosed, in writing, to Lender; and

[(iv) all representations and warranties of Borrower stated in the Debt Documents are true and correct in all material respects on and as of the date hereof, except to the extent such representations and warranties expressly relate to an earlier date, in which case such representations and warranties were true and correct in all respects on and as of such earlier date.][1]

IN WITNESS WHEREOF, I have hereunto set my hand as of the first date written above

Name: _____

Title: _____

[1] Subsection (iv) to be included only in Compliance Certificates delivered in connection with quarterly or annual financial statements or in connection with advances of each Term Loan.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT E

EPS Setup Form

Submit Via Fax:
ATTN: EPS Facilitator
(262) 798-4530

GE Healthcare Financial Services
Phone: (262) 798-4494
Fax: (262) 798-4530

1. Sender Information:

Sender Name:

_____

Sender Phone Number:

_____

Instructions To Enroll In EPS Plan:

A. Complete sections 1 - 7 (signature and all other information is required)

B. Include a copy of a voided check, on which is noted your bank, branch and account number

C. **Please submit via Fax to: (262) 798-4530**

2. Authorization Agreement for Pre-Arranged Payment Plan:

(a) Codexis, Inc., ("Borrower") authorizes General Electric Capital Corporation ("Agent") to initiate debit entries for payment becoming due pursuant to the terms and conditions set forth in the Loan and Security Agreement, dated as of [**September __, 2007**] (as amended, restated, supplemented or otherwise modified from time to time, the "Agreement"), among Borrower, Agent and the lenders signatory thereto.

(b) Borrower understands that the basic term loan payment and all applicable taxes are solely its responsibility. If payment is not satisfied due to account closure, insufficient funds, or cancellation of any required automated payment services, Borrower agrees to remit payment plus any applicable late charges, as set forth in the Agreement.

(c) It is incumbent upon Borrower to give written notice to Agent of any changes to this authorization or the below referenced bank account information 10 days prior to payment date; Borrower may revoke this authorization by giving 10 days written notice to Agent unless otherwise stipulated in the Agreement.

(d) If a deduction is made in error, Borrower has the right to be paid within five business days by Agent the amount of the erroneous deduction, provided Agent is notified in writing of such error.

(e) Cosigner must also sign if the account is a joint account.

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3. Agent Account Number(s): (Invoice **Billing ID**, 10-digit number formatted: 1234567-001)

Account:		**Account:**		**Account:**		**Account:**	
Account:		**Account:**		**Account:**		**Account:**	

4. First Payment Debit Date (mm/dd/yy) **First Payment:**

5. Complete ALL Bank and Borrower Information:

BANK INFO

Name of Bank or Financial Institution: | **Bank Account Number:** | **ABA Routing Number (9-digit number)**

Address of Bank or Financial Institution: | **City:** | **State:** **Zip Code:**

BORROWER INFO

Signatures	Company	Contact
Signature of Authorized Signer: Date:	**Company Name:**	**Contact Name:**
Name of Joint Account Holder: (Please Print)	**Company Address:**	**Contact Phone Number:**
Signature of Joint Account Holder: Date:	**City:**	**Contact Fax Number:**
Name of Authorized Signer: (Please Print)	**State:** **Zip Code:**	Contact email address:

6. Would you like to have property taxes paid via EPS on above accounts?
Check (X): YES: ☐ NO: ☐

7. Would you like to receive a complementary invoice?
Check (X): YES: ☐ NO: ☐

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit 10.2

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT

THIS FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT (this "**Amendment**") is dated as of November 9, 2007 (the "**Amendment Date**"), by and among CODEXIS, INC., a Delaware corporation ("**Borrower**"), WASABI ACQUISITION LLC, a Delaware limited liability company ("**Wasabi**"), GENERAL ELECTRIC CAPITAL CORPORATION, a Delaware corporation acting in its capacity as agent (the "**Agent**") for the lenders under the Credit Agreement (as defined below) (the "**Lenders**"), and the Lenders.

W I T N E S S E T H:

WHEREAS, Borrower, the Lenders and Agent are parties to that certain Loan and Security Agreement, dated as of September 28, 2007 (as the same may be amended, supplemented and modified from time to time, the "**Credit Agreement**"; capitalized terms used herein have the meanings given to them in the Credit Agreement except as otherwise expressly defined herein), pursuant to which Lenders have agreed to provide to Borrower certain loans and other extensions of credit in accordance with the terms and conditions thereof;

WHEREAS, Borrower has requested that Agent and Lenders amend certain provisions of the Credit Agreement, in each case in accordance with and subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises, the covenants and agreements contained herein, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Borrower, the Lenders and Agent hereby agree as follows:

1. Acknowledgment of Obligations. Borrower hereby acknowledges, confirms and agrees that as of the close of business on the Amendment Date, Borrower is indebted to the Lenders in respect of the Term Loans in the aggregate principal amount of $15,000,000. All such Term Loans, together with interest accrued and accruing thereon, and fees, costs, expenses and other charges owing by Borrower to Agent and Lenders under the Credit Agreement and the other Debt Documents, are unconditionally owing by Borrower to Agent and Lenders, without offset, defense or counterclaim of any kind, nature or description whatsoever except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditor's rights generally.

2. Amendments to Credit Agreement. Subject to the terms and conditions of this Amendment (including, without limitation, the conditions to effectiveness set forth in Section 6 below), and effective as of the Effective Date (as such term is defined in Section 6 below), the Credit Agreement is hereby amended as follows:

(a) The penultimate paragraph in Section 3.1 of the Credit Agreement is hereby amended by (1) deleting the word "or" at the end of clause (b) thereof, (2) deleting the period at the end of clause (c) thereof and inserting, in lieu thereof, the language "; or", and (3) inserting the following new clause (d) at the end thereof:

> "(d) all funds from time to time on deposit in that certain deposit account number [*] maintained with Wells Fargo Bank, N.A. (such funds, the WF Collateral", and such account, the "WF Cash Collateral Account"); provided, however, that only [*] in WF Collateral deposited in the WF Cash Collateral Account shall be subject to exclusion from the Collateral under this clause (d)."

(b) Section 5.7 of the Credit Agreement is hereby deleted in its entirety and the following new Section 5.7 is hereby inserted in lieu thereof:

" **5.7. Collateral.** Borrower is, and will remain, the sole and lawful owner, and in possession of, the Collateral, and has the sole right and lawful authority to grant the security interest described in this Agreement. The Collateral is, and will remain, free and clear of all liens, claims and encumbrances of any kind whatsoever, except for (a) liens in favor of Agent, on behalf of itself and Lenders, to secure the Obligations, (b) liens (i) with respect to the payment of taxes, assessments or other governmental charges or (ii) of suppliers, carriers, materialmen, warehousemen, workmen or mechanics and other similar liens, in each case imposed by law and arising in the Ordinary Course of Business, and securing amounts that are not yet due or that are being contested in good faith by appropriate proceedings diligently conducted and with respect to which adequate reserves or other appropriate provisions are maintained on the books of Borrower or its Subsidiaries in accordance with GAAP and which do not involve, in the judgment of Agent, any risk of the sale, forfeiture or loss of any of the Collateral (a "Permitted Contest"), (c) zoning restrictions, easements, rights of way, encroachments or other restrictions on the use of, and other minor defects or irregularities in title with respect to, any real property of Borrower or its Subsidiaries so long as the same do not materially impair the use of such real property by Borrower or such Subsidiary, (d) purported liens evidenced by the filing of precautionary UCC financing statements relating solely to operating leases of personal property entered into in the Ordinary Course of Business, (e) liens in favor of customs and revenue authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods, (f) liens existing on the date hereof and set forth on Schedule B hereto, (g) liens securing Indebtedness (as defined below) permitted under Section 7.2(c) below, provided that (i) such liens exist prior to the acquisition of, or attach substantially simultaneous with, or within 20 days after the, acquisition, repair, improvement or construction of, such property financed by such Indebtedness and (ii) such liens do not extend to any property of Borrower or its Subsidiaries other than the property (and proceeds thereof) acquired or built, or the improvements or repairs, financed by such Indebtedness, (h) licenses described in Section 7.3(b) below, and (i) liens of Wells Fargo Bank, N.A. in the WF Collateral maintained in the WF Cash Collateral Account securing the Indebtedness

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

permitted under Section 7.2(i) (all of such liens described in the foregoing clauses (a) through (i) are called "Permitted Liens"). "Ordinary Course of Business" means, with respect to Borrower and its Subsidiaries, the operation of the business of Borrower and its Subsidiaries consistent with Borrower's business plan as of the Closing Date, it being understood and acknowledged by the Lenders that the business of Borrower and/or its Subsidiaries involves entering into corporate collaborations in the fields of energy, chemicals, carbon management and pharmaceuticals pursuant to exclusive and non-exclusive licenses of Intellectual Property."

(c) Section 7.2 of the Credit Agreement is hereby amended by (1) deleting the word "and" at the end of clause (g) thereof, (2) deleting the period at the end of clause (h) thereof and inserting, in lieu thereof, the language "; and", and (3) inserting the following new clause (i) thereto:

"(i) Indebtedness consisting of reimbursement obligations owing to Wells Fargo Bank, N.A. for one or more standby letters of credit issued from time to time in favor of Borrower in a face amount not to exceed [*] in the aggregate at any time."

(d) Section 7.10 of the Credit Agreement is hereby deleted in its entirety and the following new Section 7.10 is hereby inserted in lieu thereof:

" **7.10. Deposit Accounts and Securities Accounts**. Other than with respect to (1) deposit accounts used solely to fund payroll and withholding taxes and (2) the WF Cash Collateral Account, Borrower will not directly or indirectly maintain or establish any deposit account or securities account, unless Agent, Borrower and the depository institution or securities intermediary at which the account is or will be maintained enter into a deposit account control agreement or securities account control agreement, as the case may be (an "Account Control Agreement"), in form and substance satisfactory to Agent (which agreement shall provide that such depository institution or securities intermediary shall comply with all instructions of Agent without further consent of Borrower, including, without limitation, an instruction by Agent to follow a notice of exclusive control or similar notice (such notice, a "Notice of Exclusive Control")), prior to or concurrently with the establishment of such deposit account or securities account (or in the case of any such deposit account or securities account maintained as of the date hereof, prior to or concurrently with the entering into this Agreement). Agent may give a Notice of Exclusive Control with respect to any deposit account or securities account at any time at which an Event of Default has occurred and is continuing. Borrower hereby agrees that it shall not maintain at any time in the WF Cash Collateral Account funds in excess of the lesser of (a) [*] and (b) 105% of the aggregate outstanding face amount at such time of all standby letters of credit issued by Wells Fargo Bank, N.A. in favor of Borrower in accordance with the terms and conditions of Section 7.2(i)."

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3. Amendment to Perfection Certificate and Post Closing Obligation Letter.

(a) Subject to the terms and conditions of this Amendment (including, without limitation, the conditions to effectiveness set forth in Section 6 below), and effective as of the Effective Date (as such term is defined in Section 6 below), Section 6 and Section 7 of the Perfection Certificate shall be amended in the manner described on Schedule A hereto.

(b) Subject to the terms and conditions of this Amendment (including, without limitation, the conditions to effectiveness set forth in Section 6 below), and effective as of the Effective Date (as such term is defined in Section 6 below), Paragraph 4 of that certain Post Closing Obligations Letter, dated as of September 28, 2007, by and among the parties hereto, is amended to delete the reference to deposit account number [*] maintained by Borrower with Wells Fargo Bank, N.A.

4. No Other Amendments. Except for the amendments set forth and referred to in Section 2 and Section 3 above, the Credit Agreement and the Perfection Certificate shall remain unchanged and in full force and effect. Nothing in this Amendment is intended, or shall be construed, to constitute a novation or an accord and satisfaction of any of Borrower's Obligations or to modify, affect or impair the perfection or continuity of Agent's security interests in, security titles to or other liens, for the benefit of itself and the Lenders, on any Collateral for the Obligations.

5. Representations and Warranties. To induce Agent and Lenders to enter into this Amendment, Borrower does hereby warrant, represent and covenant to Agent and Lenders that after giving effect to this Amendment (i) each representation or warranty of the Borrower set forth in the Credit Agreement is hereby restated and reaffirmed as true and correct in all material respects on and as of the Amendment Date as if such representation or warranty were made on and as of the date hereof (except to the extent that any such representation or warranty expressly relates to a prior specific date or period), (ii) no Default or Event of Default has occurred and is continuing as of the date hereof and (iii) Borrower has the power and is duly authorized to enter into, deliver and perform this Amendment and this Amendment is the legal, valid and binding obligation of the Borrower enforceable against the Borrower in accordance with its terms.

6. Condition Precedent to Effectiveness of this Amendment. This Amendment shall become effective as of the Amendment Date, and the amendments set forth in Section 2 and Section 3 hereof shall be deemed to be effective as of September 28, 2007 (the "**Effective Date**"), upon the receipt by Agent of each of the following, in each case in form and substance satisfactory to Agent and Lenders:

(a) one or more counterparts of this Amendment duly executed and delivered by the Borrower, Agent and Lenders; and

(b) one or more counterparts of the attached Confirmation duly executed and delivered by Wasabi.

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7. Release.

(a) In consideration of the agreements of Agent and Lenders contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Borrower and Wasabi (by executing the Confirmation attached hereto), on behalf of themselves and their successors, assigns, and other legal representatives, hereby absolutely, unconditionally and irrevocably release, remise and forever discharge Agent and Lenders and their respective successors and assigns, and their respective present and former shareholders, affiliates, subsidiaries, divisions, predecessors, directors, officers, attorneys, employees, the agents and other representatives (Agent and Lenders, and all such other Persons being hereinafter referred to collectively as the "**Releasees**" and individually as a "**Releasee**"), of and from all demands, actions, causes of action, suits, covenants, contracts, controversies, agreements, promises, sums of money, accounts, bills, reckonings, damages and any and all other claims, counterclaims, defenses, rights of set-off, demands and liabilities whatsoever (individually, a "**Claim**" and collectively, "**Claims**") of every name and nature, known or unknown, suspected or unsuspected, both at law and in equity, which Borrower or Wasabi or any of their respective successors, assigns, or other legal representatives may now or hereafter own, hold, have or claim to have against the Releasees or any of them for, upon, or by reason of any circumstance, action, cause or thing whatsoever which arises at any time on or prior to the day and date of this Amendment, for or on account of, or in relation to, or in any way in connection with this Amendment or transactions thereunder or related thereto.

(b) Each of Borrower and Wasabi (by executing the Confirmation attached hereto) understands, acknowledges and agrees that its release set forth above may be pleaded as a full and complete defense and may be used as a basis for an injunction against any action, suit or other proceeding which may be instituted, prosecuted or attempted in breach of the provisions of such release.

(c) Each of Borrower and Wasabi (by executing the Confirmation attached hereto) agrees that no fact, event, circumstance, evidence or transaction which could now be asserted or which may hereafter be discovered shall affect in any manner the final, absolute and unconditional nature of the release set forth above.

8. Covenant Not To Sue. Each of Borrower and Wasabi (by executing the Confirmation attached hereto), on behalf of themselves and their respective successors, assigns, and other legal representatives, hereby absolutely, unconditionally and irrevocably, covenant and agree with and in favor of each Releasee that it will not sue (at law, in equity, in any regulatory proceeding or otherwise) any Releasee on the basis of any Claim released, remised and discharged by Borrower or Wasabi pursuant to Section 7 above. If Borrower or Wasabi or any of their respective successors, assigns or other legal representatives violates the foregoing covenant, Borrower and Wasabi, for itself and its successors, assigns and legal representatives, jointly and severally agrees to pay, in addition to such other damages as any Releasee may sustain as a result of such violation, all attorneys' fees and costs incurred by any Releasee as a result of such violation.

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9. Advice of Counsel. Each of the parties represents to each other party hereto that it has discussed this Amendment with its counsel.

10. Severability of Provisions. In case any provision of or obligation under this Amendment shall be invalid, illegal or unenforceable in any applicable jurisdiction, the validity, legality and enforceability of the remaining provisions or obligations, or of such provision or obligation in any other jurisdiction, shall not in any way be affected or impaired thereby.

11. Counterparts. This Amendment may be executed in multiple counterparts, each of which shall be deemed to be an original and all of which when taken together shall constitute one and the same instrument.

12. GOVERNING LAW. THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE INTERNAL LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS MADE AND PERFORMED IN SUCH STATE WITHOUT REGARD TO THE PRINCIPLES THEREOF REGARDING CONFLICTS OF LAWS.

13. Entire Agreement. The Credit Agreement as and when amended through this Amendment embodies the entire agreement between the parties hereto relating to the subject matter thereof and supersedes all prior agreements, representations and understandings, if any, relating to the subject matter thereof.

14. No Strict Construction, Etc. The parties hereto have participated jointly in the negotiation and drafting of this Amendment. In the event an ambiguity or question of intent or interpretation arises, this Amendment shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Amendment. Time is of the essence for this Amendment.

15. Costs and Expenses. Borrower absolutely and unconditionally agree to reimburse Agent for all reasonable and documented out-of-pocket fees, costs and expenses, including all reasonable fees and expenses of one counsel or the allocated cost of internal legal staff, incurred in the preparation, negotiation, execution and delivery of this Amendment and any other Debt Documents or other agreements prepared, negotiated, executed or delivered in connection with this Amendment or transactions contemplated hereby.

[Signature Page to Follow]

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IN WITNESS WHEREOF, the parties hereto have caused this First Amendment to Loan and Security Agreement to be duly executed and delivered as of the day and year specified at the beginning hereof.

BORROWER:

CODEXIS, INC.

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President & CEO

[Additional signature pages to follow]

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AGENT AND LENDER:

GENERAL ELECTRIC CAPITAL CORPORATION

By: /s/ Daniela Gjenero
Name: Daniela Gjenero
Title: Duly Authorized Signatory

LENDER:

OXFORD FINANCE CORPORATION

By: /s/ T.A. Lex
Name: T.A. Lex
Title: COO

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CONFIRMATION

The undersigned Guarantor hereby acknowledges and agrees to the terms and performance of the within and foregoing First Amendment to Loan and Security Agreement, and hereby ratifies all the provisions of the Credit Agreement, its Guaranty and any other Debt Documents to which it is a party and confirms that all provisions of each such documents are in full force and effect.

IN WITNESS WHEREOF, the undersigned has executed this Confirmation as of the day and year first above set forth.

WASABI ACQUISITION LLC

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President & CEO

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Schedule A

Amendments to Perfection Certificate

Section 6 of the Perfection Certificate is amended by adding the following disclosure:

Indebtedness of the Borrower arising under the Standby Letter of Credit Agreement, dated as of June 8, 2007 by and between the Borrower and Wells Fargo Bank, National Association and any modifications, replacement, refinancing, refunding, renewal or extension thereof.

Section 7 of the Perfection Certificate is amended by adding the following disclosure:

Name of Holder of Lien/Encumbrance	Description of Property Encumbered	Borrower/Subsidiary
Wells Fargo Bank, National Association	Cash	Codexis, Inc

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EXHIBIT 10.3

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

LICENSE AGREEMENT

This LICENSE AGREEMENT (the "Agreement"), effective as of March 28, 2002 (the "Effective Date"), is made by and between Maxygen, Inc., a Delaware corporation ("MUS"), and Codexis, Inc., a Delaware corporation ("Codexis").

BACKGROUND

A. MUS owns and/or controls certain intellectual property, tangible property and technology potentially useful for discovery, research, development and commercialization of Products (as defined herein) for use in the Codexis Field (as defined herein); and

B. Codexis desires to obtain the right to use such intellectual property, tangible property and technology of MUS in connection with its discovery, research, development and commercialization of Products (as defined herein) in the Codexis Field; and

C. MUS is willing to grant to Codexis, and Codexis is willing to accept, such rights, subject to the terms and conditions set forth in this Agreement; and

D. MUS and Codexis have entered into a Services Agreement, a Patent Assignment Agreement, a Trademark Assignment Agreement and a Stock Issuance and Asset Contribution Agreement, of even date herewith.

NOW THEREFORE, for good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, the Parties hereby agree as follows:

1. DEFINITIONS. The terms defined in this Article 1 shall have the meanings set forth below for purposes of this Agreement:

1.1 **"Affiliate"** shall mean a corporation or other entity that is directly or indirectly controlling, controlled by or under common control with another entity. For the purposes of this definition, "control" shall mean the direct or indirect ownership of fifty percent (50%) or more of the outstanding shares or securities (representing the right to vote for the election of directors or other managing authority) of such corporation or other entity; provided, such corporation or other entity shall be deemed to be an Affiliate only so long as such ownership or control exists.

1.2 **"Agrochemical"** means any chemical intended for plant protection or plant growth applications (e.g., any insecticide, nematicide, insect growth regulator, plant growth regulator, fertilizer or herbicide).

1.3 **"Assignment Agreement"** shall mean that certain Patent Assignment Agreement between MUS and Codexis entered of even date herewith.

1.4 **"Assigned Patents"** shall mean (a) the Patent Applications and Patents assigned to Codexis pursuant to the Assignment Agreement; and (b) those Patent

Applications and Patents owned by Third Parties, to which MUS obtained license rights for use inside and outside the Codexis Field pursuant to an agreement entered by MUS with a Third Party, which agreement was assigned by MUS to Codexis in connection with the establishment of Codexis, Inc.

1.5 **"Biocatalyst"** shall mean a whole cell (live or dead) of a Microbe or Type II Plant which has been modified using Enabling Technology (whether by Gene Expression Manipulation and/or Metabolic Pathway Manipulation and/or Strain Improvement or otherwise) that can perform enzymatic catalysis of a particular chemical reaction.

1.6 **"Basic Chemical"** shall mean a chemical having a molecular weight of less than [*] which is suitable for use as a feedstock for multiple chemical reactions. By way of illustration and without limitation, a chemical monomer or oligomer suitable for polymerization, or a carbohydrate intended for use as a carbon source in fermentation, would each be a Basic Chemical, if the applicable molecule had a molecular weight of less than [*].

1.7 **"Biocatalyst Commercialization"** shall mean (i) the preparation, screening and commercial use of Biocatalysts for the purpose of allowing the selection and commercialization of Biocatalysts solely for use for Bulk Production, and (ii) the manufacture and commercial sale of Biocatalysts solely for use for Bulk Production.

1.8 **"Building Block"** shall mean any non-polypeptide chemical (optionally containing one or more chiral centers), having a molecular weight of more than [*] and less than [*], that (a) is not a Basic Chemical or a Functional Compound, and (b) is intended for addition to one or more Templates to make a Functional Compound.

1.9 **"Building Block Development"** shall mean the development of one or more Building Blocks for use in Template Decoration.

1.10 **"Bulk Production"** shall mean production by Codexis via enzymatic catalysis (using an Enzyme Product or a Biocatalyst) or fermentation of:

(a) any Enzyme Product or Biocatalyst for sale to a Third Party (other than an Affiliate of Codexis) for manufacture of Catalysis Products, or

(b) any Catalysis Product or Fermentation Product for sale to a Third Party (other than an Affiliate of Codexis) for further processing or formulation, or

(c) any Catalysis Product or Fermentation Product which will be formulated by Codexis for sale to a Third Party, which Product contains one or more Functional Compounds approved by a Regulatory Authority for human or veterinary pharmaceutical use, where such Functional Compound(s) (i) is (are) no longer covered by issued patents in the country where such production will occur, or (ii) is (are) covered by issued patents owned or Controlled by a Third Party (other than an Affiliate of Codexis) that has contracted to have Codexis formulate such Product on behalf of such Third Party.

1.11 **"Catalysis Product"** shall mean a Template, Building Block, Functional Compound and/or Intermediate that, in each case, is produced in substantially pure, noncellular form via enzymatic catalysis using an Enzyme Product or a Biocatalyst.

1.12 **"Codexis Field"** shall mean:

(a) Biocatalyst Commercialization and Enzyme Commercialization, subject to the limitations set forth in Section 2.2.2 and the rights of MUS and Third Parties described in Section 2.8;

(b) Building Block Development; and

(c) Bulk Production, subject to the limitations set forth in Section 2.2.2 and the rights of MUS and Third Parties described in Section 2.8.

1.13 **"Confidential Information"** shall mean (i) any proprietary or confidential information or material in tangible form disclosed by one Party to the other that is marked as "Confidential" or with some similar marking or legend reasonably indicating its confidential nature at the time it is delivered to the receiving Party, or (ii) proprietary or confidential information disclosed orally or in other intangible form by one Party to the other hereunder that is identified as confidential or proprietary when disclosed. Confidential Information may include information of Third Parties.

1.14 **"Control"** or **"Controlled"** shall mean possession of the ability to grant the licenses or sublicenses as provided for herein, or to transfer Materials as provided for herein, without (i) violating the terms of any agreement or other arrangement with any Third Party, and/or (ii) incurring a contractual payment obligation to a Third Party for the grant or practice of such license or sublicense, as the case may be, provided, if such a contractual payment obligation would be due to a Third Party for the grant or practice of such a sublicense to the applicable intellectual property or materials, such intellectual property and Materials shall also be deemed to fall within the scope of this definition, if Codexis or MUS, as the case may be, agrees in writing pursuant to Section 2.1.4(b) to be responsible for any and all payments due to the licensor of such intellectual property or Materials for the grant or practice of such sublicense.

1.15 **"Detection and Research Reagent Field"** shall mean the field set forth on **Exhibit A** hereto.

1.16 **"Discovery"** means the generation, identification and/or assessment of any potential human or veterinary therapeutic or prophylactic or Agrochemical, and/or modification of a potential human or veterinary therapeutic or prophylactic or Agrochemical to improve its suitability for such use.

1.17 **"Enabling Technology"** shall mean all Patent Applications and Patents Controlled by MUS on or before the Separation Event relating to (i) methods of generating genetic diversity (including, without limitation, DNA Shuffling with tangible materials or in silico), or the use thereof, and/or (ii) generally applicable screening techniques,

methodologies or processes for identifying genetic variants of interest. Enabling Technology shall include MUS' interest in Third Party Improvements, if any. A list of Patent Applications and Patents within the Enabling Technology existing as of the Effective Date is attached as **Exhibit B** hereto.

1.18 **"Enzyme Commercialization"** shall mean (i) the preparation, screening and commercial use of Enzyme Libraries for the purpose of allowing the selection and commercialization of one or more Enzyme Products solely for use for Bulk Production, and (ii) the manufacture and commercial sale of Enzyme Products solely for use for Bulk Production.

1.19 **"Enzyme Library"** shall mean a set of two or more variant but related enzymes (or genes encoding such enzymes), in each case, that are made using Enabling Technology.

1.20 **"Enzyme Product"** shall mean an enzyme selected from an Enzyme Library.

1.21 **"Excluded Technology"** shall mean the Patent Applications and Patents within the Enabling Technology listed on**Exhibit C** hereto.

1.22 **"Expression Host(s)"** shall mean eukaryotic and/or procaryotic and/or archaebacter cells of any type.

1.23 **"Fermentation Product"** shall mean any Template, Building Block, Functional Compound and/or Intermediate that is produced via fermentation of a Microbe and/or Category II Plant that has been modified with Enabling Technology (whether by Gene Expression Manipulation and/or Metabolic Pathway Manipulation and/or Strain Improvement or otherwise).

1.24 **"Functional Compound"** shall mean any non-polypeptide, organic chemical produced in substantially pure form, having a molecular weight of less than [*]**,** that is not a Basic Chemical and is used (i) as an active therapeutic agent for the treatment of any human or animal disease or condition, or (ii) to improve the flavor of human food or animal feed products, or (iii) to provide or alter the fragrance of perfumes, cosmetic and skin care products, or (iv) for external application to one or more Plants as an herbicide, pesticide or growth regulator.

1.25 **"Gene"** shall mean a structural gene, including optionally regulatory sequences therefor, including, without limitation, promoters, enhancers and downstream regulatory elements.

1.26 **"Gene Expression Manipulation"** shall mean alteration of one or more Gene(s) (e.g., alteration of a sequence of a structural gene or a sequence of a Gene regulatory element, such as a promoter) to enable and/or facilitate Product development or Bulk Production.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.27 **"Glaxo Agreement"** shall mean the Affymax/Maxygen Technology Transfer Agreement, effective February 1, 1997, entered by and among Affymax Technologies N.V., Glaxo Group Limited and Maxygen, Inc., as modified on March 1, 1998. The Glaxo Agreement is Exhibit 10.15 to the Form S-1 effective December 15, 1999, filed by Maxygen, Inc. with the U.S. Securities and Exchange Commission.

1.28 **"Government Authority"** shall mean any supranational, national, regional, state or local government, court, governmental agency, authority, board, bureau, instrumentality or regulatory body.

1.29 **"Improvement"** shall mean any improvement of or to the Enabling Technology, which improvement is (a) conceived and reduced to practice or otherwise developed on or before the Separation Event by or on behalf of Codexis or a Third Party that has received a license to the Enabling Technology and is claimed in a published Patent Application or Patent owned or Controlled by Codexis or such Third Party, as the case may be, which Patent Application or Patent is filed on or before the third anniversary of the Separation Event, and (b) within the scope of a claim of a Patent Application or Patent within the Enabling Technology in any country, which claim is entitled to filing priority based on a Patent Application or Patent within the Enabling Technology that was filed on or before the Separation Event.

1.29.1 **"Codexis Improvement"** shall mean an Improvement owned or Controlled (other than through a license from MUS hereunder) by Codexis.

1.29.2 **"Third Party Improvement"** shall mean an Improvement owned by a Third Party and Controlled by MUS.

1.30 **"Intermediate"** shall mean with regard to a particular Functional Compound, a non-polypeptide, chemical produced in substantially pure form, having a molecular weight of less than [*], that is intended as and used as the chemical precursor of such Functional Compound. It is understood and agreed that Intermediate(s) shall not include chemicals having commercial utility for any purpose other than synthesis of the applicable Functional Compound (e.g., Basic Chemicals shall not be Intermediates).

1.31 **"Internal Research Use"** shall mean use by Codexis for internal research to assess the feasibility of producing a particular Product within the Codexis Field. It is understood and agreed that Internal Research Use does not include production of any Product for commercial sale or any other commercial use of any Product or the conduct of any Services.

1.32 **"Know-How"** shall mean any and all ideas, inventions, discoveries, data, information, and corresponding intellectual property rights, including, without limitation, instructions, processes, practices, methods, techniques, specifications, formulations, formulae, know-how, trade secrets, protocols, skill, experience, opinions, results of studies, technical drawings and related copyrights, bioinformatics tools (including software) and related copyrights, and biological, chemical, pharmacological, toxicological, stability, biochemical, pharmaceutical, physical and analytical, pre-clinical and clinical, safety, efficacy, manufacturing and quality control data, documentation and information, in each case, whether or not patentable,

and that are (i) not generally known or available to the public, (ii) Controlled by MUS prior to the Separation Event and (iii) reasonably related to the use of Enabling Technology and/or the Product Technology in the Codexis Field.

1.33 **"Materials"** shall mean any chemical or biological substances including any: (i) organic or inorganic chemical element or compound; (ii) nucleic acid; (iii) vector of any type (e.g., cosmid, plasmid, spore, phage, virus, or virus-like particle), and subunits of the foregoing; (iv) host organism, including procaryotic and/or eukaryotic cells or animals; (v) eukaryotic or prokaryotic cell line or expression system; (vi) protein, including any peptide or amino acid sequence, enzyme, antibody or protein conferring targeting properties and any fragment of any of the foregoing; (vii) genetic material, including, without limitation, any genetic nucleic acid construct, marker gene and genetic control element (e.g., promoter, termination signal), gene, genome or variant of any of the foregoing; and/or (viii) assay or reagent, in each case, which are Controlled by MUS prior to the Separation Event and reasonably related to the use of Enabling Technology and/or the Product Technology in the Codexis Field.

1.34 **"Metabolic Pathway Manipulation"** shall mean alteration of one or more single Genes, multiple Genes, genetic pathways and/or genomes by modification of pathway control mechanisms to enable and/or facilitate:

(a) Product development via (i) altered pathway flux or activity, and/or (ii) altered Product yield; and/or

(b) Bulk Production.

1.35 **"Microbe"** shall mean whole (live or dead) procaryotic organisms and/or yeasts and/or fungi (excluding those which are Type II Plants), or extracts thereof.

1.36 **"Novo Agreement"** shall mean the License and Commercialization Agreement effective September 17, 1997, entered by and between Maxygen, Inc. and Novo Nordisk A/S, as amended. The Novo Agreement, with the amendments thereto dated June 29, 1998, July 29, 1998 and April 12, 1999, are set forth in Exhibit 10.11 to the Form S-1 effective December 15, 1999 filed by Maxygen, Inc. with the U.S. Securities and Exchange Commission.

1.37 **"Party"** shall mean MUS or Codexis, individually, and "**Parties**" shall mean MUS and Codexis, collectively.

1.38 **"Patent Applications and Patents"** shall mean any and all United States provisional and/or utility patent applications, including, without limitation, all divisions, renewals, continuations in whole or in part, substitutions and patents of addition thereof, and any and all foreign counterparts of any of the foregoing, and any letters patent and/or registrations issuing on any of the foregoing (including, without limitation, all reissues, renewals, extensions, confirmations, re-registrations, re-examinations, re-validations, supplementary protection certificates and/or other governmental actions that extend the term of any such letters patent) which may be granted on any of the foregoing in the United States and/or other any countries or multinational jurisdictions of the world.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.39 **"Plant(s)"** shall mean whole Plants, Plant seeds, Plant parts, Plant cells and/or Plant cell cultures derived from Category I Plants and/or Category II Plants.

1.39.1 **"Category I Plants"** shall mean:

(a) land plants, including nonseed plants (Bryophytes, Tracheophytes) such as liverworts, mosses, ferns, and seed plants, such as gymnosperms and angiosperms (monocot and dicots); and/or

(b) non-land plants, including the Prasinophytes, Chlorophyceae, Trebouxiouphyceae, Ulvophyceae, Chlorokybales, Streptophyta, Klebsormidiales, Zygnematales, Charales, Coleochaetales and Embryophytes.

1.39.2 **"Category II Plants"** shall mean:

(a) mushrooms (Basidiomycetes); and/or

(b) photosynthetic bacteria, including, but not limited to blue green algae (Cyanobacteria); and/or

(c) eukaryotic photosynthetic algae and microalgea including, but not limited to green algae (Chlorophytes and Euglenophytes), yellow algae (Cyanophytes), brown algae (Phaeophytes, Xanthophytes, Eustigmatophytes and Raphidophytes) and red algae (Rhodophytes); and/or

(d) microalgae, including but not limited to diatoms (Chrysophytes and Pyrrophytes).

1.40 **"Product"** shall mean any Catalysis Product, Enzyme Product, Biocatalyst or Fermentation Product that:

(a) is made or developed with the use of Enabling Technology, whether by Gene Expression Manipulation and/or Metabolic Pathway Manipulation and/or Strain Improvement or otherwise (e.g., incorporates any variant gene made with Enabling Technology, and/or any protein or peptide expressed therefrom), and/or

(b) is developed with the use of Product Technology, or incorporates, or is made using, or is substantially derived from, Product Technology.

1.41 **"Product Technology"** shall mean the Patent Applications and Patents Controlled by MUS on or before the Separation Event that are necessary or useful for use in the Codexis Field, that are not included in Enabling Technology. A list of the Patent Applications and Patents within the Product Technology existing as of the Effective Date is attached as **Exhibit D** hereto.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.42 **"Prosecution Costs"** shall mean all costs (including, without limitation, filing fees and annuities, and attorney, agent and/or expert fees) incurred by MUS in connection with the (a) preparation, filing, prosecution (including, without limitation, any appeal) and/or maintenance of any Patent Application or Patent within the Enabling Technology or the Product Technology in any country or multinational jurisdiction of the world, or (b) conduct of any interference, opposition, re-examination, reissue or similar proceedings with respect to any Patent Application or Patent within the Enabling Technology or the Product Technology in any country or multinational jurisdiction of the world.

1.43 **"Regulatory Agency"** shall mean the FDA, the Committee on Proprietary Medicinal Products ("CPMP") of the European Medicines Evaluation Agency, and other Governmental Authority having similar jurisdiction over the development, manufacturing, and marketing of human or veterinary pharmaceuticals and/or food or feed ingredients or products.

1.44 **"Separation Event"** shall mean the first date that the combined ownership of Codexis' outstanding shares by MUS and its Affiliates falls below fifty percent (50%) of the voting power entitled to vote in the election of Codexis' directors.

1.45 **"Service"** shall mean any activity conducted by Codexis on behalf of a Third Party in which Enabling Technology and/or Product Technology is used to discover, research or develop or produce any Product(s).

1.46 **"Shuffling"** shall mean the recombination and/or rearrangement and/or mutation of genetic material for the creation of genetic diversity.

1.47 **"Stock Issuance and Asset Purchase Agreement"** shall mean that certain Stock Issuance and Asset Contribution Agreement entered by MUS and Codexis of even date herewith.

1.48 **"Strain Improvement"** shall mean modification of a Microbe or a Category II Plant to enhance its suitability for use in Bulk Production of one or more Fermentation Products.

1.49 **"Sublicensee"** shall mean a Third Party to whom Codexis has granted a sublicense of its rights in Section 2.1.

1.50 **"Template"** shall mean the minimally active, non-polypeptide chemical structure (e.g., a pharmacophore) having a molecular weight of less than [*], that is common to a family of chemical structures, and (a) is known to possess measurable specific bioactivity (e.g., biostimulatory, bioinhibitory, receptor binding, enzyme substrate, channel blocking or similar activities) in a particular *in vitro* or *in vivo* disease model system, and (b) is useful as an Intermediate.

1.51 **"Template Decoration"** shall mean modification of a Template by a Third Party (other than an Affiliate of Codexis) by attaching, via one or more chemical and/or

enzymatic steps, one or more Building Blocks to generate an organic chemical product (including, without limitation, a Product or a Functional Compound) having a molecular weight of less than [*].

1.52 **"Third Party"** means any person or entity other than MUS or Codexis (or their successors in interest).

1.53 **"Third Party Agreement"** shall mean any agreement that was entered or is entered by MUS with a Third Party prior to the Separation Event (excluding those agreements assigned to Codexis pursuant to the Stock and Asset Purchase Agreement), pursuant to which MUS obtained or obtains a license, with the right to sublicense, of Patent Applications and/or Patents within the Enabling Technology useful in the Codexis Field.

2. LICENSE GRANTS TO CODEXIS

2.1 Grants.

2.1.1 Licenses. Subject to the terms and conditions herein, including without limitation Sections 2.2, 2.4, 2.6, 2.7 and 2.8, MUS hereby grants to Codexis, and Codexis hereby accepts, irrevocable (except as, provided in Sections 9.4.1, 12.2, 12.3 and 12.4), worldwide, royalty-free (subject to Section 2.1.5(b)) licenses, as follows:

(a) with respect to the Enabling Technology and related Know-How:

(i) an exclusive license in Microbes to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products and corresponding Services in the Codexis Field; and

(ii) a non-exclusive license in Category II Plants to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products and Services in the Codexis Field; and

(b) with respect to the Enabling Technology and related Know-How, a non-exclusive license to develop, make and use Expression Hosts for Internal Research Use; and

(c) with respect to the Product Technology and related Know-How, an exclusive license to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products and corresponding Services in the Codexis Field.

2.1.2 Bailment. MUS hereby grants to Codexis, and Codexis hereby accepts, a bailment to non-exclusively use the Materials provided by MUS to Codexis to practice the licenses granted in Section 2.1.1.

2.1.3 Further License Grants. In addition to the licenses granted in Section 2.1.1 above, at such time, if any, that MUS assigns to Codexis the Subject Agreements (as defined below), then, subject to the terms and conditions of this Agreement, MUS shall concurrently grant to Codexis, licenses under the Enabling Technology and related Know-How, and Product Technology and related Know-How, to the extent necessary for Codexis to allow it to perform its contractual obligations existing as of the date of assignment with regard to such Subject Agreements, for the sole purpose of allowing Codexis to perform such contractual obligations under such agreements. For purposes of this Section 2.1.3, the "Subject Agreements" shall mean (i) the Novo Agreement; (ii) the Collaborative Research and Development Agreement entered by Maxygen, Inc. and Technological Resources Pty Limited effective January 19, 2000, (iii) the Research Agreement entered by Maxygen, Inc. and Chevron U.S.A, Inc. effective October 11, 2000, (iv) the Collaborative Agreement entered by Maxygen, Inc. and Hercules Incorporated effective October 31, 2000; (v) the Collaboration Agreement entered by Maxygen, Inc. and Cargill-Dow L.L.C., effective March 19, 2002; (vi) the Research Agreement entered by Maxygen, Inc. and Pfizer, Inc., effective September 13, 2000, as amended prior to the Effective Date of this Agreement; and (vii) the Agreement entered by Maxygen, Inc. and Gist-Brocades B.V., effective March 15, 1999, as amended prior to the Effective Date of this Agreement.

2.1.4 Know-How. All Know-How licensed to Codexis hereunder shall be treated as Confidential Information of MUS subject to Article 6 below.

2.1.5 Third Party Agreements.

(a) Codexis acknowledges that certain Patent Applications and Patents within the Enabling Technology have been or may be licensed to MUS pursuant to the Third Party Agreement(s), and that the sublicenses granted by MUS to Codexis with respect thereto are subordinate to the terms of any such Third Party Agreement. Codexis further acknowledges that any breach of such terms by Codexis or its Sublicensees may result in damage to MUS and/or other sublicensees of the subject Enabling Technology, which may include, without limitation, loss of license rights to such Enabling Technology and/or monetary damages, and agrees to act reasonably to avoid any breach of such terms.

(b) Codexis further acknowledges that, with respect to Patent Applications and Patents licensed to MUS pursuant to a Third Party Agreement, the sublicense by MUS to Codexis may result in payment obligations to the Third Party for the grant and/or practice of such sublicense to Codexis, and agrees that Codexis shall only receive such a sublicense if it agrees in writing, in a form reasonably acceptable to MUS, to pay any such amounts due for the grant of a sublicense to Codexis or practice of such a sublicense by Codexis or its Sublicensees (which payments, may include milestone payments and/or royalties on product sales), and to otherwise comply with the terms of such Third Party Agreement.

(c) MUS shall promptly notify Codexis of the terms of any such Third Party Agreement as they relate to the licenses granted hereunder to Codexis.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

2.2 Limitations on Licenses.

2.2.1 Limited MUS Rights. It is understood and agreed that with respect to any aspect of the Enabling Technology or Product Technology, as the case may be, for which MUS has less than fully exclusive, worldwide rights (i.e., co-exclusive, non-exclusive, limited territorial or otherwise restricted rights) for use in the Codexis Field, the licenses provided in Section 2.1 shall be limited to those rights that MUS Controls and has the right to sublicense to Codexis in the Codexis Field.

2.2.2 No License Rights. Notwithstanding Section 2.1, it is understood and agreed that no license or right is granted with regard to the Enabling Technology or Product Technology, and/or related Know-How and Materials:

(a) to develop, make, have made, use, import, have imported, offer for sale or otherwise commercialize or distribute Products (or Services using such Products):

(i) that are made in Category I Plants; or

(ii) that are intended to enable or facilitate the performance of any method within the Enabling Technology by a Third Party (other than a Sublicensee), whether in the form of an instrument, a kit, or set of materials or reagents, or instruction set, protocol or software, computer program or any other form; or

(b) to make, have made, use, promote, market, distribute and/or

(i) Licensed Products (as defined in the Novo Agreement) within the exclusive licenses granted to Novo Nordisk for use in the Novo Nordisk Field (as defined in the Novo Agreement); or

(ii) any products (including, without limitation, any Products) intended for use in the Detection and Research Reagent Field; or

(c) to conduct ab initio drug Discovery (i.e., discovery or development of novel pharmaceutical products) or otherwise identify or develop potential human or veterinary therapeutic or prophylactic products (e.g., small molecules, proteins (including, without limitation, enzymes) or vaccines); or

(d) to make, have made, sell, distribute and/or otherwise commercialize analogs of any Functional Compound for use in the Discovery of pharmaceutical and/or Agrochemical products; or

(e) to make, have made, sell, distribute and/or otherwise commercialize any organic chemical (including, without limitation, any Product or Functional Compound) or set of organic chemicals to which one or more Building Blocks have been added, in each case, for use in the Discovery of pharmaceutical and/or Agrochemical products; or

(f) to make, have made, use or distribute (by sale, license, lease, placement or otherwise) variant nucleic acids or proteins made with the use of Enabling Technology for: (i) the discovery or identification of the properties of such nucleic acids or proteins (except Enzyme Products and corresponding DNA), (ii) the discovery of ligands, agonists or antagonists of ligands to any such nucleic acids or proteins, (iii) to discover or develop or modify substances for use to cure, treat, prevent or modulate any human or veterinary or plant disease or condition or for production, purification, or formulation of pharmaceuticals, vaccines and/or Agrochemicals, and/or (iv) any use outside the Codexis Field; or

(g) to make, have made, use or distribute (by sale, license, lease, placement or otherwise) of any variant nucleic acids or proteins made with the use of Enabling Technology (except Enzyme Products and corresponding DNA) for the comparative evaluation of the properties of such nucleic acids or proteins or the elucidation of structure-function relationships with respect thereto; or

(h) to make, have made, use or distribute (by sale, license, lease, placement or otherwise) of any variant nucleic acids or proteins made with the use of Enabling Technology (except Enzyme Products and corresponding DNA) for the discovery of ligands, agonists or antagonists of ligands to any such variant nucleic acids or proteins made with the use of Enabling Technology or the elucidation of related structure-function relationships, in each case, to facilitate discovery of pharmaceuticals, vaccines and/or Agrochemicals.

It is understood and agreed that the license granted Codexis herein shall not include any right or license to use Enabling Technology or Product Technology or related Know-How or Materials to modify any Template, Functional Compound or other compound for discovery by Codexis or any Sublicensee of novel pharmaceutical and/or Agrochemical products.

2.2.3 Acknowledgement. Codexis acknowledges and agrees that MUS shall have the right, without violating any term of this Agreement, to grant to Third Parties, including without limitation Affiliates of MUS, licenses under the Enabling Technology, to develop, make, have made, use, import, have imported, and offer for sale Products (and/or Services) for use in fields outside the Codexis Field.

2.3 Right to Sublicense. Codexis (or its successor) may grant sublicenses to the Enabling Technology, Product Technology and related Know-How to such Third Parties as it deems appropriate, but such sublicenses may only grant rights to practice in the Codexis Field; provided, Codexis may not sublicense the rights granted in Section 2.1.1(b) except in connection with a grant of a sublicense of the rights granted it in Section 2.1.1(a). Codexis (or its successor) may grant licenses to the Assigned Patents as it deems appropriate.

2.4 Continued License Rights. Upon the occurrence of the Separation Event:

(a) all licenses granted under this Agreement in effect as of the Separation Event shall remain in effect, subject to the terms and conditions of this Agreement; and

(b) Codexis shall not receive additional license rights to Patent Applications and Patents within Enabling Technology or Product Technology conceived and reduced to practice or otherwise developed after the Separation Event, except with respect to claims of Patent Applications or Patents within the Enabling Technology or Product Technology (as the case may be) for which MUS is entitled to claim filing priority based on another Patent Application or Patent within the Enabling Technology filed on or before the Separation Event. By way of illustration and without limitation, Codexis would be entitled to license rights to a divisional Patent Application (filed after the Separation Event) of a Patent Application within the Enabling Technology filed prior to the Separation Event, but would not have license rights to those claims of a continuation-in-part Patent Application (filed after the Separation Event) of a Patent Application or Patent within the Enabling Technology filed on or before the Separation Event, which claims relate to subject matter conceived and reduced to practice or otherwise developed after the Separation Event.

2.5 Grantback License to Improvements. Codexis shall grant and hereby grants to MUS a non-exclusive, irrevocable, royalty-free, worldwide license, with the right to grant and authorize sublicenses, with respect to all Codexis Improvements for use outside the Codexis Field. With respect to any and all sublicenses granted by Codexis to Enabling Technology or related Know-How on or before the third anniversary of the Separation Event, Codexis shall use reasonable efforts to retain Control of Improvements made by any such Sublicensee sufficient to convey a license as described in the preceding sentence to MUS. Any and all Codexis Improvements may be sublicensed by MUS, in MUS' sole discretion, for use outside the Codexis Field.

2.6 Prohibition on Transfer. Prior to the Separation Event, neither this Agreement nor the licenses granted to Codexis in Section 2.1 may be assigned by merger, operation of law or otherwise, without the prior express written consent of MUS, which MUS may grant or refuse to grant in its sole discretion.

2.7 Retained Rights.

2.7.1 MUS. Notwithstanding the license grants in Section 2.1, the Parties agree that:

(a) MUS and its wholly-owned Affiliates shall until the Separation Event, retain the right to conduct research with the Enabling Technology and related Know-How in the Codexis Field for the purpose of (i) improving and expanding Enabling Technology, and/or (ii) exploring applications of the Enabling Technology for areas outside the Codexis Field; provided, MUS and its wholly-owned Affiliates shall not use the Enabling Technology for the primary intended purpose of developing any Products or Services for use in the Codexis Field, on its own behalf or on behalf of any Third Party.

(b) At all times during and after this Agreement, nothing herein shall restrict, or be construed to restrict, MUS' right to practice and grant licenses to practice the Enabling Technology and Product Technology and/or use related Know-How, outside the Codexis Field. It is understood and agreed that, at all times, MUS shall retain (i) the right (sublicensable to its Affiliates) to internally use the Enabling Technology, Product Technology and related Know-How to discover, develop and commercialize novel pharmaceutical and/or agrochemical products by any means, which may include, without limitation, the development of Building Blocks, the addition of Building Blocks to Templates and/or analoging of Functional Compounds, and (ii) the sublicensable right to make and/or have made, use, import, have imported, offer for sale and/or sell any such products.

2.7.2 Codexis. Except as expressly set forth in this Agreement, nothing herein shall limit the ability of Codexis to use any other intellectual property, tangible property or technology developed by it or acquired by it (by license, acquisition or otherwise) for any purpose, in or outside the Codexis Field.

2.8 Third Party Rights. Codexis hereby acknowledges that MUS has informed Codexis prior to the Effective Date that:

2.8.1 In connection with the initial establishment of MUS, in theGlaxo Agreement MUS has granted perpetual, worldwide, non-exclusive licenses to certain entities associated with Glaxo Wellcome to use certain Enabling Technology for internal research purposes only (the "Glaxo Rights"), and Codexis hereby agrees that the rights and licenses granted Codexis in Section 2.1 are subject to the Glaxo Rights.

2.8.2 Prior to the Effective Date, MUS has granted to Third Parties licenses to certain Enabling Technology and related Know-How in fields outside the Codexis Field, and that after the Effective Date, MUS may grant licenses under the Enabling Technology and related Know-How to other Third Parties (including, without limitation, other Affiliates of MUS) for use outside the Codexis Field.

2.8.3 Novo Nordisk has granted to MUS a co-exclusive, worldwide license to certain Patent Applications and Patents within the Enabling Technology to make, have made and use products (including, without limitation, Products) for the development and commercialization of products for the cure, treatment, mitigation and prevention of human or animal diseases.

2.8.4 MUS has granted to Novo Nordisk in the Novo Agreement exclusive rights to use Enabling Technology to make or have made Licensed Products for use in the Novo Nordisk Field and the Preferred Areas (as such terms are defined in the Novo Agreement).

2.8.5 MUS intends to use Enabling Technology itself and/or to grant to one or more other Third Parties rights to use Enabling Technology to discover novel pharmaceutical and/or Agrochemical products, and to develop, make, have made, use and commercialize such products.

2.9 Delivery. Promptly following the Effective Date, at Codexis' written request, MUS shall, to the extent that these are in MUS' possession and MUS Controls the same, deliver to Codexis (a) documents (in electronic or hard copy format) embodying Know-How, as agreed by the Parties, and (b) samples of any Materials necessary to allow Codexis to establish initial stocks of the same, provided, in each case, MUS shall have no on-going obligation to deliver further Know-How or Materials, unless otherwise agreed in writing by the Parties.

2.10 Improvements. Until the third anniversary of the Separation Event, Codexis and MUS shall each annually notify the other of any Patent Applications or Patents claiming one or more Improvements which such Party owns or Controls, and provide to the other Party copies of any of the foregoing which have not been previously provided to such other Party.

2.11 No Implied Rights. No rights, options or licenses with respect to any intellectual property owned by Maxygen or Codexis are granted or will be deemed granted under this Agreement or in connection with it, other than those rights expressly granted in this Agreement.

2.12 U.S. Rights. Codexis acknowledges that certain of the inventions claimed in the Patent Applications and Patents within the Enabling Technology and/or the Product Technology have been made with funds provided by the U.S. Government, and that with respect thereto the U.S. government retains a non-exclusive license as set forth in 35 U.S.C. §202. At Codexis' written request, MUS will provide to Codexis a list of the Patent Applications and Patents that, to the best of MUS' then-current knowledge, claim inventions made with funds provided by the U.S. Government. In addition, Codexis acknowledges that 35 U.S.C. §200 et seq. sets forth additional obligations with regard to inventions made with U.S. government funds and products based thereon, including, without limitation, a preference for manufacture in the United States pursuant to 35 U.S.C. §204.

3. ASSIGNMENT TO CODEXIS; LICENSE TO MUS

3.1 Assignment. The Parties acknowledge that MUS has assigned to Codexis certain Patent Applications and Patents in the Assignment Agreement.

3.2 License to MUS. In partial consideration for the rights granted herein, Codexis shall grant and hereby grants, and MUS hereby accepts, a non-exclusive, irrevocable (unless in the case of Patent Applications and Patents within the scope of Section 1.4(b), prohibited by the applicable Third Party Agreement), royalty-free (subject to Section 3.3) worldwide license under the Assigned Patents, with the right to grant and authorize sublicenses to licensees of the Enabling Technology and Product Technology, to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products and Services solely outside the Codexis Field.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

3.3 Third Party Agreements.

3.3.1 MUS acknowledges that certain Patent Applications and Patents within the Assigned Patents have been or may be licensed to Codexis pursuant to the Third Party Agreement(s), and that the sublicenses granted by Codexis to MUS with respect thereto are subordinate to the terms of any such Third Party agreement. MUS further acknowledges that any breach of such terms by MUS or its sublicensees may result in damage to Codexis and/or other sublicensees of the subject Assigned Patents, which may include, without limitation, loss of license rights to such Assigned Patents and/or monetary damages, and agrees to act reasonably to avoid any breach of such terms.

3.3.2 MUS further acknowledges that, with respect to Patent Applications and Patents licensed to Codexis pursuant to a Third Party agreement, the sublicense by Codexis to MUS may result in payment obligations to the Third Party for the grant and/or practice of such sublicense to MUS, and agrees that MUS shall only receive such a sublicense if it agrees in writing, in a form reasonably acceptable to Codexis, to pay any such amounts due for the grant of a sublicense to MUS or practice of such a sublicense by MUS or its sublicensees (which payments, may include milestone payments and/or royalties on product sales), and to otherwise comply with the terms of such Third Party agreement.

3.3.3 Codexis shall promptly notify MUS of the terms of any such Third Party agreement as they relate to the licenses granted hereunder to MUS.

4. COVENANTS

4.1 Use Within the Codexis Field. Codexis covenants that it will not knowingly practice its licenses to the Enabling Technology and related Know-How, or its licenses to the Product Technology and related Know-How, for the purpose of developing or commercializing Products or Services for use outside the Codexis Field.

4.2 Use Outside the Codexis Field. MUS covenants that it will not knowingly use its retained rights with regard to the Enabling Technology or the Product Technology, or knowingly practice its license to Codexis Improvements (if any), for the purpose of developing or commercializing Products or Services for use in the Codexis Field; provided that such covenants shall be subject to Section 2.7.1 and further provided that such covenants shall terminate with regard to any Patent Applications and/or Patents for which Codexis' license terminates pursuant to Sections 9.4.1, 12.2, 12.3 and/or 12.4 below.

5. CONSIDERATION. In partial consideration for the rights granted hereunder, Codexis shall issue to MUS one million (1,000,000) shares of Common Stock and six million (6,000,000) shares of Series A Preferred Stock of Codexis pursuant to the Stock Issuance and Asset Contribution Agreement by and between MUS and Codexis of even date hereof.

6. CONFIDENTIALITY

6.1 Confidential Information. Except as expressly provided herein, the Parties agree that, for the term of this Agreement and for five (5) years thereafter, each Party shall keep completely confidential and shall not publish, permit access to or otherwise disclose

and shall not use for any purpose except to practice the rights granted in Article 2 or as expressly permitted in this Article 6, any Confidential Information furnished to such Party by the disclosing Party hereto pursuant to this Agreement, except to the extent that it can be established by the receiving Party by competent proof that such Confidential Information:

(a) was already known to the receiving Party, other than under an obligation of confidentiality, at the time of initial disclosure hereunder;

(b) was generally available to the public or otherwise part of the public domain at the time of its initial disclosure to the Receiving Party hereunder;

(c) became generally available to the public or otherwise part of the public domain after its disclosure hereunder and other than through any act of commission or omission of the receiving Party in breach of this Agreement;

(d) was independently developed by the receiving Party without reference to any information or materials disclosed by or on behalf of the disclosing Party, as demonstrated by contemporaneous documentation; or

(e) was subsequently disclosed to the receiving Party by a Third Party without breach of any legal obligation to the disclosing Party.

6.2 Permitted Disclosures. Each Party may disclose the other Party's Confidential Information, to the extent such disclosure is reasonably necessary in filing or prosecuting Patent Applications within the Enabling Technology and/or Product Technology, prosecuting or defending litigation, complying with applicable laws or regulations or otherwise submitting information to tax or other Government Authorities (including, without limitation, in filings with the U.S. Food & Drug Administration, U.S. Environmental Protection Agency, U.S. Department of Agriculture and/or similar foreign regulatory entities), conducting clinical or field trials, or making a permitted sublicense or otherwise exercising its rights hereunder; provided, after the Separation Event, Codexis may not use Confidential Information received from MUS in connection with filing or prosecuting Patent Applications without MUS' prior written consent. Each time a Party is required to disclose, or in the exercise of its rights hereunder, makes any disclosure of the other Party's Confidential Information, other than pursuant to a confidentiality agreement with confidentiality and non-disclosure obligations at least as restrictive as those set forth in this Agreement, such Party will give reasonable advance notice to such other Party of such contemplated disclosure and, save to the extent inappropriate in the case of Patent Applications, will use reasonable efforts to secure confidential treatment of such information of the other Party prior to each such disclosure (whether through protective orders or otherwise).

6.3 Duty of Care. Each Party agrees (a) to keep in confidence and trust all of the other Party's Confidential Information received by it, (b) not to use Confidential Information of the other Party other than as expressly permitted under the terms of this Agreement or any other agreement between the Parties, (c) to take reasonable steps to prevent unauthorized disclosure or use of the other Party's Confidential Information, and to prevent it from falling into the public domain or the possession of unauthorized persons, and (d) to disclose

the Confidential Information only to those persons who need access to the Confidential Information for purposes of the Party carrying out its business as contemplated herein and, except as permitted under Section 6.4, only to those persons who have executed a confidentiality agreement with confidentiality and non-disclosure obligations at least as restrictive as those set forth in this Agreement that protects the other Party's Confidential Information.

6.4 Terms. Except as expressly provided in this Agreement, each Party agrees not to disclose any terms of this Agreement to any Third Party without the written consent of the other Party; provided, disclosures may be made to: (i) its wholly-owned Affiliates; (ii) professional advisors, potential or actual, licensees or sublicensees, acquirors, acquirees or business partners, in each case, so long as they are bound by obligations requiring reasonable precautions be taken to protect the confidentiality and prevent misuse of such information; and/or (iii) the extent required to comply with applicable laws and regulations.

7. REPRESENTATIONS AND WARRANTIES

7.1 MUS. MUS represents and warrants, as of the Effective Date, that:

7.1.1 it has the right to enter this Agreement, has the power and authority to execute and deliver this Agreement and to perform its obligations hereunder, and that the execution, delivery, and performance by MUS of this Agreement, except as otherwise disclosed to Codexis in writing prior to the Effective Date, will not conflict with or result in any breach of, or constitute a default under, any security agreement, commitment, contract, or other agreement, instrument or undertaking to which MUS is a party;

7.1.2 MUS owns or Controls the Enabling Technology and the Product Technology;

7.1.3 to the best of its knowledge, except as previously disclosed to Codexis in writing prior to the Effective Date, it has not received a claim from a Third Party alleging that the practice of the Enabling Technology or the Product Technology in the Codexis Field would infringe any patent, copyright, or other intellectual property right of a Third Party; and

7.1.4 it will not during the term of this Agreement violate the covenant in Section 4.2.

7.2 Codexis. Codexis represents and warrants, that:

7.2.1 as of the Effective Date, that it has the right to enter this Agreement, has the power and authority to execute and deliver this Agreement and to perform its obligations hereunder, and that the execution, delivery, and performance by Codexis of this Agreement will not conflict with or result in any breach of, or constitute a default under, any security agreement, commitment, contract, or other agreement, instrument or undertaking to which Codexis is a party; and

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

7.2.2 it will not during the term of this Agreement violate the covenant in Section 4.1.

7.3 Disclaimers. Nothing in this Agreement shall be construed as:

(a) a representation or warranty of either Party as to the validity or scope or enforceability of any Patent Application or Patent licensed under this Agreement;

(b) a representation or warranty of either Party that any Product or Service developed, made, used, sold or marketed or otherwise commercially exploited under any license granted in this Agreement is or will be free from infringement of Patents of Third Parties;

(c) a requirement that either Party file any Patent Application, secure any Patent, or maintain any Patent in force; or

(d) an obligation to bring or prosecute any actions or suits against Third Parties for patent infringement of any Patent licensed under this Agreement.

7.4 No Warranty. Except as expressly provided in this Article 7, THE ENABLING TECHNOLOGY, PRODUCT TECHNOLOGY, KNOW-HOW AND MATERIALS ARE LICENSED TO CODEXIS "AS IS". EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS ARTICLE 7, MUS SPECIFICALLY DISCLAIMS ALL WARRANTIES, STATUTORY, EXPRESS OR IMPLIED, OR ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE, WITH REGARD TO THE ENABLING TECHNOLOGY, KNOW-HOW, MATERIALS, IMPROVEMENTS, PRODUCTS AND/OR THE PRODUCT TECHNOLOGY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY.

7.5 Limitation of Liability. NEITHER PARTY SHALL BE LIABLE FOR ANY LOST REVENUES OR PROFITS OF ANY PERSON OR ENTITY OR ANY OTHER INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8. RIGHT OF NEGOTIATION

8.1 Right of Negotiation. Codexis hereby grants to MUS until the Separation Event a first right of negotiation with regard to any Enzyme Libraries and/or Products developed by Codexis or its Sublicensees as a result of the use or practice of the Enabling Technology and/or related Know-How that have application(s) outside the Codexis Field. Until the Separation Event, Codexis shall notify MUS of such Enzyme Libraries and/or Products prior to their respective first commercial use or sale and, at the request of MUS, the Parties will

negotiate in good faith the terms of a license to MUS (or an entity that is then a MUS Affiliate) for the development and commercialization of such Enzyme Library or Product outside the Codexis Field.

8.2 No Agreement. Notwithstanding Section 8.1, if the Parties are unable to reach agreement on the terms of a license within one hundred twenty (120) days of the commencement of such negotiations for the applicable Enzyme Library or Product, Codexis shall have no obligation to grant to MUS or any MUS Affiliate a license with regard to such Enzyme Library or Product.

9. PATENT PROSECUTION

9.1 Enabling Technology.

9.1.1 Intent. The Parties recognize that it is their shared goal to obtain the broadest patent coverage available with regard to the Enabling Technology, consistent with the goal of obtaining patents that are valid and enforceable as against Third Parties. The Parties recognize the value and importance of coordinating the Patent Prosecution (as defined in Section 9.1.2) of Patent Applications and Patents within the Enabling Technology and of MUS' knowledge, prior experience and expertise with the Patent Prosecution of the Enabling Technology. Codexis acknowledges that there will be multiple licensees of the Enabling Technology and that MUS has the responsibility to determine how to best conduct Patent Prosecution of the Patents within the Enabling Technology for the benefit of all licensees, including Third Parties other than Codexis, and Codexis further acknowledges that such responsibility may affect MUS' determination whether to undertake a particular act or elect not to undertake any particular action in connection with the Patent Prosecution of a particular Patent Application and/or Patent within the Enabling Technology in any particular instance.

9.1.2 Rights. MUS (or its designee) shall have the right, but not the obligation, to prepare, file and prosecute patent applications within the Enabling Technology and to conduct any interferences, oppositions, re-examinations, reissues or similar proceedings, with respect thereto, and to maintain any patents resulting from the foregoing activities ("Patent Prosecution"). MUS shall keep Codexis reasonably informed with respect to such Patent Prosecution activities, and Codexis may consult with MUS and provide advice to MUS regarding such Patent Prosecution activities, but MUS shall have the right to take such acts in connection therewith as MUS, in its sole discretion, deems appropriate.

9.1.3 Sharing of Prosecution Costs. In partial consideration for the grant of the licenses granted in Section 2.1, Codexis shall pay to MUS amounts for Prosecution Costs incurred after the Effective Date in connection with the activities described in Section 9.1.2 as set forth on **Exhibit E** hereto.

9.1.4 Opt Out by MUS. If MUS does not wish to conduct Patent Prosecution with regard to any Patent Application or Patent within the Enabling Technology in a particular country, and believes that the conduct of such activities will not have a material adverse effect on other patent applications and/or patents within the Enabling Technology, and

no Third Party has the right to prosecute the applicable Patent Application or Patent, MUS shall notify Codexis (and any other licensees of such Patent Application or Patent) that Codexis (together with any other interested licensees thereof) may conduct such Patent Prosecution, in MUS' name. Within thirty (30) days after the date of such notice, Codexis shall notify MUS whether or not Codexis wishes to participate in the conduct of such Patent Prosecution activities in the applicable country(ies) with regard to the applicable Patent Application or Patent. In such event, (i) the prosecuting entity(ies) (i.e., Codexis and any other interested licensees of the Enabling Technology) shall keep MUS fully informed of all actions and decisions made in connection with such Patent Prosecution (including, without limitation, by promptly providing MUS with copies of all correspondence sent to or received from any patent office), (ii) MUS shall have the right to consult and provide advice with respect to such Patent Prosecution activities, and (iii) Codexis and such other prosecuting entities shall be solely responsible for paying the Prosecution Costs for such activities. It is understood and agreed that if MUS believes that the Patent Prosecution of a particular patent application or patent could have a material adverse effect on other patent applications or patents within the Enabling Technology (e.g., due to issues relating to double patenting) that MUS shall have the right to decline to allow Codexis and Third Parties to conduct Patent Prosecution with respect to the subject Patent Application or Patent.

9.1.5 Opt Out By Codexis.

(a) In the event that Codexis does not wish to retain its license rights under this Agreement to any Patent Application or Patent within the Enabling Technology or Product Technology in any country, it shall have the right to terminate its license to such Patent Application and/or Patent with one hundred and twenty (120) days prior written notice to MUS identifying the specific Patent Application(s) and/or Patent(s) (by country or, as applicable, multinational jurisdiction) to which it wishes to relinquish its license. In any such event, as of the effective date of such termination, Codexis' license to the applicable Patent Applications and Patents shall terminate, shall not be entitled to further consultation and/or information rights as described in Sections 9.1.2 and 9.1.6, with regard to such Patent Applications and/or Patents, and Codexis shall have no obligation to pay Prosecution Costs incurred after the effective date of termination with respect to the applicable Patent Application and/or Patent. Codexis shall remain obligated to pay its share of any Patent Prosecution expenses incurred prior to the applicable effective date of termination.

(b) If MUS wishes to continue to conduct Patent Prosecution with respect to any Patent Application or Patent to which Codexis has relinquished its rights pursuant to Section 9.1.5(a), MUS may do so, at its own expense and in its own name. In any such case, Codexis shall provide MUS with a power of attorney to the extent necessary to conduct such activities.

9.1.6 Information. If Codexis conducts or otherwise participates in any Patent Prosecution activities pursuant to Section 9.1.4, Codexis shall keep MUS fully informed as to the status of such patent matters, including, without limitation, by providing MUS a reasonable opportunity to review and comment on any documents relating to the applicable

Patent Application or Patent which will be filed in any patent office before such filing, and promptly providing to MUS copies of any material documents relating to applicable Patent Applications or Patents which are received from such patent offices, including notice, without limitation, of all interferences, reissues, reexaminations, oppositions or requests for patent term extensions.

9.2 Product Technology.

9.2.1 Rights. Codexis shall have the initial right, but not the obligation, to conduct Patent Prosecution of Patent Applications and Patents within the Product Technology exclusively licensed to it, unless such Patent Applications and Patents claim methods and/or compositions that have substantial, commercially valuable applications outside the Codexis Field, in which case, MUS shall have the initial right but not the obligation to conduct Patent Prosecution of such Patent Applications and Patents.

9.2.2 Sharing of Prosecution Costs. Codexis shall be responsible for all Prosecution Costs in connection with Patent Prosecution activities described in Section 9.2.1 conducted by or under authority of Codexis. If MUS conducts the Patent Prosecution activities described in Section 9.2.1 with regard to any Patent Applications and Patents that are Product Technology, Codexis shall pay to MUS fifty percent (50%) of the Prosecution Costs incurred by MUS after the Effective Date in connection with such activities. Such amounts will be paid to MUS (or its designee) within forty-five (45) days of an invoice therefore.

9.2.3 Opt Out.

(a) By MUS. If MUS has the right to conduct Patent Prosecution with regard to any Patent Application or Patent in any particular country or, if applicable, multinational jurisdiction, pursuant to this Section 9.2, but does not wish to conduct such activities with regard to any Patent Application or Patent within such country or multinational jurisdiction, as the case may be, it shall notify Codexis (and any other licensees of such Patent Application or Patent), and subject to any Third Party right to prosecute the applicable Patent Application or Patent that was granted prior to the Effective Date, Codexis (and the other licensees) may thereafter notify MUS that such entities wish to conduct such Patent Prosecution activities in the applicable country(ies) with regard to the applicable Patent Application or Patent in MUS' name. In such event, (i) the prosecuting entity(ies) shall keep MUS fully informed of all actions and decisions made in connection with such Patent Prosecution (including, without limitation, by promptly providing MUS with copies of all correspondence sent to or received from any patent office), (ii) MUS shall have the right to consult and provide advice with respect to such Patent Prosecution activities, and Codexis and such Third Parties shall be solely responsible for paying the Prosecution Costs thereof.

(b) By Codexis. If Codexis has the right to conduct Patent Prosecution with regard to any Patent Application or Patent in any particular country or, if applicable, multinational jurisdiction, pursuant to this Section 9.2, but does not wish to conduct such activities with regard to any Patent Application or Patent within such country or multinational jurisdiction, as the case may be, it shall notify MUS (and any other licensees of

such Patent Application or Patent), and subject to any Third Party right to prosecute the applicable Patent Application or Patent that was granted prior to the Effective Date, MUS (and the other licensees) may thereafter notify Codexis that such entities wish to conduct such Patent Prosecution activities in the applicable country(ies) with regard to the applicable Patent Application or Patent, and MUS and such Third Parties shall be solely responsible for paying the Prosecution Costs thereof. In such event, Codexis shall have no further license rights under this Agreement with regard to the applicable Patent Applications and/or Patents, shall not be entitled to further consultation and/or information rights as described in Section 9.2.4, with regard to such Patent Applications and/or Patents, and shall have no obligation to pay Prosecution Costs incurred after the effective date of termination with respect to the applicable Patent Application and/or Patent. Codexis shall remain obligated to pay its share of any Patent Prosecution expenses incurred prior to the applicable effective date of termination.

9.2.4 Information. The Party conducting Patent Prosecution activities pursuant to this Section 9.2 shall keep the other Party fully informed as to the status of such patent matters, including, without limitation, by providing the other Party a reasonable opportunity, to review and comment on any documents relating to the applicable Patent Application or Patent which will be filed in any patent office before such filing, and promptly providing the other Party copies of any material documents relating to applicable Patent Applications or Patents which the Party conducting such activities receives from such patent offices, including notice, without limitation, of all interferences, reissues, reexaminations, oppositions or requests for patent term extensions.

9.3 Payments; Interest. All payments due to MUS under this Article 9 shall be paid in U.S. dollars by wire transfer in immediately available funds to a bank account designated by MUS. Any payment or portion thereof that is not paid on the date such payments are due under this Agreement shall bear interest at the lesser of (i) the prime rate as reported by the J.P. Morgan Chase & Co., New York, New York (or its successor) on the date such payment is due, plus an additional two percent (2%), or (ii) the maximum rate permitted by law, in each case, per annum calculated from the first date such payment is delinquent to the date such payment is actually made. This Section 9.3 shall in no way limit any other remedies available for late payment.

9.4 Jointly Owned Patent Applications and Patents.

9.4.1 Joint Activities. If any invention is jointly owned by the Parties (each a "Joint Invention"), the Parties will (except as the Parties may otherwise agree in writing) cooperate to file, prosecute and maintain Patent Applications covering invention(s) jointly owned by the Parties in the United States, the United Kingdom, France and Germany (e.g., through a European Patent Convention application) and Japan (collectively, the "Core Countries") and other countries or multinational jurisdictions agreed upon in writing by the Parties. The Parties shall agree which Party shall be responsible for conducting such activities with respect to a particular Joint Invention. The Party conducting such activities shall keep the other Party fully informed as to the status of such patent matters, including, without limitation, by providing the other Party a reasonable opportunity, to review and comment on any documents

relating to the Joint Invention which will be filed in any patent office before such filing, and promptly providing the other Party copies of any material documents relating to Joint Invention which the Party conducting such activities receives from such patent offices, including notice, without limitation, of all interferences, reissues, reexaminations, oppositions or requests for patent term extensions. Subject to Sections 9.4.2, the Parties will share equally all expenses and fees associated with the filing, prosecution, issuance and maintenance of any Patent Application and resulting Patent for a Joint Invention in the Core Countries and other agreed countries or multinational jurisdictions.

9.4.2 Opt Out. In the event that either Party wishes to seek Patent protection with respect to any Joint Invention outside the Core Countries, it shall notify the other Party hereto. If both Parties wish to seek Patent protection with respect to such Joint Invention in such country or countries, activities shall be subject to Section 9.4.1. If only one Party wishes to seek Patent protection with respect to such Joint Invention in such country or countries, it may conduct Patent Prosecution activities with respect to such Patent Applications and Patents, at its own expense and in its own name. In any such case, the Party declining to participate in such Patent Prosecution activities shall provide the Party that is conducting such activities with a power of attorney to the extent necessary to conduct such activities.

9.5 Improvements. With regard to any Patent Application claiming one or more Improvements, the owner(s) of such Patent Application (or its designee) shall have the exclusive right, but not the obligation, to conduct Patent Prosecution of Patent Applications and Patents, as such owner(s) deem appropriate, at its (their) sole expense, unless such Patent Application claims a Joint Invention, in which event it shall be subject to Section 9.4.

9.6 Separation Event. Within sixty (60) days following the Separation Event, MUS shall provide to Codexis with a written list of all Patent Applications and Patents within the Enabling Technology as of the Separation Event, and Codexis shall provide to MUS a written list of all Patent Applications and Patents within the Codexis Improvements as of the Separation Event. Within thirty (30) days following each of the first three (3) annual anniversaries of the Separation Event, Codexis shall update its written list of Patent Applications and Patents within the Codexis Improvements.

9.7 Common Interest. MUS and Codexis acknowledge that in the course of conducting the activities described in Articles 9 and 10 of this Agreement, the Parties may discuss information related to Patent Applications and Patents and other intellectual property rights of the Parties and their Affiliates and/or of Third Parties, and/or conduct by Third Parties that may constitute infringement of one or more of the patents licensed under this Agreement, and the Parties may wish to review documents and information of the other Party that is protected by the attorney-client privilege and/or the attorney work-product doctrine, and agree that disclosure of such documents and information, in confidence, will further the mutual interests of the Parties. Accordingly, the Parties agree that a community of interest exists between MUS and Codexis as to these matters and therefore the disclosure of privileged information in the conduct of activities pursuant to Articles 9 and 10 of this Agreement shall not constitute a waiver of any such privilege. Each Party will treat all such information received

from the other Party under this Agreement that is marked, by the Party to which the privilege runs, as "Confidential" or "Privileged" or "Attorney Work Product," or in a similar manner to reasonably indicate its protected and confidential nature, and will take precautions to preserve the confidentiality and privilege of said information as if it were its own privileged information or attorney work product.

10. PATENT ENFORCEMENT ACTIONS

10.1 Infringement. If Codexis becomes aware of any actual or potential infringement of any Enabling Technology or Product Technology, or if MUS becomes aware of any actual or potential infringement of any Enabling Technology or Product Technology in the Codexis Field or any declaratory judgment action or similar proceeding with respect to any Patent within the Enabling Technology or Product Technology, then such Party shall promptly notify the other Party in writing of such actual or potential infringement or proceeding, providing an explanation of the basis of its conclusion.

10.2 Enabling Technology.

10.2.1 Intent. The Parties recognize that it is their shared goal to maintain the broadest patent coverage available with regard to the Enabling Technology, consistent with the goal of obtaining patents that are valid and enforceable as against Third Parties. The Parties recognize the value and importance of coordinating the enforcement of Patent Applications and Patents within the Enabling Technology and of MUS' knowledge, prior experience and expertise with the Patent Prosecution and enforcement of Patent Rights. Codexis hereby acknowledges that there will be multiple licensees of the Enabling Technology and that MUS has the responsibility to determine how to best enforce and defend the Patents within the Enabling Technology for the benefit of all licensees, including Third Parties other than Codexis, and Codexis further acknowledges that such responsibility may affect MUS' determination whether to enforce particular Patent Applications and Patents within the Enabling Technology in any particular instance.

10.2.2 MUS. As between MUS and Codexis, MUS shall have the initial right, but not the obligation, to enforce and/or defend in any declaratory judgment or similar action, the Patents within Enabling Technology both in and outside of the Codexis Field, except as provided in Section 10.4. Codexis acknowledges that (i) certain patents within the Enabling Technology are and will be owned by Third Parties and, that in some cases, such Third Parties may have retained or may retain the first right, or the sole right to enforce such patents, and (ii) prior to the Effective Date, MUS has granted to Third Parties rights to conduct or participate in the enforcement and/or defense of Patent Applications and/or Patents within the Enabling Technology owned by MUS. In connection with any action brought or defended by MUS pursuant to this Section 10.2.2, MUS shall be responsible for its costs incurred in connection with such actions or proceedings and may retain any recovery obtained in connection therewith.

10.2.3 Codexis. If MUS elects not to pursue an infringement by any Third Party with respect to a patent within the Enabling Technology, and Codexis believes

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that such infringement would have a material adverse impact on Codexis' exercise of its rights or practice of its license in the Codexis Field, Codexis may, with notice to MUS, request the right to enforce specific patents within the Enabling Technology against such infringement. Any such request shall contain a detailed factual explanation of (i) the specific patent(s) it believes are/have been infringed, (ii) the basis for its belief that infringement has occurred, and (iii) the material adverse impact(s) that it believes such infringement will/has caused Codexis. MUS shall have one hundred and eighty (180) days from its receipt of the foregoing explanation (and such other information as MUS may reasonably request) to notify Codexis whether it intends to commence an enforcement action against such Third Party. Codexis shall have the right (subject to the consent of owner of the applicable patents if these are not owned by MUS, and subject to any rights granted to a Third Party prior to the Effective Date) to enforce the relevant patents within the Enabling Technology against the Third Party identified by Codexis in the Codexis Field, unless within such one hundred and eighty (180) day period, (A) MUS initiates and diligently pursues steps to abate the alleged such infringement, or (B) MUS notifies Codexis that MUS believes that such enforcement may have a material adverse impact on MUS or one or more other licensees of the Enabling Technology, or (C) MUS notifies Codexis that it disagrees with Codexis' factual conclusions provided in its notice described above, in which event the matter shall be submitted to a neutral expert for prompt determination, with the expenses of such neutral assessment being shared equally by MUS and Codexis. In the event that Codexis enforces the applicable patent, MUS agrees to cooperate in connection with such action, including by joinder as a party, if required by applicable law. If Codexis enforces the applicable patent, then Codexis shall pay all costs of conducting any such action, and any recovery shall be allocated as agreed by the Parties.

10.3 Product Technology.

10.3.1 Infringement in the Codexis Field.

(a) So long as it retains an exclusive license to the applicable Patent within the Product Technology and such Patent has applications only in the Codexis Field, Codexis shall have the first right but not the obligation to enforce Patents within the Product Technology against any infringements by Third Parties in the Codexis Field and defend any declaratory judgment action. If Codexis fails to initiate a suit to enforce such patent in any jurisdiction against a commercially significant infringement in the Codexis Field within one (1) year of a request by MUS to do so, MUS may initiate suit against such infringement, at its expense. In such event, Codexis agrees to join in such action, if required by applicable law.

(b) If Codexis does not have an exclusive license to the applicable Patent, and/or if such Patent claims inventions having one or more applications outside the Codexis Field, then MUS shall have the first right, but not the obligation, to enforce patents within the Product Technology against any infringements by Third Parties in the Codexis Field and defend any declaratory judgment action with respect thereto. If MUS fails to initiate a suit to enforce such patent in any jurisdiction against a commercially significant infringement in the MUS Field within one (1) year of a request by Codexis to do so, Codexis may initiate suit against such infringement, at its expense. In such event, MUS agrees to join in such action, if required by applicable law.

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(c) Notwithstanding Section 10.3.1(b), Codexis acknowledges that (i) certain patents within the Product Technology are and will be owned by Third Parties and, that in some cases, such Third Parties may have retained or may retain the first right, or the sole right to enforce such patents, and (ii) prior to the Effective Date, MUS has granted to Third Parties rights to conduct or participate in the enforcement and/or defense of Patent Applications and/or Patents within the Product Technology owned by MUS.

10.3.2 Infringement Outside the Codexis Field. MUS (or its designee) shall have the right but not the obligation to pursue infringement of Patents within the Product Technology outside the Codexis Field, but shall consult with Codexis before commencing any such suit.

10.3.3 Recoveries. Any recovery by such Party received as a result of any such claim, suit or proceeding brought pursuant to this Section 10.3 shall be used first to reimburse the Party(ies) for all expenses (including attorneys and professional fees) incurred in connection with such claim, suit or proceeding. The remainder shall be divided as follows: (a) in any suit relating primarily to infringement in the Codexis Field, seventy percent (70%) to the Party initiating the suit, and thirty percent (30%) to the other Party, and (b) in any suit primarily relating to infringement outside the Codexis Field, as may be agreed by the Parties in writing.

10.4 Jointly Owned Technology. In the event that any patent that is jointly owned by MUS and Codexis is infringed by a Third Party, Codexis and MUS shall discuss whether, and, if so, how, to enforce or defend such jointly owned Patent in an infringement action, declaratory judgment or other proceeding. In the event only one Party wishes to participate in such proceeding, it shall have the right to proceed alone, at its expense, and may retain any recovery.

10.5 Improvements. The owner of any Patent claiming an Improvement (or its designee) shall have the exclusive right, but not the obligation, to defend and enforce such Patent, at its expense, except as the Parties may otherwise agree in writing.

10.6 General.

10.6.1 Cooperation. In connection with any such claim, suit or proceeding subject to Sections 10.2, 10.3 and/or 10.4, the Parties shall cooperate with each other and shall keep each other reasonably informed of all material developments in connection with any such claim, suit or proceeding. At the request and expense of the Party initiating any such claim, suit or proceeding, the other Party agrees to cooperate and join in any such claim, suit or proceeding in the event that under applicable law the other Party is necessary or indispensable to such proceedings or such joinder of such Party is otherwise required by applicable law; provided, however, MUS shall not be obligated to participate as a party or otherwise in any proceeding in which MUS would be in an adversarial relationship with any Maxygen Affiliate or another entity which is a licensee of the Enabling Technology.

10.6.2 Settlements; Admissions. Neither Party shall enter into any settlement agreement with any Third Party that would conflict with rights granted to the other Party under this Agreement without the prior written consent of such affected Party, which consent shall not be unreasonably withheld. Neither Party shall enter into any agreement that makes any admission regarding (i) wrongdoing on the part of the other Party, or (ii) the validity/invalidity, enforceability/unenforceability or infringement/absence of infringement of any Patents licensed hereunder, without the prior written consent of the other Party, which consent shall not be unreasonably withheld.

10.7 Infringement Claims.

10.7.1 Notice; Cooperation. If any claim, suit or proceeding is commenced alleging patent infringement against MUS or Codexis due to the manufacture, use, sale, offer for sale or importation of a Product or provision of a Service, such Party shall promptly notify the other Party hereto. The Parties shall cooperate reasonably with each other in connection with any such claim, suit or proceeding and shall keep each other reasonably informed of all material developments in connection with any such claim, suit or proceeding.

10.7.2 MUS Responsibility. If such claim, suit or proceeding subject to this Section 10.7 is based solely on an allegation that the practice of the Enabling Technology infringed a patent owned by a Third Party, then MUS shall have the right and responsibility to conduct the defense of such action, and shall pay the costs of defense of any such action, unless Codexis knew or should have known (through the conduct of reasonable patent and/or literature searches and/or other customary inquiries) of the existence of the enforced Third Party patent prior to the conduct of the allegedly infringing acts.

10.7.3 Codexis Responsibility. If any claim, suit or proceeding subject to this Section 10.7 is not based solely on an allegation that the practice of the Enabling Technology infringed a patent owned by a Third Party, then Codexis shall have the right and responsibility to conduct the defense of such action, and shall pay the costs of defense of any such action.

11. INDEMNIFICATION

11.1 Indemnification by Codexis.

11.1.1 Indemnity Obligation. Codexis agrees to indemnify and hold harmless MUS, and its Affiliates (and with respect to Enabling Technology licensed to MUS by a Third Party, such Third Party) and their respective officers, directors, employees and agents (each a "MUS Indemnitee") from and against all actions, claims, losses, liabilities, costs and expenses (including, without limitation, reasonable attorneys' and expert fees and costs of litigation) and/or judgments finally awarded and/or entered by a court of competent jurisdiction and/or any amounts paid in settlement that any MUS Indemnitee may suffer as a result of any

Third Party claims, demands, actions or other proceedings arising out of or in connection with: (i) any practice by Codexis or its Sublicensees of the licenses and rights granted herein to Codexis to the Enabling Technology, Product Technology, Know-How and/or Materials, except as expressly set forth in Section 10.7.2; and/or (ii) any breach of Codexis' representations and warranties in Section 7.2; and/or (iii) any acts (whether of omission or commission) by Codexis and/or its Sublicensees, relating to the development, manufacture, importation, use, offer for sale, sale and/or other commercial exploitation of any products or services (including, without limitation, Products or Services), including, without limitation, product liability and environmental claims, except, in each case, to the extent due to the negligence or willful misconduct of MUS.

11.1.2 Procedure. If MUS intends to claim indemnification under Section 11.1.1, MUS shall promptly notify Codexis in writing of any claim in respect of any MUS Indemnitee for indemnification, and, except as otherwise expressly provided in this Agreement, Codexis shall have control of the defense and/or settlement thereof using counsel reasonably acceptable to MUS. However, if MUS believes that due to potential conflicts of interest between MUS and Codexis representation of MUS by Codexis' counsel would be inappropriate (e.g., due to issues relating to the field or scope of the rights licensed to Codexis in this Agreement, and rights licensed to another entity), MUS may select separate counsel and Codexis shall be responsible for the costs of such representation of MUS. Under all other circumstances, MUS may, in its sole discretion, participate in any such proceeding with separate counsel of its choice, at its own expense. The foregoing indemnity obligation shall not apply to amounts paid by MUS in settlement of any claim if such settlement is effected by MUS without the consent of Codexis, which consent shall not be withheld unreasonably. At Codexis' request and expense, MUS and its employees and agents shall provide reasonable cooperation to Codexis and its legal representatives in the investigation of and preparation for the defense against any action, claim or liability covered by this indemnification. The Indemnitor shall not enter into any settlement or consent to an adverse judgment in any such claim, demand, action or other proceeding that admits wrongdoing on the part of the other Party or its officers, directors, employees and agents, or which imposes additional obligations on the other Party, without the prior express written consent of the other Party, which consent shall not be unreasonably withheld or delayed.

11.2 Indemnification by MUS.

11.2.1 Indemnity Obligation. MUS agrees to indemnify and hold harmless Codexis, and its Affiliates and their respective officers, directors, employees and agents (each a "Codexis Indemnitee") from and against all actions, claims, losses, liabilities, costs and expenses (including, without limitation, reasonable attorneys' and expert fees and costs of litigation) and/or judgments finally awarded and/or entered by a court of competent jurisdiction and/or any amounts paid in settlement that any Codexis Indemnitee may suffer as a result of any Third Party claims, demands, actions or other proceedings arising out of or in connection with: (i) any practice by Codexis or its licensees of the licenses and rights granted herein to Codexis with regard to the Enabling Technology, to the extent set forth in Section 10.7.2; and/or (ii) any breach of MUS' representations and warranties in Section 7.1, and/or (iii) any practice by MUS of the licenses and rights granted MUS to the Codexis Improvements and Assigned Patents, except, in each case, to the extent due to the negligence or willful misconduct of Codexis.

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11.2.2 Procedure. If Codexis intends to claim indemnification under Section 11.2.1, Codexis shall promptly notify MUS in writing of any claim in respect of any Codexis Indemnitee claim for such indemnification, and, except as otherwise expressly provided in this Agreement, MUS shall have control of the defense and/or settlement thereof using counsel reasonably acceptable to Codexis. Under all other circumstances, Codexis may, in its sole discretion, participate in any such proceeding with separate counsel of its choice, at its own expense. The foregoing indemnity obligation shall not apply to amounts paid by Codexis in settlement of any claim if such settlement is effected by Codexis without the consent of MUS, which consent shall not be withheld unreasonably. At MUS' request and expense, Codexis and its employees and agents shall provide reasonable cooperation to MUS and its legal representatives in the investigation of and preparation for the defense against any action, claim or liability covered by this indemnification. The Indemnitor shall not enter into any settlement or consent to an adverse judgment in any such claim, demand, action or other proceeding that admits wrongdoing on the part of the other Party or its officers, directors, employees and agents, or which imposes additional obligations on the other Party, without the prior express written consent of the other Party, which consent shall not be unreasonably withheld or delayed.

12. TERMINATION

12.1 Term. This Agreement shall be effective as of the Effective Date and, unless terminated earlier as provided in this Article 12 or as otherwise agreed by the Parties in writing, shall remain in force and effect until the expiration of the last to expire patent within the Enabling Technology and/or the Product Technology. Thereafter, Codexis shall retain a non-exclusive, royalty-free license to the Know-How and Materials transferred by MUS to Codexis for fifty (50) years following the termination or expiration of this Agreement.

12.2 Termination on Business Cessession. Prior to the Separation Event, (i) in the event of a dissolution or liquidation of Codexis, (ii) upon the institution by Codexis of insolvency, receivership or bankruptcy proceedings or any other proceedings for the settlement of debts, (ii) upon the institution of such proceedings against Codexis, which are not dismissed without prejudice or otherwise resolved in Codexis' favor within sixty (60) days thereafter, (upon Codexis' making a general assignment for the benefit of its creditors, or (iv) in the event that a substantial portion of Codexis' assets or the conduct of Codexis' business shall be substantially encumbered by extraordinary governmental action or by operation of law, MUS may in any of the foregoing circumstances, at its option and in its sole discretion, terminate this Agreement, effective immediately upon giving written notice of termination to Codexis.

12.3 Termination for Failure to Pay Patent Prosecution Expenses. If Codexis fails to timely pay amounts due with respect to Patent Prosecution of any particular Patent Application or Patent owned by MUS more than three times in any three (3) year period, MUS shall have the right with one hundred and eighty (180) days notice to Codexis, to terminate Codexis' license to such Patent Application or Patent (the "Subject Patent Application or Patent") and all other Patent Applications and Patents licensed to Codexis hereunder in the same Patent family (i.e., that claim filing priority to the same Patent Application(s) or Patent(s) as the Subject Patent Application or Patent).

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12.4 Breach of a Third Party Agreement. If Codexis breaches the terms of any Third Party agreement pursuant to which it has license or sublicense rights hereunder, whether by failure to timely pay amounts due under such agreement or otherwise, and after notice from the licensor or MUS of such breach fails to cure such breach within the period for cure provided in the applicable agreement, then MUS shall have the right with thirty (30) days notice to Codexis, to terminate Codexis' license or sublicense, as the case may be, granted hereunder to all Patent Applications and Patents, Know-How and/or Materials covered by such agreement.

12.5 Effect of Termination.

12.5.1 Rights and Obligations. Termination of this Agreement for any reason shall not release any Party hereto from any liability that, at the time of such termination, has already accrued or that is attributable to a period prior to such termination nor preclude either Party from pursuing all rights and remedies it may have hereunder or at law or in equity with respect to any breach of this Agreement.

12.5.2 Licenses. In the event of any termination of this Agreement pursuant to Section 12.2, Codexis' license(s) shall terminate concurrently.

12.6 Survival. The provisions of Sections 2.5, 2.6, 2.7, 2.11, 3.1, 3.2, 3.3, 7.5, 9.4, 10.7, 12.5 and 12.6, and Articles 4, 6, 11, 13 and 14 shall survive the expiration or termination of this Agreement for any reason.

13. DISPUTE RESOLUTION

13.1 Mediation. If a dispute arises out of or relates to this Agreement, or the breach thereof, and if the dispute cannot be settled through negotiation, the Parties agree first to try in good faith to settle the dispute by mediation before resorting legal action.

13.2 Jurisdiction; Venue. All disputes arising out of this Agreement (except any dispute relating to the infringement, validity or enforceability of any patent subject to this Agreement) shall be subject to the exclusive jurisdiction and venue of the California state courts of San Mateo County (or, if there is federal jurisdiction, the United States District Court for the Northern District of California), and the Parties hereby irrevocably consent to the personal jurisdiction of and venue in such courts.

13.3 Legal Expenses. The prevailing Party (if any is determined by the finder of fact) in any legal action brought by one Party against the other shall be entitled, in addition to any other rights and remedies it may have, to reimbursement for its expenses incurred thereby, including court costs and reasonable attorneys' and expert fees and expenses.

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14. MISCELLANEOUS

14.1 Governing Law. This Agreement (and any dispute relating to its construction, performance and/or breach) shall be governed by the laws of the State of California, without reference to conflicts of laws principles of that State or of any other jurisdiction.

14.2 Notices. Any notice provided under this Agreement by one Party to the other Party shall be in writing and shall be deemed to have been effectively given (i) upon receipt when delivered personally, (ii) one day after sending when sent by internationally recognized express mail service (such as Federal Express or DHL), or (iii) five (5) days after sending when sent by regular mail, and in each case sent to the other Party at its address indicated below:

In the case of MUS:

Maxygen, Inc.
515 Galveston Drive
Redwood City, CA 94063
Attn: General Counsel

In the case of Codexis:

Codexis, Inc.
515 Galveston Drive
Redwood City, CA 94063
Attn: President

or to such other address as MUS or Codexis shall have last designated to the other by written notice in accordance with this Section 14.2.

14.3 Independent Contractors. This Agreement does not create or imply a principal agent, employer, employee, partnership, joint venture, or any other relationship except that of independent contractors between the Parties, and neither Party shall have any right, power or authority to create any obligation, express or implied, on behalf of the other in connection with the performance hereunder.

14.4 Non-Waiver. The failure or delay of either Party at any time to require performance by the other Party of any provision hereof shall not affect in any way, or act as a waiver of, the right to require such other Party to perform in accordance with this Agreement at any other time, nor shall the waiver of either Party of a breach of a provision of this Agreement be held or taken to be a waiver of the provision itself or any previous or subsequent breach thereof. No waiver shall be binding unless in writing.

14.5 Severability: Partial Invalidity. If any provision of this Agreement is held to be invalid in whole or in part by a court of competent jurisdiction, then the remaining provisions shall remain, nevertheless, in full force and effect. The Parties agree to renegotiate in good faith any provision held invalid and to be bound by the mutually agreed substitute provision in order to give the most approximate effect originally intended by the Parties.

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14.6 Assignment. Prior to a Separation Event, Codexis may not assign this Agreement or any of its rights nor delegate or transfer any of its obligations hereunder without the prior express written consent of MUS, which consent MUS shall not be obligated to give. After a Separation Event, Codexis may upon notice to MUS assign this Agreement to a Third Party in connection with a merger, sale of all or substantially all of its assets, or other corporate reorganization of Codexis. MUS may assign this Agreement and its rights and obligations under this Agreement, without restriction. Any purported assignment not expressly permitted by this Section 14.6 shall be null and void. Subject to the above restrictions, this Agreement shall inure to the benefit of and bind the successors and assigns of the Parties.

14.7 Export Control. In exercising its rights under this Agreement, each Party agrees to comply strictly and fully with all export controls imposed, by any country or organization or nations within whose jurisdiction the Party operates or does business. Each Party agrees not to export or permit exportation of any software products or any related technical data or any direct product of any related technical data, related to or serving as a component of the Products, without complying with the export control laws in the relevant jurisdiction. In particular, the Parties acknowledge that they are subject to United States laws and regulations controlling the export of products or technical information. Codexis agrees that it will not export, directly or indirectly, any technical information acquired under this Agreement or any Products using such technical information to any country for which the United States government or agency thereof at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from the Department of Commerce or other agency of the United States government when required by an applicable statute or regulation.

14.8 Further Assurances. At any time or from time to time on and after the date of this Agreement, either Party shall at the request of the other Party (i) deliver to the requesting Party such records, data or other documents consistent with the provisions of this Agreement, (ii) execute, and deliver or cause to be delivered, all such consents, documents or further instruments of assignment, transfer or license, and (iii) take or cause to be taken all such actions, as the requesting Party may reasonably deem necessary or desirable in order for the requesting Party to obtain the full benefits of this Agreement and the transactions contemplated hereby.

14.9 Force Majeure. Neither Party shall lose any rights hereunder or be liable to the other Party for damages or losses (except for payment obligations) on account of failure of performance by the defaulting Party if the failure is occasioned by war, strike, fire, act of terrorism, Act of God, earthquake, flood, lockout, embargo, governmental acts or orders or restrictions, failure of suppliers (including, without limitation, energy suppliers), or any other reason where failure to perform is beyond the reasonable control and not caused by the negligence, intentional conduct or misconduct of the nonperforming Party and the nonperforming Party has exerted reasonable efforts to avoid or remedy such force majeure; provided, however, that in no event shall a Party be required to settle any labor dispute or disturbance.

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14.10 No Implied Rights. Only the rights granted pursuant to the express terms of this Agreement shall be of any legal force or effect. No other rights shall be created by implication, estoppel or otherwise.

14.11 No Third Party Rights. This Agreement has been entered for the benefit of the Parties and, except as expressly set forth herein or as otherwise may be agreed in writing by the Parties, is not intended to benefit any Third Party.

14.12 Entire Agreement; Modification. This Agreement, including its Exhibits which are incorporated by reference herein, together with the Services Agreement, Patent Assignment Agreement, Trademark Agreement and Stock Issuance and Asset Contribution Agreement, contains the Parties' entire understanding with respect to the subject matter hereof. There are no promises, covenants or undertakings, oral or written, other than those set forth herein with respect to the subject matter hereof, and neither Party is relying upon any representations or warranties except as set forth herein. This Agreement may not be modified except by a writing signed by both Parties.

14.13 Headings. The captions to the several Sections and Articles hereof are not a part of this Agreement, but are included merely for convenience of reference only and shall not affect its meaning or interpretation.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

MAXYGEN, INC.	**CODEXIS, INC.**
By: /s/ Russell J. Howard	By: /s/ Alan Shaw
Name: Russell J. Howard	Name: Alan Shaw
Title: CEO	Title: President

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EXHIBIT A

DETECTION AND RESEARCH REAGENT FIELD

"**Detection and Research Reagent Field"** means making, having made, using, and selling of reagents, instruments, and services for the diagnostics and research supply markets, only as follows: (1) clinical and diagnostic tests, including those conducted to identify genetic disease predisposition, genetic or other disease conditions, and infectious or pathogenic agents, as well as those conducted for other medical, agricultural or veterinary purposes; (2) tests for analytical/bioanalytical purposes, including those conducted for biomedical, chemical, or medical research or treatment purposes, for environmental purposes, and for forensic purposes, including paternity, maternity, or identity tests; and (3) sequencing and sequence analysis of nucleic acids or other biological polymers for any purpose.

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EXHIBIT B

ENABLING TECHNOLOGY

[*]

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EXHIBIT C

EXCLUDED TECHNOLOGY

[*]

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EXHIBIT D

CODEXIS PRODUCT TECHNOLOGY

[*]

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EXHIBIT E

PROSECUTION COSTS FOR ENABLING TECHNOLOGY

In partial consideration for the grant of the licenses granted in Section 2.1 of the Agreement, Codexis shall pay to MUS [*] of the Prosecution Costs incurred after the Effective Date with regard to Enabling Technology. However, during the period until the fourth anniversary of the Effective Date, such payments to MUS shall not exceed the amounts below:

	Maximum Prosecution Costs for Enabling Technology
First 12 months after Effective Date	$ 575,000
Next 12 months after Effective Date	$ 625,000
Next 12 months after Effective Date	$ 675,000
Next 12 months after Effective Date	$ 750,000

The applicable amounts will be paid to MUS (or its designee) within forty-five (45) days of an invoice therefor.

Prior to the fourth anniversary of the Effective Date, Codexis and MUS shall negotiate and agree in writing on the amounts Codexis will pay to MUS for Prosecution Costs with regard to the Enabling Technology after the fourth anniversary of the Effective Date. However, unless otherwise agreed by Codexis and MUS, in any calendar year such payments shall not exceed the aggregate amount due to MUS for Prosecution Costs for Enabling Technology for the 12 month period from the third anniversary of the Effective Date until the fourth anniversary of the Effective Date.

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EXHIBIT 10.4

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AMENDMENT NO. 1 TO LICENSE AGREEMENT

This Amendment No. 1 ("Amendment No. 1") amends that certain License Agreement effective March 28, 2002 (the "Agreement") entered by and between Maxygen, Inc. ("MUS") and Codexis, Inc. ("Codexis"), and shall be effective as of September 13, 2002 (the "Amendment Date"). MUS and Codexis hereby amend the License Agreement as follows:

1. Article 1 is amended by the addition of the following new definitions:

1.54 **"Category"** shall mean each of the identified categories listed on Exhibit G.

1.55 **"Reserved SubField Termination Date"** shall mean the period commencing on the Amendment Date and ending on the later of (i) five (5) years after the Amendment Date, or (ii) a Separation Event.

1.56 **"Reserved SubFields"** shall mean, in the period from the Amendment Date until the Reserved SubField Termination Date, the subject matter within the SubFields. It is understood and agreed that (i) as of the Reserved SubField Termination Date, one or more of the SubFields may become part of the Codexis Field pursuant to Section 2.1.6(d), and (ii) as of the Reserved SubField Termination Date, the Reserved SubFields (including each Category and SubField) shall be terminated, and shall have no content or force or effect for the remainder of the term of the Agreement.

1.57 **"Scheduled Product"** shall mean any chemical described on Exhibit F.

1.58 **"SubField"** shall mean each of the identified SubFields listed on Exhibit G.

1.59 **"Supplemental Product"** shall mean (a) any chemical within a Category with regard to which Category Codexis conducts a research project meeting the criteria set forth in Section 2.1.6(a) prior to the Reserved SubField Termination Date and (b) each chemical that is within a SubField that becomes part of the Codexis Field as of the Reserved SubField Termination Date pursuant to Section 2.1.6(d).

2. Section 1.10 is amended to provide in its entirety, as follows:

1.10 **"Bulk Production"** shall mean production by Codexis via enzymatic catalysis (using an Enzyme Product or a Biocatalyst) or fermentation of:

(a) any Enzyme Product or Biocatalyst for sale to a Third Party (other than an Affiliate of Codexis) for manufacture of Catalysis Products, or

(b) any Catalysis Product or Fermentation Product for sale to a Third Party (other than an Affiliate of Codexis) for further processing or formulation, or

(c) any Catalysis Product or Fermentation Product that will be formulated by Codexis for sale to a Third Party, which Product contains one or more Functional Compounds approved by a Regulatory Authority for human or veterinary pharmaceutical use, where such Functional Compound(s) (i) is (are) no longer covered by issued patents in the country where such production will occur, or (ii) is (are) covered by issued patents owned or Controlled by a Third Party (other than an Affiliate of Codexis) that has contracted to have Codexis formulate such Product on behalf of such Third Party, or

(d) any Scheduled Product for sale to a Third Party (other than an Affiliate of Codexis) for further processing or formulation, or

(e) any Supplemental Product for sale to a Third Party (other than an Affiliate of Codexis) for further processing or formulation.

3. Section 1.12 is amended to provide in its entirety, as follows:

1.12 **"Codexis Field"** shall mean:

(a) Biocatalyst Commercialization and Enzyme Commercialization, subject to the limitations set forth in Section 2.2.2 and the rights of MUS and Third Parties described in Section 2.8;

(b) Building Block Development;

(c) Bulk Production of Products (except Supplemental Products), subject to the limitations set forth in Section 2.2.2 and the rights of MUS and Third Parties described in Section 2.8;

(d) Bulk Production of Supplemental Products to which Codexis has acquired rights pursuant to Sections 2.1.6(c) or (d), subject to the limitations set forth in Section 2.2.2 and the rights of MUS and Third Parties described in Section 2.8.

4. Section 1.17 is amended to provide in its entirety, as follows:

1.17 **"Enabling Technology"** shall mean all Patent Applications and Patents Controlled by MUS that claim (i) methods of generating genetic diversity (including, without limitation, DNA Shuffling with tangible materials or in silico), or the use thereof, and/or (ii) generally applicable screening techniques, methodologies or processes for identifying genetic variants of interest that: (a) are filed on or before the Separation Event, or (b) claim inventions conceived and reduced to practice or otherwise developed on or before the Separation Event, which Patent Application or Patent is filed on or before the third anniversary of the Separation Event. Enabling Technology shall include MUS' interest in Third Party Improvements, if any. A list of Patent Applications and Patents within the Enabling Technology existing as of the Effective Date is attached as **Exhibit B** hereto

5. Section 1.40 is amended to provide in its entirety, as follows:

1.40 **"Product**" shall mean any Catalysis Product, Enzyme Product, Scheduled Product, Supplemental Product, Biocatalyst or Fermentation Product that:

(a) is made or developed with the use of Enabling Technology, whether by Gene Expression Manipulation and/or Metabolic Pathway Manipulation and/or Strain Improvement or otherwise (e.g., incorporates any variant gene made with Enabling Technology, and/or any protein or peptide expressed therefrom), and/or

(b) is developed with the use of Product Technology, or incorporates, or is made using, or is substantially derived from, Product Technology.

6. Section 1.41 is amended to provide in its entirety, as follows:

1.41 **"Product Technology"** shall mean the Patent Applications and Patents Controlled by MUS on or before the Separation Event that are necessary or useful for use in the Codexis Field, that are not included in Enabling Technology or the Assigned Patents. A list of the Patent Applications and Patents within the Product Technology existing as of the Effective Date is attached as Exhibit D hereto.

7. Section 2.1.1 is amended to read in its entirety as follows:

2.1.1 Licenses. Subject to the terms and conditions herein, including without limitation Sections 2.2, 2.4, 2.6, 2.7 and 2.8, MUS hereby grants to Codexis, and Codexis hereby accepts, irrevocable (except as provided in Sections 9.4.1, 12.2, 12.3 and 12.4), worldwide, royalty-free (subject to Section 2.1.5(b)) licenses, as follows:

(a) with respect to the Enabling Technology and related Know-How:

(i) an exclusive license in Microbes to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products (including those Supplemental Products that Codexis has acquired rights to pursuant to Section 2.1.6 (c), but excluding, until the Reserved SubField Termination Date, other Supplemental Products) and corresponding Services in the Codexis Field; and

(ii) a non-exclusive license in Category II Plants to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products (including those Supplemental Products that Codexis has acquired rights to pursuant to Section 2.1.6 (c), but excluding, until the Reserved SubField Termination Date, other Supplemental Products) and corresponding Services in the Codexis Field; and

(b) subject to the terms of Section 2.1.6(a), with respect to the Enabling Technology and related Know-How, in the period from the Amendment Date until the Reserved SubField Termination Date:

(i) an exclusive license in Microbes to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Supplemental Products and corresponding Services; and

(ii) a non-exclusive license in Category II Plants to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Supplemental Products and corresponding Services; and

(c) with respect to the Enabling Technology and related Know-How, a non-exclusive license to develop, make and use Expression Hosts for Internal Research Use; and

(d) with respect to the Product Technology and related Know-How:

(i) an exclusive license in Microbes to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products (including those Supplemental Products that Codexis has acquired rights to pursuant to Section 2.1.6 (c), but excluding, until the Reserved SubField Termination Date, other Supplemental Products) and corresponding Services in the Codexis Field; and

(ii) a non-exclusive license in Category II Plants to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products (including those Supplemental Products that Codexis has acquired rights to pursuant to Section 2.1.6 (c), but excluding, until the Reserved SubField Termination Date, other Supplemental Products) and corresponding Services in the Codexis Field; and

(e) subject to the terms of Section 2.1.6(a), with respect to the Product Technology and related Know-How, in the period from the Amendment Date until the Reserved SubField Termination Date:

(i) an exclusive license in Microbes to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Supplemental Products and corresponding Services; and

(ii) a non-exclusive license in Category II Plants to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Supplemental Products and corresponding Services.

8. Article 2.1 is revised by the addition of new Sections 2.1.6 and 2.1.7:

2.1.6 Reserved SubField. With regard to the Reserved SubFields set forth on Exhibit G:

(a) Until the Reserved SubField Termination Date, Codexis may practice licenses as described in Sections 2.1.1(b) and (e), on a Category-by-Category basis, if for such Category Codexis:

(i) enters into a written contract (including any government grant) with a Third Party that will provide Codexis with at least [*] over a continuous period of [*] months or less from such Third Party to (a) conduct research using the Enabling Technology in the applicable Category, or (b) develop for commercial uses Products subject to Section 1.40(a) in the applicable Category; or

(ii) expends its own funds in an amount of at least [*] over a continuous period of [*] months or less, to (a) conduct research using Enabling Technology in the applicable Category, or (b) develop for commercial uses Products subject to Section 1.40(a) in the applicable Category; or

(iii) expends its own funds and funds from a Third Party collaborator, which funds total at least [*] over a continuous period of [*] months or less, to conduct (a) research using Enabling Technology in the applicable Category, or (b) develop for commercial uses one or more Products in the applicable Category.

The Codexis Board of Directors (with appropriate recusals for interested party transactions) must approve the transactions and/or Codexis expenditures described in this Section 2.1.6(a).

(b) Commencing on the first anniversary of the Amendment Date and annually thereafter on the anniversary of the Amendment Date until the Reserved SubField Termination Date, and at Codexis' option, at other times, Codexis shall provide MUS with a written report (i) identifying all Supplemental Products and Categories with regard to which Codexis has conducted research subject to Section 2.1.6(a) above, and (ii) reporting, by Category, the amount of funds expended by Codexis to conduct research in each such Category in the preceding twelve (12) month period.

(c) If Codexis has conducted activities subject to Section 2.1.6(a) as to a particular Category, Codexis shall notify MUS in writing (the "Category Notice") providing a detailed explanation of why it believes the Section 2.1.6(a) criteria have been fulfilled with regard to the applicable Category. Within thirty (30) days following the date of such Category Notice, senior business representatives of MUS and Codexis shall jointly prepare and sign a written summary (the "Category Summary") identifying the Category and corresponding Supplemental Product(s) subject to Section 1.59(a). All Supplemental Products in such agreed Category Summary shall be included in the Codexis Field (subject to the applicable SubField exclusions set forth on Exhibit G) for all purposes of this Agreement, as of the date of the applicable agreed Category Summary. Any dispute regarding the subject matter that will be added to the Codexis Field pursuant to this Section 2.1.6(c) shall be resolved as set forth in Article 13.

(d) If Codexis has conducted activities that meet the criteria set forth in Section 2.1.6(a) above with regard to at least one-half of the Categories of any SubField, then, from and after the date of such occurrence (the "Subfield Inclusion Date"), such entire SubField (including all its Categories) shall, subject to the applicable SubField exclusions set forth on Exhibit G, thereafter be included in the Codexis Field for all purposes of this Agreement. Within thirty (30) days following the SubField Inclusion Date, senior business representatives of MUS

and Codexis shall jointly prepare a written summary identifying (i) those Supplemental Product(s) subject to Section 1.59(a) within Categories that have not become part of the Codexis Field, and (ii) those Categories and SubFields have become included in the Codexis Field. Any dispute regarding the subject matter that will be added to the Codexis Field shall be resolved as set forth in Article 13.

(e) After the Reserved SubField Termination Date, Codexis shall retain the right to complete research regarding a particular Supplemental Product that it commenced prior to such date pursuant to Section 2.1.6(a) if it has expended at least [*] on such research with respect to such Supplemental Product by the Reserved SubField Termination Date, and to commercialize Supplemental Products resulting from such activities, but otherwise Codexis shall not have any other rights with regard to any Category(ies) or SubField(s) that are not within the Codexis Field after the Reserved SubField Termination Date.

(f) Until the date that Codexis acquires license rights under this Agreement to a particular Supplemental Product pursuant to Sections 2.1.6 (c) or (d), Codexis may not grant any Third Party (i) a sublicense to the Enabling Technology for the development or manufacture of any Supplemental Product, or (ii) an option to (1) obtain a sublicense to the Enabling Technology for use with regard to the development or manufacture of any Supplemental Product, or (2) use the Enabling Technology to develop or manufacture any Supplemental Product. It is understood and agreed that Codexis may grant such sublicenses and options to Supplemental Products which have become included in the Codexis Field pursuant to Section 2.1.6(c) above as a result of Codexis having satisfied the conditions of 2.1.6(a).

(g) Until the Reserved SubField Termination Date, MUS will not (i) itself use the Enabling Technology to develop or manufacture any Supplemental Product, or (ii) grant a Third Party a license to use the Enabling Technology to develop or manufacture any Supplemental Product.

(h) It is understood and agreed that as of the Reserved SubField Termination Date, the Reserved SubFields (including each Category and SubField) shall be terminated and shall have no content or force or effect for the remainder of the term of the Agreement.

2.1.7 Rights to Negotiate for Rights Outside the Codexis Field.

(a) Codexis Proposal. If Codexis wishes to use the Enabling Technology outside the then-current scope of the Codexis Field to make a particular commodity chemical or fine chemical, then Codexis shall have a right of negotiation to obtain from MUS a license to use the Enabling Technology to make such specific products via processes proposed by Codexis. In any such event, Codexis shall notify MUS in writing of the particular processes and specific commodity chemical(s) or fine chemical(s). If Codexis notifies MUS that Codexis wishes to negotiate for an expanded license to the Enabling Technology as described in this Section 2.1.7(a), Codexis and MUS shall for a period of one hundred twenty (120) days from Codexis' notice, or such longer period as the parties may agree in writing, negotiate terms and conditions for such license rights.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) MUS Notice. If MUS wishes to use or license a Third Party to use the Enabling Technology to make a particular commodity chemical or fine chemical for industrial manufacturing applications outside the then-current scope of the Codexis Field, then until the Separation Event, MUS shall notify Codexis, and Codexis shall have a first right of negotiation to obtain from MUS a license to use the Enabling Technology to make such specific products. In any such event, MUS shall notify Codexis in writing of the particular processes and specific commodity chemical(s) or fine chemical(s), subject to any obligations of confidentiality owed to a Third Party. If Codexis notifies MUS in writing within thirty (30) days of notice by MUS pursuant to this Section 2.1.7(b) that Codexis wishes to negotiate for an expanded license to the Enabling Technology for the applicable processes and products, then for a period of one hundred twenty (120) days from MUS' notice, or such longer period as the parties may agree in writing, MUS and Codexis shall negotiate terms and conditions for such license rights. For the avoidance of doubt, it is understood and agreed that this Section 2.1.7(b) shall apply only to proposed uses of Enabling Technology for manufacturing of commodity chemicals or fine chemicals for industrial applications, and shall not apply to any other application outside the Codexis Field, including, without limitation, to any proposed use for discovery, research, development or manufacturing of pharmaceuticals, vaccines or Agrochemicals and/or for any application relating to agriculture, e.g., processing of food or feed.

(c) Agreement on Terms. If the Parties agree upon mutually acceptable terms and conditions pursuant to Section 2.1.7(a) or Section 2.1.7(b), the Parties shall enter into a written amendment to this Agreement modifying the license granted to Codexis as appropriate to include the relevant rights and applicable chemicals. Neither Party shall be obligated to accept or agree to such terms or conditions, or to enter into any agreement regarding such expanded license rights. If MUS and Codexis do not agree upon mutually acceptable terms and conditions within the applicable time period above, Codexis shall have no right or license to use the Enabling Technology outside the then-existing Codexis Field.

9. Section 2.2.2(b)(i) is deleted, such that Section 2.2.2(b) provides in its entirety, as follows:

(b) to make, have made, use, promote, market, distribute and/or sell any products (including, without limitation, any Products) intended for use in the Detection and Research Reagent Field; or

10. Section 2.2.2(c) is revised by the insertion of the word "itself" before the word "develop".

11. Revise Sections 2.2.2(f)(ii) and 2.2.2(h) by changing each occurrence of "discovery" to "Discovery", and revise Section 2.8.5 by changing "discover" to "conduct Discovery of".

12. Section 2.3 is amended to read in its entirety as follows:

2.3 Right to Sublicense. Codexis (or its successor) may grant sublicenses to the Enabling Technology, Product Technology and related Know-How to such Third Parties as it

deems appropriate, but such sublicenses may only grant rights to practice in the Codexis Field; provided, Codexis may not (i) sublicense the rights granted in Section 2.1.1(c) except in connection with a grant of a sublicense of the rights granted it in Section 2.1.1(a), or (ii) sublicense the rights granted it in Section 2.1.1(b) or 2.1.1(e). Codexis (or its successor) may grant licenses to the Assigned Patents as it deems appropriate.

13. Section 2.7.1 is amended to provide in its entirety as follows:

2.7.1 MUS. Notwithstanding the license grants in Section 2.1, the Parties agree that:

(a) MUS and its wholly-owned Affiliates shall, until the Separation Event, retain the right to conduct research with the Enabling Technology and related Know-How in the Codexis Field and/or the Reserved SubFields for the purpose of (i) improving and expanding Enabling Technology, and/or (ii) exploring applications of the Enabling Technology for areas outside the Codexis Field and/or the Reserved SubFields; provided, MUS and its wholly-owned Affiliates shall not use the Enabling Technology for the primary intended purpose of developing any Products or Services for use in the Codexis Field and/or the Reserved SubFields, on its own behalf or on behalf of any Third Party.

(b) At all times during and after this Agreement, nothing herein shall restrict, or be construed to restrict, MUS' right to practice and grant licenses to practice the Enabling Technology and Product Technology and/or use related Know-How, outside the Codexis Field and/or the Reserved SubFields.

(c) It is understood and agreed that, at all times, MUS shall retain (i) the right (sublicensable to its Affiliates) to internally use the Enabling Technology, Product Technology and related Know-How to conduct Discovery and development of pharmaceutical and/or Agrochemical products by any means (which may include, without limitation, the development of Building Blocks, the addition of Building Blocks to Templates and/or analoging of Functional Compounds), and to conduct commercialization of such products; and (ii) the sublicensable right to make and/or have made, use, import, have imported, offer for sale and/or sell any such products.

14. Section 2.7.2 is revised to provide in its entirety as follows:

2.7.2 Codexis. Except as expressly set forth in this Agreement, nothing herein shall limit the ability of Codexis to use any intellectual property, tangible property or technology not subject to this Agreement, whether the foregoing is developed by it or acquired by it (by license, acquisition or otherwise) for any purpose, in or outside the Codexis Field.

15. Section 3.2 is amended to provide in its entirety, as follows:

3.2 License to MUS. In partial consideration for the rights granted herein. Codexis shall grant and hereby grants, and MUS hereby accepts, the following licenses:

(a) with respect to Patent Applications and Patents within the scope of Section 1.4(a), an exclusive, worldwide, royalty-free, irrevocable license, with the right to grant and authorize sublicenses; and

(b) with respect to Patent Applications and Patents within the scope of Section 1.4(b), subject to the terms of the applicable Third Party Agreement as described in Section 3.3.1, an exclusive (to the extent permitted by the applicable Third Party Agreement), worldwide (to the extent permitted by the applicable Third Party Agreement), royalty-free (subject to Section 3.3.2), irrevocable (to the extent permitted by the applicable Third Party Agreement) license, with the right to grant and authorize sublicenses.

in each case, to develop, make, have made, use, import, have imported, offer for sale, sell or otherwise commercialize or distribute Products and Services solely outside the Codexis Field, and until the Reserved Termination Date, the Reserved SubFields.

16. Article 4 is amended to read in its entirety as follows:

4. **COVENANTS**

4.1 Use Within the Codexis Field. Codexis covenants that it will not knowingly practice its licenses to the Enabling Technology and related Know-How, or its licenses to the Product Technology and related Know-How, for the purpose of developing or commercializing Products or Services for use outside the Codexis Field and/or the Reserved SubField. Codexis further covenants that it will not knowingly make or permit any of its Sublicensees or contractors to knowingly make any release into the environment of any Microbe or any Plant which has been modified with the use of Enabling Technology (e.g., outside a container or containment vessel which precludes exit of any such Microbes or Plants from such container or vessel), without the prior written consent of MUS.

4.2 Use Outside the Codexis Field. MUS covenants that it will not knowingly use its retained rights with regard to the Enabling Technology or the Product Technology, or knowingly practice its license to Codexis Improvements (if any), for the purpose of developing or commercializing Products or Services for use in the Codexis Field and/or the Reserved SubField; provided that such covenants shall be subject to Section 2.7.1 and further provided that such covenants shall terminate with regard to any Patent Applications and/or Patents for which Codexis' license terminates pursuant to Sections 9.2.3(b), 12.2, 12.3 and/or 12.4 below.

17. Section 9.2.1 is amended to provide in its entirety, as follows:

9.2.1 Patent Prosecution.

(a) With regard to Patent Applications and Patents within the Product Technology owned by a Third Party, such Third Party shall have the sole right and discretion to conduct Patent Prosecution of such Patent Applications and Patents.

(b) With regard to Patent Applications and Patents within the Product Technology owned by MUS, MUS shall have the initial right, but not the obligation, to conduct Patent Prosecution of such Patent Applications and Patents, unless such Patent Applications and Patents claim only methods and/or compositions that have substantial, commercially valuable applications solely within the Codexis Field and/or the Reserved SubFields, in which case Codexis shall have the right, but not the obligation, to conduct Patent Prosecution of such Patent Applications and Patents.

18. Section 9.2.2 is amended to provide in its entirety, as follows:

9.2.2 Sharing of Prosecution Costs. Codexis shall be responsible for Prosecution Costs in connection with Patent Prosecution activities described in Section 9.2.1, as follows:

(a) With regard to Patent Applications and Patents within the Product Technology owned by a Third Party, the Third Party and Codexis shall agree on the amounts to be paid by Codexis to the Third Party with regard to the Patent Prosecution of such Patent Application and/or Patent. Unless otherwise agreed in writing, Codexis agrees it shall pay a pro rata share of such Prosecution Costs based on the following formula: Codexis' percentage share of such Prosecution Costs = 100 (1/1+X), where X equals the number of sublicenses granted by MUS with regard to the applicable Patent Application and/or Patent.

(b) With regard to any Patent Applications and Patents within the Product Technology that are owned by MUS, if MUS conducts the Patent Prosecution activities described in Section 9.2.1(b), Codexis shall pay to MUS a pro rata share of such Prosecution Costs based on the number of sublicenses granted by MUS with regard to the applicable Patent Application and/or Patent.

(c) With regard to any Patent Applications and Patents within the Product Technology that are owned by MUS, if Codexis conducts the Patent Prosecution activities described in Section 9.2.1(b), Codexis shall pay one hundred percent (100%) of the Prosecution Costs incurred after the Effective Date in connection with such activities.

(d) Any amounts for Prosecution Costs subject to this Section 9.2.2 for which Codexis is responsible will be paid by Codexis to the applicable Third Party (or its designee) or to MUS (or its designee), as applicable, within forty-five (45) days of an invoice therefor.

19. Section 9.2 is amended by the addition of new Section 9.2.5:

9.2.5 Opt Out. Notwithstanding Sections 9.2.1 through 9.2.4 above, if Codexis does not wish to retain rights to any Patent Application or Patent within the Product Technology, Codexis may, with sixty (60) days written notice to MUS, relinquish its license rights to such Patent Application and Patent. In such event, Codexis shall have no further license rights under this Agreement with regard to the applicable Patent Applications and/or Patents, (i) shall not be entitled to participate in further Patent Prosecution as described in Section 9.2.2 with respect

thereto, and/or further consultation and/or information rights as described in Section 9.2.4, with regard to such Patent Applications and/or Patents, (ii) shall have no obligation to pay Prosecution Costs incurred after the effective date of termination with respect to the applicable Patent Application and/or Patent; (iii) shall have no further enforcement rights described in Section 10.3 with respect to such Patent Application and/or Patent. Codexis shall remain obligated to pay its share of any Patent Prosecution expenses incurred prior to the applicable effective date of termination.

20. Section 10.3 is amended to provide in its entirety, as follows:

10.3 Product Technology.

10.3.1 Infringement in the Codexis Field.

(a) With regard to any Patent within the Product Technology that is owned by a Third Party, such Third Party shall have the first right, but not the obligation to enforce such Patent within the Product Technology against any infringements by Third Parties in the Codexis Field and/or the Reserved SubFields and defend any declaratory judgment action.

(b) With regard to any Patent within the Product Technology that is owned by MUS:

(i) So long as Codexis retains an exclusive license to the applicable Patent within the Product Technology and such Patent has applications only in the Codexis Field, Codexis shall have the first right, but not the obligation, to enforce Patents within the Product Technology against any infringements by Third Parties in the Codexis Field and defend any declaratory judgment action. If Codexis fails to initiate a suit to enforce such patent in any jurisdiction against a commercially significant infringement in the Codexis within one (1) year of a request by MUS to do so, MUS may initiate suit against such infringement, at its expense. In such event, Codexis agrees to join in such action, if required by applicable law.

(ii) If Codexis does not have an exclusive license to the applicable Patent and/or if such Patent claims inventions having one or more applications outside the Codexis Field, then MUS shall have the first right, but not the obligation, to enforce such Patent against any infringements by Third Parties in the Codexis Field and defend any declaratory judgment action with respect thereto. If MUS fails to initiate a suit to enforce such Patent in any jurisdiction against a commercially significant infringement in the MUS Field within one (1) year of a request by Codexis to do so, Codexis may initiate suit against such infringement, at its expense. In such event, MUS agrees to join in such action, if required by applicable law.

(c) Notwithstanding Section 10.3.1(b) above, Codexis acknowledges that (i) certain patents within the Product Technology are and will be owned by Third Parties and, that in some cases, such Third Parties may have retained or may retain the first right, or the sole right to enforce such patents, and (ii) prior to the Effective Date, MUS has granted to Third Parties rights to conduct or participate in the enforcement and/or defense of certain Patent Applications and/or Patents within the Product Technology that are owned by MUS.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

10.3.2 Infringement Outside the Codexis Field.

(a) With regard to any Patent within the Product Technology that is owned by a Third Party, such Third Party shall have the first right, but not the obligation, at its sole expense, to enforce such Patents against any infringements by Third Parties outside the Codexis Field and/or the Reserved SubFields and defend any declaratory judgment action relating thereto.

(b) With regard to any Patent within the Product Technology that is owned by MUS, MUS (or its designee) shall have the right, but not the obligation, to pursue infringement of such Patents outside the Codexis Field and the Reserved SubFields, but shall consult with Codexis before commencing any such suit.

103.3 Recoveries. Any recovery received by a Party hereto as a result of any claim, suit or proceeding brought pursuant to this Section 10.3 shall be used first to reimburse the Party(ies), and any involved Third Party, for all expenses (including attorneys and professional fees) incurred in connection with such claim, suit or proceeding. Any amounts recovered by a Third Party in a claim, suit or proceeding pursued solely by such Third Party may be retained by such Third Party. With regard to any other recovery, after reimbursement as described in the preceding sentence, the remainder shall be divided as follows: (a) in any suit relating primarily to infringement in the Codexis Field and/or the Reserved SubFields, seventy percent (70%) to the Party initiating the suit, and thirty percent (30%) to the other Party, and (b) in any suit primarily relating to infringement outside the Codexis Field and/or the Reserved SubFields, as MUS determines or as may be agreed by the Parties in writing.

21. Section 10.7.3 is revised to read in its entirety, as follows:

10.7.3 Codexis Responsibility. If any claim, suit or proceeding subject to this Section 10.7 is based on allegations relating to the conduct or activities of Codexis and/or its Sublicensees, unless such claim, suit or proceeding is based solely on an allegation that the practice of the Enabling Technology infringed a patent owned by a Third Party, then Codexis shall have the right and responsibility to conduct the defense of such action, and shall pay the costs of defense of any such action.

22. Revise Sections 1.31 such that the phrase “within the Codexis Field’ shall be amended to read “within the Codexis Field, and until the Reserved SubField Termination Date, the Reserved SubFields”.

23. Revise Sections 1.32, 1.33, 1.41, 1.53, 2.2.1 and 7.1.3 by adding the phrase “and/or the Reserved SubFields” after each occurrence of the phrase “in the Codexis Field”.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

24. Revise Sections 2.2.2(f), 2.2.3, 2.5, 2.7.2, 2.8.2, 4.1, 8.1 and 9.2.1 by adding the phrase “and/or the Reserved SubFields” after each occurrence of the phrase “outside the Codexis Field”.

25. Exhibits F and G attached to this Amendment No. 1 shall become exhibits to the Agreement.

26. Except as expressly provided herein, the terms of the Agreement shall remain in full force and effect.

[THE REMAINDER OF THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, MUS and Codexis have executed this Amendment No. 1 to License Agreement as of the first above written.

MAXYGEN, INC.

By: /s/ Russell J. Howard
Name: Russell J. Howard
Title: Chief Executive Officer

CODEXIS, INC.

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President

EXHIBIT F

SCHEDULED PRODUCTS

1. Products for the following petrochemical applications:

Crude Oil Applications

enhancement of recovery of down-hole crude
reduction of metals or sulfur in crude oil & derivatives
reduction of viscosity in crude oil & derivatives

Refinery Applications (for crude oil derivatives)

aromatic/ring-compound removal
sulfur removal
viscosity modification
bio-thepene removal from fuels
conversion of glycerine to glycerine derivatives

2. Products for the following textile/paper manufacturing applications:

manufacture of dyes/pigments
manufacture of sizing agents
enhanced fiber bio-degradation
enhanced pulping

3. Products for the following environmental clean-up applications:

Soil/water bioremediation (e.g., hydrocarbons/chlorocarbon contamination)
sulfur/CO2 sequestration
radioisotope contamination
nuclear waste processing
treatment (i.e., degradation) of effluent waste products from wood
product/paper processing
treatment (i.e., degradation) of effluent waste products from grain/oil seed processing

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT G

RESERVED SUBFIELDS

1. **SubField 1**: Manufacture of the [*] monomers specified below, for use to make polymers (excluding polymers for use for [*] and/or [*]):

   Categories
   (a) [*]
   (b) **carboxylic acids, as follows: amino carboxylic acids, hydroxy carboxylic acids, olefinic carboxylates and hydroxy acids**
   (c) [*]
   (d) [*]
   (e) [*]

2. **SubField 2**: Manufacture of the [*] agents specified below (excluding agents for use for [*] and/or [*]):

   Categories
   (a) [*]
   (b) [*]
   (c) [*]
   (d) [*]

3. **SubField 3**: Manufacture of the fuels and fuel additives specified below:

   Categories
   (a) C7-C20 hydroxyalkanes and/or biomass (cellulose) conversion into ethanol
   (b) bioester fuel oxygenates and/or additives to increase biodegradability of hydrocarbon fuels
   (c) production of [*] for use as a [*]

4. **SubField 4**: [*], as specified below:

   Categories
   (a) [*]
   (b) [*]
   (c) [*]

5. **SubField 5**: Manufacture of the following [*], to the extent not covered by SubField 1:

   Categories
   (a) [*]
   (b) [*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(c) [*]
(d) [*]
(e) [*]

6. **SubField 6**: Manufacture of polymers made from the monomers specified below, for use as [*] (excluding any use in, on or for [*] or any other [*] and/or [*]):

Categories
(a) [*]
(b) [*]
(c) [*]
(d) [*]
(e) [*]
(f) [*]

7. **SubField 7**: Manufacture of the [*] specified below for [*] uses (excluding any use in, on or for [*] or any other [*] and/or [*]):

Categories
(a) [*]
(b) [*]
(c) [*]
(d) [*]
(e) [*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit 10.5

AMENDMENT NO. 2 TO LICENSE AGREEMENT

This Amendment No. 2 ("Amendment No. 2") amends that certain License Agreement effective March 28, 2002, entered into by and between Maxygen, Inc. ("MUS") and Codexis, Inc. ("Codexis"), as amended by Amendment No. 1 to License Agreement effective September 13, 2002 (as amended, the "Agreement"), and shall be effective as of October 1, 2002. MUS and Codexis hereby amend the Agreement as follows:

1. Section 1.44 of the Agreement shall be amended to provide in its entirety, as follows:

   1.44 **"Separation Event"** shall mean the earlier of (i) four (4) years after the Amendment Date, and (ii) the date upon which a Change of Control of Codexis occurs.

2. Article 1 is amended by the addition of the following new definition:

   1.59 **"Change of Control of Codexis"** means (i) a dissolution or liquidation of Codexis; (ii) a sale of all or substantially all the assets of Codexis, (iii) any consolidation or merger of Codexis with or into any other corporation or other entity or person, or any other corporate reorganization, in which the stockholders of Codexis immediately prior to such consolidation, merger or reorganization, own less than fifty percent (50%) of the Company's voting power immediately after such consolidation, merger or reorganization, excluding any consolidation, merger or reorganization effected exclusively to change the domicile of Codexis, or (iv) acquisition by any person, entity or group within the meaning of Section 13(d) or 14(d) of the Exchange Act, or any comparable successor provisions (other than MUS, CMEA Ventures Life Sciences 2000, L.P., Chevron Technology Ventures, LLC, Pequot Private Equity Fund III, L.P. and their respective Affiliates (collectively, the "Current Stockholders", or any group including any Current Stockholder that does not include, within the reasonable discretion of Maxygen, a competitor of Codexis) of the beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act, or comparable successor rule) of securities of the Company such that after the acquisition the person, entity or group owns securities of Codexis representing at least fifty percent (50%) of the combined voting power entitled to vote in the election of directors.

3. Subsections 2.1.1(b)(i) and (ii) and 2.1.1(e)(i) and (ii) are amended to add the words "in the Codexis Field" as the last words of each such clause.

4. As soon as practicable after the date hereof, an Amended and Restated License Agreement will be prepared reflecting the amendments to the Agreement contained in this Amendment No. 2 and the September 13, 2002 amendment to the Agreement, without the need for any additional approval by the Board of Directors of Codexis or any member thereof.

IN WITNESS WHEREOF, MUS and Codexis have executed this Amendment No. 2 to License Agreement as of the first above written.

MAXYGEN, INC.

By: /s/ Russell J. Howard
Name: Russell J. Howard
Title: Chief Executive Officer

CODEXIS, INC.

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President

EXHIBIT 10.6

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

AMENDMENT NO. 3 TO LICENSE AGREEMENT

This Amendment No. 3 ("Amendment No. 3") amends that certain License Agreement effective March 28, 2002 entered by and between Maxygen, Inc. ("MUS") and Codexis, Inc. ("Codexis"), as previously amended by Amendment No. 1 to License Agreement effective September 13, 2002, and Amendment No. 2 to License Agreement effective October 1, 2002, (as amended, the "Agreement"), and shall be effective as of August __, 2006 (the "Third Amendment Date"). MUS and Codexis hereby amend the Agreement as follows:

1. Article 1 is amended by the addition of the following new definitions:

1.60 **"Consumer Price Index"** or **"CPI**" means the Consumer Price Index, All Urban Consumers, as published by the U.S. Bureau of Labor Statistics

1.61 **"Energy Product"** means any (i) Supplemental Product subject to any Modified SubField, and (ii) Scheduled Product subject to 1 of Exhibit F of the Agreement.

1.62 **"FTE"** means the efforts of one or more employees of Codexis equivalent to the efforts of one Codexis full time employee (i.e., an employee that works at least [*] hours per year.

1.63 **"Net Sales"** shall mean means the consideration received by Codexis or its Affiliates for the sale or use of Energy Products in arm's length sales to an independent Third Party, after deduction of the following items, provided and to the extent such items are actually incurred and documented and do not exceed reasonable and customary amounts in the market in which such sale occurred: (i) ordinary and customary trade discounts actually allowed; (ii) credits, rebates and returns; (iii) freight, insurance and duties paid for and separately identified on the invoice or other documentation maintained in the ordinary course of business, and (iv) taxes, duties and other compulsory payments to governmental authorities actually paid and separately identified on the invoice or other documentation maintained in the ordinary course of business. All sales or use of Energy Products between Codexis and any of its Affiliates shall be disregarded for purposes of computing Net Sales. A "sale" shall include any transfer or other disposition for consideration, and Net Sales shall include all consideration received by Codexis or its Affiliates in respect of any sale or use of Energy Products, whether such consideration is in cash, payment in kind, exchange or another form.

In the case of discounts on "bundles" of products and/or services which include Energy Products, Codexis may with notice to MUS calculate the Net Sales by discounting the bona fide list price of an Energy Product by no more than the average percentage discount of all products and services of Codexis and/or its Affiliates in a particular "bundle", calculated as follows:

Average percentage discount on a particular "bundle" = (1 - A/B) x 100

where A equals the total discounted price of a particular "bundle" of products and services, and B equals the sum of the undiscounted bona fide list prices of each unit of every product and service in such "bundle". Codexis shall provide MUS documentation, reasonably acceptable to MUS, establishing such average discount with respect to each "bundle". If Codexis cannot so establish the average discount of a bundle, the Net Sales shall be based on the undiscounted list price of the Energy Product in the bundle. If an Energy Product in a bundle is not sold separately and no bona fide list price exists for such Energy Product, the Parties shall negotiate in good faith an imputed list price for such Energy Product, and Net Sales with respect thereto shall be based on such imputed list price.

2. The following definitions in Article 1 shall be amended to read as follows:

1.55 **"Reserved SubField Termination Date"** shall mean (a) for SubFields 1, 2, 4, 5, 6 and 7, the period commencing on the Amendment Date and ending on the later of (i) five (5) years after Amendment Date, or (ii) a Separation Event, and (b) for SubFields 3, 8, 9 and 10 (the "Modified SubFields"), the period commencing on the Amendment Date and ending six (6) years after the Amendment Date; provided, however, that in the event Codexis has satisfied the criteria set forth in Section 2.1.6(a) as to a particular SubField within the Modified SubFields such that such entire SubField becomes included in the Codexis Field, as provided in Section 2.1.6(d), on or before six (6) years after the Amendment Date, then the Reserved SubField Termination Date shall be extended by one additional year; and further provided that upon the satisfaction of the criteria set forth in Section 2.1.6(d) for each additional SubField within the Modified SubFields, if any, the Reserved SubField Termination Date for the remaining Modified SubFields shall be extended for an additional one (1) year period, up to a maximum of three (3) such additional one (1) year extensions.

1.56 **"Reserved SubFields"** shall mean, in the period from the Amendment Date until the applicable Reserved SubField Termination Date, the subject matter within the applicable SubField(s). It is understood and agreed that as of the applicable Reserved SubField Termination Date, (a) one or more Categories within the Reserved SubFields may become part of the Codexis Field pursuant to Section 2.1.6(c), (b), one or more of the Reserved SubFields may become part of the Codexis Field pursuant to Section 2.1.6(d), and (c) any Category and any Reserved SubField that is not within the scope of the Codexis Field pursuant to subsection (a) or (b) above as of the applicable Reserved SubField Termination Date, shall be terminated, and shall no longer be within the Reserved SubFields.

1.57 **"Scheduled Product"** shall mean any Product described on Exhibit F.

1.59 **"Supplemental Product"** shall mean any Biocatlyst or Enzyme Product,

and/or chemical made with the use of a Biocatlyst or Enzyme Product, in each case, that is (a) within a Category, where Codexis conducts with regard to such Category a research project meeting the criteria set forth in Section 2.1.6(a) prior to the applicable Reserved SubField Termination Date, and (b) within a Reserved SubField that becomes part of the Codexis Field at any time prior to the applicable Reserved SubField Termination Date pursuant to Section 2.1.6(d)."

3. Section 2.1.1 is amended as follows:

   a. In the first clause, revise the phrase ". . . worldwide, royalty-free (subject to Section 2.1.5(b) licenses, . . ." to read: ". . . worldwide, royalty-free (subject to Section 2.1.5(b) and the terms of Article 5) licenses, . . ."

   b. Revise Sections 2.1.1(a)(i), 2.1.1(a)(ii), 2.1.1(d)(i) and 2.1.1(d)(ii) by adding the phrase "and/or Section 2.1.6(d)" after each occurrence of the phrase "pursuant to Section 2.1.6(c)".

   c. Revise Section 2.1.1 by changing each occurrence of "the Reserved SubField Termination Date" to "the applicable Reserved SubField Termination Date".

4. Section 2.1.6 is amended as follows:

   Revise Section 2.1.6 by changing each occurrence of "the Reserved SubField Termination Date" to "the applicable Reserved SubField Termination Date".

5. Section 2.1.6(h) is amended in its entirely as follows:

   "Except with respect to (i) any Category for which Codexis has satisfied the criteria set forth in Section 2.1.6(c), and (ii) any Reserved SubField for which Codexis has satisfied the criteria set forth in Section 2.1.6(d), it is understood and agreed that as of the applicable Reserved SubField Termination Date, the applicable Reserved SubFields (including each Category and SubField) shall be terminated and shall have no content or force or effect for the remainder of the term of the Agreement, and, as of the applicable Reserved SubField Termination Date, MUS (and/or its designee) shall have, as between the Parties, the exclusive rights in and to and shall be free, at its sole discretion, to work in, such Reserved SubField(s) without restriction or obligation to Codexis."

6. Article 5 shall be revised to read in its entirety as follows:

   5.1 Codexis Stock. In partial consideration for the rights granted hereunder, Codexis shall issue to MUS one million (1,000,000) shares of Common Stock and six million (6,000,000) shares of Series A Preferred Stock of Codexis pursuant to the Stock Issuance and Asset Contribution Agreement by and between MUS and Codexis of even date hereof.

   5.2 Energy Products. In consideration for the rights granted to Codexis in this

Amendment No. 3, for all Energy Products and/or any grant of rights with regard to the use of any Enabling Technology for the development and commercialization of any Energy Product, Codexis will pay MUS:

5.2.1 [*] of all consideration received by Codexis from any Sublicensee or Third Party for:

a. option and/or license fees for rights to use any Enabling Technology to develop and/or make any Energy Product; and

b. development payments (e.g., milestone payments) in respect of any Energy Product, and/or any product made with the use of any Energy Product; and

c. royalties and/or other payments for the commercialization of any Energy Product, and/or any product made with the use of any such Energy Product; and

d. the purchase of any equity securities of Codexis; provided, that the consideration received by Codexis from such Sublicensee or Third Party in connection with such purchase shall be deemed to be the amount obtained by multiplying [*]; provided that at the time of such purchase such Sublicensee or Third Party has a contractual relationship with Codexis (or proposes to have a contractual relationship with Codexis in connection with such purchase and the contractual relationship thereafter becomes effective), and the primary business purpose of the relationship is the development and/or commercialization of (i) any Energy Product, or (ii) any product made with the use of any Energy Product; and

5.2.2 Notwithstanding anything to the contrary in Section 5.2.1 above, Codexis shall not be required to pay to MUS any share of research and/or development funding received (and not subject to any further performance criteria) by Codexis from a Third Party for the support of Codexis personnel (i.e., payments on an FTE basis to support Codexis employees for activities conducted by Codexis); provided that (i) such payments are actually used by Codexis for FTE funding, and (ii) the applicable rate per FTE does not exceed the Base FTE Rate. The Base FTE Rate for 2006 shall be [*] per FTE per year, and shall be revised annually at the beginning of each subsequent calendar year to reflect annual changes in the Consumer Price Index, using September 2006 as the baseline comparison. Codexis shall pay to MUS [*] of any research funding received from a Third Party for the development of any Energy Product, and/or any product made with the use of any Energy Product, in each case only to the extent such funding does not satisfy the criteria listed in subsections (i) and (ii) above.

5.2.3 If Codexis directly commercializes any Energy Product, Codexis will pay to MUS a royalty of [*] of (a) Net Sales of such Energy Products sold by Codexis or its Affiliates, and/or (b) amounts received by Codexis or its Affiliates from any Sublicensee or other Third Party for the use of Energy Products, to the extent Codexis or its Affiliates utilize such Product(s) to provide services to such Sublicensee or Third Party, as the case may be.

5.3 Quarterly Reports. Commencing in the first calendar quarter in which Codexis receives any payment subject to Section 5.2, Codexis shall make quarterly written reports to MUS within sixty (60) days after the end of each calendar quarter, stating in each such report the consideration subject to Section 5.2 received by it during such calendar quarter. Such reports shall provide separately for Codexis and each of its Affiliates and Sublicensees, in each case, on a country-by-country and Energy Product-by-Energy Product basis:

(i) the type (e.g., license fee, milestone payment) and amount of consideration received;

(ii) for payments based on Energy Products, the quantity and description of each such Energy Product sold or used; and

(iii) the calculation of amounts due to MUS, accompanied by sufficient information to enable MUS to verify the accuracy of the calculations made by Codexis, and a detailed explanation of the methodology used to determine the applicable payment.

5.4 Payment. Concurrently with providing to MUS each quarterly report described in Section 5.3, Codexis shall pay MUS all amounts due under Section 5.2 for the calendar quarter corresponding to such report.

5.5 Audit. Codexis and its Affiliates shall keep complete, true and accurate books of account and records for the purpose of determining the amounts payable under Section 5.2 of this Agreement. Such books and records shall be kept at the principal place of business of such party, as the case may be, for at least four (4) years following the end of the calendar quarter to which they pertain. Such records will be open for inspection during such four (4) year period by a public accounting firm selected by MUS reasonably acceptable to Codexis, solely for the purpose of verifying the reports and payments hereunder. Such inspections may be made no more than once each calendar year, at reasonable times and on reasonable notice. Inspections conducted under this Section 5.5 shall be at the expense of MUS, unless a variation or error producing an increase exceeding ten percent (10%) of the amount stated for any period covered by the inspection is established in the course of any such inspection, whereupon all reasonable costs relating to the inspection and any unpaid amounts that are discovered will be paid promptly by Codexis together with interest thereon as set forth in Section 5.6 below.

5.6 Payment Method; Late Payments. All payments due to MUS under this Agreement shall be paid in U.S. dollars by bank wire transfer in immediately available funds to a bank account designated by MUS. Any payment or portion thereof that is not paid on the date such payments are due under this Agreement shall bear interest at the lesser of (i) the prime rate as reported by the Chase Manhattan Bank, New York, New York (or its successor) on the date such payment is due, plus an additional two percent (2%), or (ii) the maximum rate permitted by law, in each case calculated on the number of days such payment is delinquent. This Section 5.6 shall in no way limit any other remedies available for late payment.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5.7 Currency Conversion. All payments due to MUS under this Agreement shall first be determined in local currency and then, if necessary, converted to its equivalent in United States currency. The buying rates of exchange for converting the currencies involved into the currency of the United States quoted by the Wall Street Journal (or its successor in interest) on the last business day of the quarterly period in which the payments were received by Codexis shall be used to determine any such conversion.

5.8 Restrictions on Payment. The obligation of Codexis to pay amounts to MUS under this Agreement with respect to sales of Energy Products in a particular country shall be waived and excused to the extent that statutes, laws, codes or government regulations in a particular country prevent such payments; provided, however, in such event, if legally permissible, Codexis shall pay the amounts owed to MUS by depositing such amounts in a bank account in such country that has been designated by MUS and promptly report such payment to MUS in writing.

5.9 Taxes. Any tax that Codexis is required to withhold and pay on behalf of MUS with respect to amounts payable to MUS under this Agreement shall be deducted from and offset against said payments prior to remittance to MUS; provided, however, that in regard to any tax so deducted, Codexis shall give or cause to be given to MUS such assistance as may reasonably be necessary to enable MUS to claim exemption therefrom or credit therefor, and in each case shall furnish MUS with proper evidence of the taxes paid on its behalf.

5.10 Energy Affiliate.

(a) If (i) Codexis or any of its Affiliates or subsidiaries (each, a **"Codexis Entity"**) proposes to form, establish or acquire, directly or indirectly, any Affiliate or subsidiary that engages in a line of business related to the use of any Energy Products, and/or any Enabling Technology in or for any energy application (the **"Energy Rights"**), or any Affiliate or subsidiary of Codexis proposes, at any time, to engage, directly or indirectly, in such line of business (in each case, an **"Energy Affiliate"**); (ii) a Codexis Entity proposes to acquire or obtain, directly or indirectly, by merger, consolidation, acquisition of equity interests or otherwise, any assets, rights or other interests of whatever kind and nature in any business or Third Party (e.g. any individual, corporation, partnership, limited liability company, joint venture or other business organization or division thereof) that engages in a line of business related to the use of any of the Energy Rights (or at any time in the future proposes to engage in such line of business); or (iii) a Codexis Entity proposes to acquire or obtain, directly or indirectly, by merger, consolidation, acquisition of equity interests or otherwise, or becomes entitled to, any assets, rights or other interests of whatever kind and nature in any business or Third Party, in whole or partial consideration for the sale, assignment, license, contribution, pledge or other transfer by a Codexis Entity of any assets, interests or rights

relating to any of the Energy Rights, then Codexis shall give written notice to MUS at least thirty (30) days prior to the effectiveness or consummation of such event or transaction. The notice shall describe in reasonable detail the proposed event or transaction including, without limitation, the nature of such event or transaction, the consideration to be paid and the amount constituting the applicable MUS Interest (as defined in Section 5.10(b) below).

(b) In consideration for the rights granted to Codexis in this Amendment No. 3, Codexis shall take, or cause to be taken, all actions, and do, or cause to be done, all things necessary, proper and advisable under applicable laws, so as to assign, transfer and deliver the MUS Interest to MUS immediately upon the effectiveness or consummation of any event or transaction described in Section 5.10(a) above or cause the MUS Interest to be so assigned, transferred and delivered, without cost to MUS. For purposes of this Section 5.10, the term **"MUS Interest"** shall mean all legal and beneficial title to the equity interests, assets, rights or other interests of whatever kind and nature (other than consideration received by Codexis subject to Codexis' payment obligations to MUS pursuant to Section 5.2.1 above) of the Energy Affiliate or Third Party in an amount equal to [*] of each asset, interest or right held, acquired or obtained by the Codexis Entity(ies) in connection with any event, transaction or series of transactions described in Section 5.10(a) above.

(c) If, in connection with the transaction or series of transactions described in Section 5.10(a), a Codexis Entity has provided consideration other than assets, interests or rights relating to the use of any of the Energy Rights (the "**Other Consideration**"), then, as a condition of the transfer to MUS of the portion of the MUS Interest held, acquired or obtained by the Codexis Entity specifically for such Other Consideration, MUS shall reimburse the Codexis Entity for up to [*] of the cash value of the Other Consideration (as of the date of transfer of the Other Consideration by the Codexis Entity). The election to reimburse the Codexis Entity and the amount of such reimbursement (up to the aforementioned [*] limit) shall be determined by MUS in its sole discretion. Upon reimbursement, the Codexis Entity shall transfer to MUS the applicable portion of the MUS Interest attributable to the amount reimbursed by MUS for the Other Consideration. If MUS elects to reimburse the Codexis Entity for a portion of the Other Consideration corresponding to the MUS Interest equal to less than [*] of such Other Consideration, and not for the total [*], MUS' right to receive additional equity interests, assets, rights or other interests of whatever kind and nature of the applicable Energy Affiliate or Third Party pursuant to Section 5.10(b) that are directly attributable to the equity interests, assets, rights or other interests held, acquired or obtained for such Other Consideration will be prorated accordingly. For example, if MUS elects to reimburse the Codexis Entity for [*] of the Other Consideration corresponding to the MUS Interest (and not [*]), MUS' right to receive additional equity interests, assets, rights or other interests of whatever kind and nature of the applicable Energy Affiliate or Third Party pursuant to Section 5.10(b) that are directly attributable to the equity interests, assets, rights or other interests held, acquired or obtained for such Other Consideration will be equal to [*] of the amount that MUS would have received if MUS

had reimbursed the Codexis Entity for [*] of the Other Consideration corresponding to the MUS Interest. If MUS elects not to pay any amount to the Codexis Entity for the reimbursement of the Other Consideration, MUS' right to receive additional equity interests, assets, rights or other interests of whatever kind and nature of the applicable Energy Affiliate or Third Party pursuant to Section 5.10(b) that are directly attributable to the equity interests, assets, rights or other interests held, acquired or obtained for such Other Consideration shall terminate. Except as otherwise provided in this Section 5.10(c) with respect to an election by MUS to reimburse the applicable Codexis Entity for Other Consideration, MUS shall, in all cases, be entitled to receive, and shall not be required to reimburse any Codexis Entity, Energy Affiliate or Third Party or otherwise pay any amounts to any Codexis Entity, Energy Affiliate or Third Party for, the MUS Interest and any additional equity interests, assets, rights or other interests of the applicable Energy Affiliate or Third Party that are attributable to or received in consideration for any of the Energy Rights (and not attributable to or received in consideration for Other Consideration).

(d) If any Codexis Entity proposes to subsequently sell, assign, or otherwise transfer any assets, rights or interests acquired or obtained in connection with an event, transaction or series of transactions described in Section 5.10(a) above, then Codexis shall give written notice to MUS at least thirty (30) days prior to the effectiveness or consummation of such transaction, which notice shall describe the proposed transaction in reasonable detail, including, without limitation, the nature of such transaction and the consideration to be received. MUS shall have the right, exercisable upon written notice to Codexis within fifteen (15) days after receipt of such notice, to participate in such transaction and to sell, assign or otherwise transfer up to a pro rata portion of the MUS Interest on the same terms and conditions as described in the notice; provided, however, that in no event shall MUS be required to sell, assign or transfer any portion of the MUS Interest to any party, except as required by applicable law; provided, further, that MUS' pro rata portion of the MUS Interest shall be deemed to be [*] of each asset, right or interest proposed to be sold, assigned or transferred by the applicable Codexis Entity(ies).

(e) Notwithstanding the foregoing, if for any reason all or any portion of the MUS Interest is not transferable to MUS in accordance with Section 5.10(b) above, or if the sale, assignment or other transfer by MUS of all or any portion of the MUS Interest in accordance with Section 5.10(d) above is not permitted, then the applicable Codexis Entity(ies) shall not consummate or effectuate, directly or indirectly, such event or transaction without the prior written consent of MUS in its sole discretion.

(f) In the event that (i) sufficient information does not exist to determine the value, amount or allocation of any assets, rights or interests for purposes of calculating the applicable MUS Interest, the applicable Other Consideration or any other amount in accordance with this Section 5.10, or (ii) Codexis and MUS cannot otherwise agree as to such value, amount or allocation, such value, amount or allocation shall be determined through an appraisal to be performed by an independent Third Party reasonably acceptable to both Parties, and the expenses incurred in obtaining such appraisal shall be shared equally by Codexis and MUS.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(g) In furtherance of the foregoing, Codexis acknowledges that, in consideration for the rights granted to Codexis in this Amendment No. 3, this Section 5.10 is intended to provide MUS with the applicable portion of any value or potential value attributable to or derived from any business related to energy applications engaged in by any Codexis Entity or otherwise attributable to or derived from any of the Energy Rights and agrees that it shall not authorize, commit or agree to take, and shall not permit any Affiliate, nor any subsidiary, to authorize, commit or agree to take, any action that would be inconsistent with this Section 5.10 or impair any portion of the MUS Interest.

5.11 MUS not an Affiliate. Notwithstanding anything to the contrary, for purposes of this Article 5, MUS shall not be considered, or deemed to be, an Affiliate of Codexis.

7. Article 12 of the Agreement is amended by the addition of new Section 12.7:

12.7 Termination for Cause. In the event that Codexis materially breaches any of its obligations pursuant to Article 5 of the Agreement, and such breach has continued for sixty (60) days after receipt of written notice thereof from MUS, MUS may terminate any and all rights received by Codexis under the terms of this Amendment No. 3.

8. Exhibit F shall be revised such that Exhibit F shall read in its entirety as attached to this Amendment No. 3.

9. Exhibit G shall be revised such that Exhibit G shall read in its entirety as attached to this Amendment No. 3.

10. Except as expressly provided herein, the terms of the Agreement shall remain in full force and effect.

[THE REMAINDER OF THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, MUS and Codexis have executed this Amendment No. 3 to License Agreement as of the first above written.

MAXYGEN, INC.

By: /s/ Russell J. Howard
Name: Russell J. Howard
Title: Chief Executive Officer

CODEXIS, INC.

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President

EXHIBIT F

SCHEDULED PRODUCTS

(REVISED AUGUST __, 2006)

1. Products for the extraction, modification, purification and/or transformation of oil and/or petroleum (including oil shale) with regard to the following applications:

   Crude Oil and Oil Shale Applications

   enhancement of recovery of down-hole crude oil
   metal removal
   sulfur removal
   viscosity and/or molecular weight modification

   Refinery Applications (for crude oil and oil shale derivatives)

   aromatic/ring-compound removal or addition
   thiophene removal
   conversion of glycerine to glycerine derivatives
   creation of cyclo-paraffins for purposes of improving octane number
   enhanced energy and combustion properties
   improved emissions profile
   metal removal
   sulfur removal
   viscosity and/or molecular weight modification

2. Products for the following textile/paper manufacturing applications:

   manufacture of dyes/pigments
   manufacture of sizing agents
   enhanced fiber bio-degradation
   enhanced pulping

3. Products for the following environmental clean-up applications:

   soil/water bioremediation (e.g., hydrocarbons/chlorocarbon contamination)
   sulfur/CO2 sequestration
   radioisotope contamination
   nuclear waste processing
   treatment (i.e., degradation) of effluent waste products from wood product/paper processing
   treatment (i.e., degradation) of effluent waste products from grain/oil seed processing

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT G

RESERVED SUBFIELDS

(REVISED AUGUST __, 2006)

1. **SubField 1:** Manufacture of the [*] monomers specified below, for use to make polymers (excluding polymers for use for [*] and/or [*]):

   Categories

   a. [*]

   b. carboxylic acids, as follows: amino carboxylic acids, hydroxy carboxylic acids, olefinic carboxylates and hydroxy acids

   c. [*]

   d. [*]

   e. [*]

2. **SubField 2:** Manufacture of the [*] agents specified below (excluding agents for use for [*] and/or [*]):

   Categories

   a. [*]

   b. [*]

   c. [*]

   d. [*]

3. **SubField 3:** Manufacture of the [*] (and intermediates thereof) specified below:

   Categories

   a. production of [*] for use as a [*]

4. **SubField 4**: [*], as specified below:

   Categories

   a. [*]

   b. [*]

   c. [*]

5. **SubField 5:** Manufacture of the following [*], to the extent not covered by SubField 1:

   Categories

   a. [*]

   b. [*]

   c. [*]

   d. [*]

   e. [*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6. **SubField 6:** Manufacture of polymers made from the monomers specified below, for use as [*] (excluding any use in, on or for [*] or any other [*]):

Categories

a. [*]

b. [*]

c. [*]

d. [*]

e. [*]

c. [*]

7. **SubField 7:** Manufacture of the [*] specified below for [*] (excluding any use in, on or for [*] or any other [*] and/or [*]):

Categories

a. [*]

b. [*]

c. [*]

d. [*]

e. [*]

8. **SubField 8**: Manufacture of fuels and fuel additives (and intermediates thereof) as specified below:

a. Manufacture of fuel and/or fuel additives, where Biomass (as defined below) is the starting material for the applicable fuel and/or fuel additive, including without limitation the manufacture of compounds (e.g., fermentable sugars) which are intermediates in the process of producing fuel or fuel additives, where Biomass is the starting material for the applicable fuel and/or fuel additive and such intermediates are used solely in the production of fuel or fuel additives, but specifically excluding the fuels and/or fuel additives in Category (b) below.

b. Conversion of Biomass-derived oils into fuel and/or fuel additives, including without limitation the manufacture of compounds which are intermediates in the process of converting Biomass-derived oils into fuel and/or fuel additives, where such intermediates are used solely in the production of fuel or fuel additives.

For purposes of clarification, as used in this SubField 8 (and with regard to any Supplemental Products that may result due to activation of any Category of SubField 8), "fuel additives" are substances which are intended to be added to fuel to modify the characteristics of such fuel, including, for example, biodegradability, combustibility, viscosity and/or emissions profile.

"Biomass" shall mean [*].

Notwithstanding the above, for purposes of this SubField 8, no right or license is granted to Codexis to use any Enabling Technology to alter or modify any gene(s) of any Plant to (a) **[*]**, or (b) [*]; provided, however, Codexis may produce in Category II Plants chemicals that are Supplemental Products resulting from the activation of any Category of this SubField 8.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

9. **SubField 9**: Manufacture of Products for the [*] for the following specific applications:

   a. [*]

   b. [*]

   c. [*]

   d. [*]

   e. [*]

   f. [*]

10. **SubField 10**: Manufacture of Products for the [*], for the following specific applications:

   a. [*]

   b. [*]

   c. [*]

   d. [*]

   e. [*]

   f. [*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT 10.7

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Maxygen, Inc.
200 Penobscot Drive
Redwood City, CA 94063
650.298.5300 main
650.364.2715 fax
www.maxygen.com

maxygen

February 18, 2005

Dr. John Grate
Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063

Dear John:

I acknowledge your letter dated February 17, 2005, retracting the letter dated January 6, 2005 from Tassos Gianakakos.

This will confirm our agreement reached in our meeting of February 18, 2005 that, based on Codexis' representations in its letter dated February 8, 2005 regarding the expenditures made by Codexis, Inc. and Cargill, Inc. with respect to 3-HP, Codexis has satisfied the requirements of Section 2.1.6(a) of the License Agreement entered March 28, 2002, between Codexis and Maxygen, as amended, for Subfield I, Category (b) set forth on Exhibit G to the License Agreement.

Accordingly, Maxygen agrees that, as of the date of this letter, [*] monomers that are amino carboxylic acids, hydroxy carboxylic acids, olefinic carboxylates and/or hydroxy acids, shall be Supplemental Products (as defined in the Agreement) that may be used to make polymers (excluding polymers for use for [*] and/or [*]).

Please indicate Codexis' agreement to the foregoing by countersigning below.

Yours sincerely,

/s/ Michael Rabson
Michael S. Rabson

UNDERSTOOD AND AGREED
BY CODEXIS, INC.

By: /s/ John H. Grate
Name: John H. Grate
Title: VP, R&D and CTO
Date: 3-4-05

EXHIBIT 10.8

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Maxygen, Inc.
200 Penobscot Drive
Redwood City, CA 94063
650.298.5300 main
650.364.2715 fax
www.maxygen.com

maxygen

September 11, 2007

Codexis. Inc.
Attn: Doug Sheehy
200 Penobscot Drive
Redwood City, CA 94063

Re: License Agreement effective as of March 28, 2002, by and between Maxygen, Inc. and Codexis, Inc., as amended (the "Agreement")

Dear Doug:

This letter confirms that, based on Codexis' representations in its letter dated March 30, 2007, Codexis has satisfied the requirements of (i) Section 2.1.6(a) of the License Agreement for SubField 8, Category (a), set forth on Exhibit G to the Agreement, and (ii) Section 2.1,6(d) of the Agreement for SubField 8, Category (b), set forth on Exhibit G to the Agreement.

Accordingly, Maxygen agrees that, as of March 30, 2007, the fuels and fuel additives (and intermediates thereof) specified below, shall be Supplemental Products:

a. Fuel and/or fuel additives, where Biomass is the starting material for the applicable fuel and/or fuel additive, including without limitation the manufacture of compounds (e.g., fermentable sugars) which are intermediates in the process of producing fuel or fuel additives, where Biomass is the starting material for the applicable fuel and/or fuel additive and such intermediates are used solely in the production of fuel or fuel additives, but specifically excluding the fuels and/or fuel additives in Category (b) below.

b. Fuel and/or fuel additives made by the conversion of Biomass-derived oils into such fuel and/or fuel additives, including without limitation the manufacture of compounds which are intermediates in the process of converting Biomass-derived oils into fuel and/or fuel additives, where such intermediates are used solely in the production of fuel or fuel additives.

For purposes of clarification, "fuel additives" means substances which are intended to be added to fuel to modify the characteristics of such fuel, including, for example, biodegradability, combustibility, viscosity and/or emissions profile.

"Biomass" shall mean [*].

Notwithstanding the above, no right or license is granted by this letter to Codexis to use any Enabling Technology to alter or modify any gene(s) of any Plant to (a) [*], or (b) [*]; provided, however, Codexis may produce in Category II Plants chemicals that are Supplemental Products as set forth above.

In addition, Maxygen agrees that, in accordance with Section 1.55 of the Agreement, the Reserved SubField Termination Date for the Modified SubFields (i.e., SubFields 3, 8, 9 and 10) is extended until the period ending seven (7) years after the Amendment Date.

Capitalized terms used but not otherwise defined herein shall have the meanings set forth in the Agreement.

Please indicate Codexis' agreement to the foregoing by countersigning below.

Yours sincerely,

/s/ Michael Rabson
Michael S. Rabson

UNDERSTOOD AND AGREED
BY CODEXIS, INC.

By: /s/ Douglas Sheehy
Name: Douglas Sheehy
Title: VP, General Counsel
Date: September 12, 2007

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT 10.9

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Maxygen, Inc.
200 Penobscot Drive
Redwood City, CA 94063
650.298.5300 main
650.364.2715 fax
www.maxygen.com

maxygen

September 24, 2007

Codexis, Inc.
Attn: Doug Sheehy
200 Penobscot Drive
Redwood City, CA 94063

Re: License Agreement effective as of March 28, 2002, by and between Maxygen, Inc. and Codexis, Inc., as amended (the "Agreement")

Dear Doug:

This letter confirms that, as of the date hereof, SubField 8 of Exhibit G to the Agreement is hereby deleted in its entirety and replaced with the following:

"SubField 8: Manufacture of fuels, fuel additives and lubricants (and intermediates of the foregoing) as specified below:

a. Manufacture of fuel and/or fuel additives and/or lubricants, where Biomass (as defined below) is the starting material for the applicable fuel and/or fuel additive and/or lubricant, including without limitation the manufacture of compounds (e.g., fermentable sugars) which are intermediates in the process of producing fuel or fuel additives and/or lubricants, where Biomass is the starting material for the applicable fuel and/or fuel additive and/or lubricant and such intermediates are used solely in the production of fuel or fuel additives and/or lubricants, but specifically excluding the fuels and/or fuel additives and/or lubricants in Category (b) below.

b. Conversion of Biomass-derived oils into fuel and/or fuel additives and/or lubricants, including without limitation the manufacture of compounds which are intermediates in the process of converting Biomass-derived oils into fuel and/or fuel additives and/or lubricants, where such intermediates are used solely in the production of fuel or fuel additives and/or lubricants.

For purposes of clarification, as used in this SubField 8 (and with regard to any Supplemental Products that may result due to activation of any Category of SubField 8), "fuel additives" are substances which are intended to be added to fuel to modify the characteristics of such fuel, including, for example, biodegradability, combustibility, viscosity and/or emissions profile, and "lubricants" are [*].

"Biomass" shall mean [*].

Notwithstanding the above, for purposes of this SubField 8, no right or license is granted to Codexis to use any Enabling Technology to alter or modify any gene(s) of any Plant to (a) [*], or (b) [*]; provided, however, Codexis may produce in Category II Plants chemicals that are Supplemental Products resulting from the activation of any Category of this SubField 8."

The parties acknowledge and agree that all of Subfield 8, as amended by this letter, is subject to that certain letter dated September 11, 2007, and that all fuels, fuel additives and/or lubricants within amended Subfield 8 shall be Supplemental Products.

Capitalized terms used but not otherwise defined herein shall have the meanings set forth in the Agreement.

Please indicate Codexis' agreement to the foregoing by countersigning below.

Yours sincerely,

/s/ Michael Rabson
Michael S. Rabson

UNDERSTOOD AND AGREED
BY CODEXIS, INC.

By: /s/ Douglas T. Sheehy
Name: Douglas T. Sheehy
Title: VP & General Counsel
Date: September 24, 2007

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT 10.10

AMENDED AND RESTATED COLLABORATIVE RESEARCH AGREEMENT

THIS AMENDED AND RESTATED COLLABORATIVE RESEARCH AGREEMENT, together with exhibits and schedules attached hereto, (the "**Amended and Restated Research Agreement**" or the "**Agreement**") is entered into as of the Execution Date and effective as of November 1, 2006 (the "**Effective Date**"), by and between **Equilon Enterprises LLC dba Shell Oil Products US**, a Delaware limited liability company, having a place of business at 910 Louisiana Street, Houston, Texas 77002 ("**Shell**"), and **Codexis, Inc.**, a Delaware corporation, having a place of business at 200 Penobscot Drive, Redwood City, California 94063 ("**Codexis**"). Shell and Codexis may each be referred to herein individually as a "**Party**" or, collectively, as the "**Parties**."

RECITALS

WHEREAS, Codexis possesses certain valuable business and/or technical knowledge, information and/or expertise applicable to the enhancement of the performance of certain enzymatically catalyzed processes.

WHEREAS, Shell and Codexis entered into a certain Collaborative Research Agreement, effective as of November 1, 2006, as amended, pursuant to which Codexis has agreed to work exclusively with Shell in the Field of Use (as defined below) to develop certain new biocatalytic processes for use in the conversion of biomass to fuels and/or fuel additives and/or lubricants.

WHEREAS, the Parties desire to amend and restate such Collaborative Research Agreement to revise the scope of, and increase the resources devoted to, the collaboration between the Parties, all on the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the promises and undertakings set forth herein, the Parties agree as follows:

ARTICLE 1
DEFINITIONS

Capitalized terms not otherwise defined herein will have the meaning set forth below:

1.1 "Acquired Technology" has the meaning set forth in Section 7.1.

1.2 "Affiliate" means,

(a) with respect to Codexis, any business entity controlling, controlled by, or under common control with Codexis. For the purpose of this Section 1.2(a) only, "control" means (i) the possession, directly or indirectly, of the power to direct the management or policies of a business entity, whether through the ownership of voting securities, by contract or otherwise, or (ii) the ownership, directly or indirectly, of at least fifty percent (50%) of the voting securities

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or other ownership interest of a business entity; provided that, if local law requires a minimum percentage of local ownership, control will be established by direct or indirect beneficial ownership of one hundred percent (100%) of the maximum ownership percentage that may, under such local law, be owned by foreign interests; and

(b) with respect to Shell, Royal Dutch Shell plc and any company (other than Shell) which is from time to time directly or indirectly affiliated with Royal Dutch Shell plc. For the purpose of this Section 1.2(b) only, a particular company is (i) directly affiliated with another company or companies if that latter company beneficially owns or those latter companies together beneficially own fifty per cent or more of the voting rights attached to the ownership interest of the particular company; and (ii) is indirectly affiliated with company or companies if a series of companies can be specified, beginning with that latter company or companies and ending with the first mentioned company, so related that each company of the series (except the latter company or companies) is directly affiliated with one or more of the companies earlier in the series.

1.3 "Amended and Restated License Agreement" means the Amended and Restated License Agreement entered into by Shell and Codexis on the Execution Date and effective as of the Effective Date.

1.4 "Biocatalyst" means an enzyme or a Microbe that can enzymatically catalyze a particular chemical reaction, and which enzyme or Microbe arose out of the Program.

1.5 "Biomass" means organic, non-fossil, plant-derived matter available on a renewable basis, including, for example, crops and/or trees grown or harvested for use for fuel and/or fuel additive production, agricultural food and feed crops, aquatic plants and, in each case, organic wastes derived from the foregoing, including municipal wastes (e.g., newspapers).

1.6 "Codexis Technology" means (a) the Shuffling Technology and any improvements to the Shuffling Technology developed by employees of or consultants to Shell and/or employees of or consultants to Codexis in performance of the Program; and (b) any other Technology that is or was (i) developed by employees of or consultants to Codexis, alone or jointly with Third Parties, prior to or during the Term outside the scope of activities described in any Research Plan; or (ii) acquired during the Term by purchase, license, assignment or other means from Third Parties by Codexis, in each of case (b)(i) and (b)(ii), introduced by Codexis into the activities to be conducted under any Research Plan.

1.7 "Confidential Information" means any and all non-public and proprietary Information that is specifically designated as such and that is disclosed by either Party to the other in written or other similar form in connection with this Amended and Restated Research Agreement and that, if orally or visually disclosed, shall be summarized in writing in detail and specifically designated as proprietary and such summary delivered to the receiving Party within thirty (30) days after such disclosure.

1.8 "Contract Year" means a year beginning on the Effective Date, or an anniversary of the Effective Date during the Term, and ending one (1) year after such respective date.

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1.9 "Control" means, with respect to an item, Information, Patent Right or an intellectual property right, possession of the ability, whether arising by ownership or license or otherwise, to grant a license or sublicense as provided for herein under such item, Information, Patent Right or right without violating the terms of any written agreement with a Third Party.

1.10 "Execution Date" means November 1, 2007.

1.11 "Field of Use" means the conversion of (a) Biomass into fermentable sugars, such sugars to be converted into (i) liquid fuel and/or liquid fuel additives and/or (ii) Lubricants, and (b) fermentable sugars derived from Biomass into (i) liquid fuel and/or liquid fuel additives, and/or (ii) Lubricants. For purposes of this Section 1.11 only, (1) "liquid" means [*], and (2) "fuel additive" means [*]. For avoidance of doubt the "Field of Use" shall not include any material obtained from Biomass that is used as an ingredient in human food or animal feed products.

1.12 "FTE" means the efforts of one or more employees of Codexis equivalent to the efforts of one Codexis full time employee (i.e., an employee that works at least [*] hours per year).

1.13 "Information" means data, results, evaluations, inventories, Microbes, show-how, know-how, computer chip and programs, processes, machines, biological chemicals, intermediates, trade secrets, techniques, methods, developments, materials, methods of analysis, compositions of matter, copyrights or other information.

1.14 "Lubricant" means [*].

1.15 "Microbes" means whole (live or dead) prokaryotic organisms and/or yeasts and/or fungi or extracts thereof. Microbes shall not include land plants, including nonseed plants (Bryophytes, Tracheophytes) such as liverworts, mosses, ferns, and seed plants, such as gymnosperms and angiosperms (monocot and dicots); and/or non-land plants, including Prasinophytes, Chlorophyceae, Trebouxiouphyceae, Ulvophyceae, Chlorokybales, Streptophyta, Klebsormidiales, Zygnematales, Charales, Coleochaetales and Embryophytes.

1.16 "Oversight Committee" has the meaning set forth in Section 2.3(a).

1.17 "Patent Rights" means all patent applications and patents, whether domestic or foreign, covering patentable inventions within the Codexis Technology, the Shell Technology and the Program Technology, as applicable, all continuations, continuations-in-part and divisions of such patent applications and of patent applications from which such patents issued, all patents issuing from any of such patent applications, and all renewals, reissues, re-examinations and extensions of any of such patents.

1.18 "Program" means the program of activities conducted by Codexis and/or Shell pursuant to this Amended and Restated Research Agreement, as further described in the Research Plans.

1.19 "Program Technology" means Technology (other than Codexis Technology and/or Shell Technology) either (a) developed by employees of or consultants to Shell and/or

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employees of or consultants to Codexis during the Term in the course of activities described in the Research Plans; or (b) acquired during the Term by purchase, license, assignment or other means from Third Parties by Codexis and/or Shell for the purpose of the Research Plans.

1.20 "Research Committee" has the meaning set forth in Section 2.2(a).

1.21 "Research Plan" means a written plan to be agreed upon by the Parties describing activities to be carried out in connection with each work stream, which plan may be amended from time to time by agreement between the Parties. Each Research Plan, and any amendment thereto, shall be attached to this Amended and Restated Research Agreement as a schedule to Exhibit 1.21.

1.22 "Series D Stock Purchase Agreement" has the meaning set forth in Section 3.5(a).

1.23 "Series E Stock Purchase Agreement" has the meaning set forth in Section 3.5(b).

1.24 "Shell Technology" means any Technology that is or was (a) developed by employees of or consultants to Shell or an Affiliate of Shell, alone or jointly with Third Parties, prior to or during the Term outside the scope of activities described in any Research Plan; or (b) acquired during the Term by purchase, license, assignment or other means from Third Parties by Shell or an Affiliate of Shell, in each of case (a) or (b), introduced by Shell into the activities to be conducted under any Research Plan.

1.25 "Shuffling" means the characterization, development and optimization of genes and proteins for commercial uses through the recombination and/or rearrangement and/or mutation of genetic material for the creation of genetic diversity.

1.26 "Shuffling Technology" means any and all techniques, methodologies, processes, materials and/or instrumentation Controlled by Codexis, including without limitation any and all patent rights, know-how, confidential information and materials relating thereto, that, in each case, relates to Shuffling, and generally applicable screening techniques, methodologies, or processes of using the resulting genetic material to identify potential usefulness.

1.27 "Technology" means and includes all materials, technology, technical information, intellectual property, know-how, expertise and trade secrets related to the Field of Use.

1.28 "Term" has the meaning set forth in Section 11.1.

1.29 "Third Party" means any party other than Codexis, Shell or Affiliates of either Party.

1.30 "Warrant Agreement" has the meaning set forth in Section 8.2.

1.31 "Year Four Goal(s)" shall have the meaning set forth in Section 2.8(c).

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1.32 "Year One Final Milestone" shall mean the achievement of the criteria set forth on Exhibit 1.32.

1.33 "Year Six Goal(s)" shall have the meaning set forth in Section 2.8(d).

ARTICLE 2
PROGRAM ACTIVITIES

2.1 Purpose. Codexis and Shell shall conduct the Program during the Term. The objective of the Program is to utilize Shuffling Technology to conduct research, and to discover and develop Biocatalysts, and associated processes for the use of such Biocatalysts, in the Field of Use, all as described in further detail in the Research Plans.

2.2 Research Committee.

(a) Function. Shell and Codexis shall establish a Research Committee (the "**Research Committee**") to:

(i) review the Research Plans as proposed by the Parties pursuant to Section 2.7, and to make recommendations to the Oversight Committee with respect to such proposed Research Plans;

(ii) review and evaluate progress under the Research Plans;

(iii) amend the Research Plans, as appropriate;

(iv) review annual milestones for activities to be carried out under each Research Plan by the Parties as defined and pursuant to Section 2.8(b), and to make recommendations to the Oversight Committee with respect to such proposed Milestones;

(v) review the Year Four Goal(s) proposed by the Parties pursuant to Section 2.8(c), and to make recommendations to the Oversight Committee with respect to such proposed Year Four Goal(s) on or before the [*];

(vi) review the Year Six Goal(s) proposed by the Parties pursuant to Section 2.8(d), and to make recommendations to the Oversight Committee with respect to such proposed Year Six Goal(s) on or before [*];

(vii) make recommendations to the Oversight Committee with respect to whether Milestones for the activities to be carried out under each Research Plan, the Year Four Goal(s) and the Year Six Goal(s) have been achieved;

(viii) coordinate and monitor publication of research results obtained from, and the exchange of Information that relates to, the Program;

(ix) review and, if appropriate, investigate through appointment of a patent subcommittee or otherwise, at the election of the Research Committee, any issues that

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either Party may raise with respect to intellectual property rights of any Third Party directly relevant to the activities under the Research Plans and to make recommendations to the Parties regarding the appropriate action, if any, with respect thereto, including, for example, a recommendation to obtain a license from a Third Party. For purposes of clarification, each Party shall notify the other Party, through the Research Committee, of any and all intellectual property of a Third Party which the notifying Party believes is directly relevant to the activities under the Research Plans which such Party becomes aware during the Term; and

(x) provide a written meeting discussion summary to the Oversight Committee of each meeting of the Research Committee within ten (10) business days after each such meeting.

(b) Membership. Shell and Codexis each, in its sole discretion, shall appoint three (3) members to the Research Committee and shall provide written notice to the other Party of the names and contact information of such three (3) members within five (5) days after the Effective Date. Each Party may appoint substitutes for its members at any time, such substitution to be effective immediately upon providing the name and contact information of such substitute to the other Party's representatives on the Research Committee.

(c) Chair. The Research Committee shall be chaired by two (2) co-chairpersons, one appointed by Shell and one appointed by Codexis.

(d) Meetings. The Research Committee shall meet at least quarterly, at places and on dates selected in turn by each Party. Representatives of Shell or Codexis or both, in addition to members of the Research Committee, may attend such meetings at the invitation of either Party.

(e) Minutes. The Research Committee shall keep accurate written minutes of its deliberations that record all proposed decisions and all actions recommended or taken. Drafts of the minutes shall be delivered to all Research Committee members within ten (10) business days after each such meeting. The Party hosting the meeting shall be responsible for the preparation and circulation of the draft minutes. Draft minutes shall be edited within ten (10) business days after reception of the draft minutes by the co-chairpersons and shall be issued in final form only after each chairperson provides their respective approval and agreement. A final copy of the minutes shall be issued no later than thirty (30) business days after each respective meeting.

(f) Decisions.

(i) Decision Making Process of the Research Committee. All decisions of the Research Committee shall be made by unanimous vote or written consent, as indicated by both co-chairpersons of the Research Committee signing the final written minutes thereof. Codexis representatives collectively shall have one (1) vote and Shell representatives collectively shall have one (1) vote; provided, however, that in the case of a deadlock where unanimity has not been reached, the final decision with respect to matters concerning technical aspects within the scope of an approved Research Plan shall be made by [*]; provided further, that the scope and goal(s) of such Research Plan, including (A) the annual Milestone(s) for such

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Research Plan, the Year Four Goal and the Year Six Goal, and (B) whether such Milestone(s), Year Four Goal and Year Six Goal have been achieved, shall never be considered "technical aspects." If a disagreement among members of the Research Committee with respect to matters other than "technical aspects" remains unresolved for more than thirty (30) business days after the Research Committee first addresses such matter (or such longer period as the Parties may mutually agree upon), such disagreement shall be submitted to the Oversight Committee for resolution. Notwithstanding anything to the contrary, the Research Committee shall have no authority to alter, modify or amend any of the rights and obligations of the Parties set forth under this Amended and Restated Research Agreement.

(ii) Decision Making Process if the Research Committee is Disbanded. If the Research Committee is disbanded pursuant to Section 2.2(h), then after such disbanding, decisions formerly within the jurisdiction of the Research Committee shall be submitted to the Oversight Committee for resolution. If the Oversight Committee has been disbanded pursuant to Section 2.3(h), then decisions shall be submitted to senior executive officers of each Party having authority to make decisions in such matters as designated by each Party in a written notice to the other Party (**"Executives"**), subject to the decision making processes and principles set forth in Section 2.3(f)(i) as if Section 2.3(f)(i) applied to decisions to be made by such Executives.

(g) Expenses. Shell and Codexis shall each bear all expenses of their respective members related to their participation on the Research Committee.

(h) Disbanding of the Research Committee. The Parties shall have the right to disband the Research Committee upon mutual agreement. Failure to agree to disband the Research Committee shall not constitute a breach of this Agreement, nor trigger the Dispute Resolution process as described in Section 12.7. The Research Committee shall be automatically disbanded upon the expiration or termination of the Agreement as set forth in Article 11.

2.3 Oversight Committee.

(a) Function. Shell and Codexis shall establish an Oversight Committee (the "**Oversight Committee**") to:

(i) set priorities for the Parties' performance under the Program;

(ii) review summaries of meetings and other reports of the Research Committee;

(iii) review and approve recommendations from the Research Committee with respect to the Milestones for the activities to be carried out for each Research Plan, the Year Four Goal(s) and the Year Six Goal(s), and to approve such Milestones;

(iv) determine whether Milestones for the activities to be carried out under each Research Plan, the Year Four Goal(s) and the Year Six Goal(s) have been achieved;

(v) review, provide comment on, and approve Research Plans;

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(vi) review the activities and obligations of the Parties and the Research Committee under this Agreement;

(vii) resolve any disputes or disagreements submitted to it by the Research Committee, and, if applicable, submit disputes or disagreements that it does not resolve within the time provided in Section 2.3(f)(i) to designated Executives of the Parties, as further described in Section 2.3(f)(i);

(viii) review all material data arising in the course of activities conducted pursuant to this Amended and Restated Research Agreement by either Party;

(ix) appoint subcommittees as it deems appropriate for carrying out the Program; and

(x) perform such other functions as appropriate to further the purposes of this Amended and Restated Research Agreement as determined by the Parties, including without limitation the periodic evaluation of performance against goals.

(b) Membership. Shell and Codexis each, in its sole discretion, shall appoint three (3) members to the Oversight Committee and shall provide written notice to the other Party of the names and contact information of all such members within five (5) days after the Execution Date. Each Party may appoint substitutes for its members at any time, such substitution to be effective immediately upon providing the name and contact information of such substitute to the other Party's representatives on the Oversight Committee.

(c) Chair. The Oversight Committee shall be chaired by two (2) co-chairpersons, one appointed by Shell and one appointed by Codexis.

(d) Meetings. The Oversight Committee shall meet at least bi-annually, at places and on dates selected in turn by each Party. Representatives of Shell or Codexis or both, in addition to members of the Oversight Committee, may attend such meetings at the invitation of either Party.

(e) Minutes. The Oversight Committee shall keep accurate written minutes of its deliberations that record all proposed decisions and all actions recommended or taken. Drafts of the minutes shall be delivered to all Oversight Committee members within ten (10) business days after each meeting. The Party hosting the meeting shall be responsible for the preparation and circulation of the draft minutes. Draft minutes shall be edited by the co-chairpersons and shall be issued in final form only after each chairperson provides their respective approval and agreement. A final copy of the minutes shall be issued within thirty (30) business days after each respective meeting.

(f) Decisions.

(i) Decision Making Process of the Oversight Committee. All decisions of the Oversight Committee shall be made by unanimous vote or written consent, as indicated by the co-chairpersons of the Oversight Committee signing the written minutes thereof, with Codexis representatives collectively having one (1) vote and Shell representatives

collectively having one (1) vote; provided, however, that in the case of a deadlock where unanimity has not been reached, the final decisions shall be made by [*] except with respect to (A) the approval or modification of the annual Milestone(s) for each Research Plan, the Year Four Goal(s) or the Year Six Goal(s), (B) the approval or amendment of any Research Plan, (C) the determination as to whether Milestones for the activities to be carried out under each Research Plan, the Year Four Goal(s) or the Year Six Goal(s) have been achieved, (D) the acquisition of Third Party rights pursuant to Section 7.1, (E) the determination to have any party that is a Third Party as of the Execution Date participate in the activities to be conducted under the Program, (F) the introduction of Third Party Information into the Program, or (G) any decision that has a reasonable likelihood of having a material adverse impact on [*] business as conducted at the time of such decision or as contemplated to be conducted at the time of such decision. Notwithstanding anything to the contrary, except with respect to the approval of the Research Plans, the annual milestones for the activities carried out under each Research Plan, the Year Four Goal(s), the Year Six Goal(s), and any amendments to any of the foregoing, the Oversight Committee shall have no authority to alter, modify or amend any of the rights and obligations of the Parties set forth under this Amended and Restated Research Agreement. If the Oversight Committee is unable to resolve any dispute, controversy, or claim with respect to items (A) – (G) above in this Section 2.3(f)(i) within thirty (30) days after it first addresses such matter (or such longer period as the Parties may mutually agree upon), then the dispute shall be referred to Executives of each Party. For purposes of clarification, all matters related to "technical aspects" of an approved Research Plan shall be resolved in accordance with Section 2.2(f)(i).

(ii) Decision Making Process If the Oversight Committee is Disbanded. If the Oversight Committee is disbanded by mutual agreement of the Parties prior to the expiration or termination of the Agreement pursuant to Section 2.3(h), then after such disbanding, decisions formerly within the jurisdiction of the Oversight Committee shall be submitted for resolution by designated Executives of each Party, subject to the decision making processes and principles set forth in Section 2.3(f)(i) as if Section 2.3(f)(i) applied to decisions to be made by such Executives.

(g) Expenses. Shell and Codexis shall each bear all expenses of their respective members related to their participation on the Oversight Committee.

(h) Disbanding of the Oversight Committee. The Parties shall have the right to disband the Oversight Committee upon mutual agreement. Failure to agree to disband the Oversight Committee shall not constitute a breach of this Agreement, nor trigger any Dispute Resolution process as described in Section 12.7. Additionally, the Oversight Committee shall be disbanded automatically upon the expiration or termination of the Agreement as set forth in Article 11.

2.4 Reports and Materials.

(a) Reports.

(i) During the Term, each Party shall provide to the Research Committee:

(1) summary written reports within thirty (30) days after the end of each three (3) month period commencing on the Effective Date, describing such Party's work and progress, if any, under the Research Plans;

(2) annual executive summaries within thirty (30) days after each anniversary of the Effective Date for each Research Plan for which work was performed during the relevant Contract Year;

(3) a comprehensive written report within thirty (30) days after completion of all work under each Research Plan, describing in detail the work accomplished by it under such Research Plan and discussing and evaluating the results of such work; and

(4) a comprehensive written report within thirty (30) days after the end of the Term, describing in detail the work accomplished by it under the Research Plans during the Term and discussing and evaluating the results of such work.

(ii) During the Term, the Research Committee shall provide a written meeting discussion summary report to the Oversight Committee of each meeting of the Research Committee within ten (10) business days after each such meeting.

(iii) Any report delivered to a Party hereunder shall be owned by the delivering Party;provided, however, all such reports shall be deemed to be Confidential Information of both Parties for purposes of Article 6.

(b) Materials. Codexis and Shell shall, during the Term, as a matter of course as described in the Research Plans, or upon each other's written or oral request, furnish to each other samples of biochemical, biological or synthetic chemical materials which are part of Shell Technology, Codexis Technology or Program Technology which are necessary for each Party to carry out its responsibilities under the Research Plans.

2.5 Laboratory Facility and Personnel.

(a) Codexis shall provide suitable laboratory facilities, equipment and personnel for the work to be done by Codexis in carrying out the Research Plans. For purposes of clarification, except as set forth in Section 2.5(b) below, all fees and payments due to Codexis hereunder for the provision of laboratory facilities, equipment and personnel are set forth in Article 3 below.

(b) Shell shall be responsible, at Shell's sole cost and expense, for providing suitable laboratory facilities, equipment and personnel for the work to be done by Shell at Shell facilities, if any, in carrying out the Research Plans; provided that from time to time during the Term after the second (2nd) anniversary of the Effective Date, upon the written agreement of the Parties, Codexis shall make commercially reasonable efforts to accommodate no more than [*] Shell employees at Codexis' facilities in Redwood City, California, for periods of up to [*] months, at Shell's sole cost and expense, in order to permit such Shell employees to carry out activities under the Research Plans; provided further, that any such Shell employee shall first

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execute a confidentiality agreement with Codexis acceptable to Shell and to Codexis prohibiting such Shell employee from using or disclosing confidential information of Codexis for any purpose other than as necessary to carry out activities under the Research Plans (such limitations on use and disclosure to include without limitation disclosure to or use for the benefit of Shell or any Shell Affiliate); provided further that Shell shall agree to serve as a surety as to, and with respect to any damages suffered by Codexis or its Affiliates as a result of the breach of the non-use and non-disclosure restrictions set forth in such confidentiality agreement by such Shell employee, including without limitation any breach that may occur after such Shell employee is no longer an employee of Shell; provided further that in a circumstance of a former employee of Shell, Codexis shall first pursue its full legal rights against such former employee and/or Third Party that caused any such damages to Codexis, before Codexis seeks any relief from Shell but, thereafter, will not be required to reassert against Shell any claim or demand previously asserted against such former employee and/or such Third Party that, in such previous action, was resolved in favor of Codexis.

2.6 Efforts.

(a) Each Party shall use commercially reasonable efforts during the Term to perform that part of the Program for which such Party is responsible pursuant to the terms and conditions of this Amended and Restated Research Agreement, and to complete such tasks in compliance with the schedule set forth in the applicable Research Plan.

(b) FTEs.

(i) Beginning on the Effective Date and ending on March 31, 2007, Codexis shall assign [*] FTEs to perform Codexis' obligations under the Program, and to complete the tasks assigned to Codexis in the Research Plan for such period. The Parties acknowledge and agree that as of the Execution Date, Codexis has fulfilled its obligations under this Section 2.6(b)(i).

(ii) Beginning on April 1, 2007 and ending on October 31, 2007, Codexis shall assign [*] FTEs to perform Codexis' obligations under the Program, and to complete the tasks assigned to Codexis in the Research Plan for such period. The Parties acknowledge and agree that as of the Execution Date, Codexis has fulfilled its obligations under this Section 2.6(b)(ii) for the period beginning on April 1, 2007 and ending on the Execution Date.

(iii) Subject to Section 2.6(c), after the first anniversary of the Effective Date, during the Term, Codexis shall assign, on or before the dates set forth in the table in this Section 2.6(b)(iii), below, no less than the corresponding number of FTEs set forth in the table in this Section 2.6(b)(iii), below, to perform Codexis' obligations under the Program, and to complete the tasks assigned to Codexis in the Research Plans.

Total Number of FTEs	Date
[*]	[*]

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Total Number of FTEs	Date
[*]	[*]
[*]	[*]

Notwithstanding the foregoing, either Party, upon not less than thirty (30) days prior written notice, may extend, by up to sixty (60) days, the dates set forth under the heading "Date" in the table above in this Section 2.6(b)(iii); provided, however, that under no circumstances will the total delay of any such date be greater than sixty (60) days, whether the delay is requested by Shell, Codexis, or both.

(iv) In the event that Codexis has resources available to dedicate to an approved Research Plan in advance of the schedule set forth in Section 2.6(b)(iii), Codexis shall allocate such resources to the Program upon thirty (30) days advance written notice to Shell.

(c) Reduction in FTEs.

(i) During the period beginning on August 1, 2008 and ending on the third (3rd) anniversary of the Effective Date, Shell shall have the right to reduce the total number of FTEs assigned by Codexis to perform Codexis' obligations under the Program by up to [*] FTEs upon sixty (60) days advance notice.

(ii) After the third (3rd) anniversary of the Effective Date, Shell shall have the right to reduce the total number of FTEs assigned by Codexis to perform Codexis' obligations under the Program upon advance notice; provided, however, that the number of FTEs that may be reduced will not be greater than as set forth in, and implemented after written notice thereof in accordance with, the table in this Section 2.6(c)(ii), below; provided, further, however, that no reductions may be noticed during the applicable standstill period set forth in this Section 2.6(c)(ii), below, immediately after an FTE reduction already noticed (each such period during which no subsequent notice may be given, a "**Standstill Period**").

Number of FTEs that May Be Reduced	Standstill Period	Advance Notice Required
[*]	[*]	[*]
[*]	[*]	[*]
[*]	[*]	[*]

By way of example, if Shell elects to reduce the number of FTEs by [*] FTEs or less, no

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additional reductions may be made by Shell during the [*] day Standstill Period beginning on the date of advance written notice of such reduction election. Similarly, if Shell elects to reduce the number of FTEs by more than [*] FTEs but less than or equal to [*] FTEs, no additional reductions may be made by Shell during the [*] day Standstill Period beginning on the date of advance written notice of such reduction election.

2.7 Approval of Research Plans. Prior to beginning work, Codexis shall provide a proposed Research Plan to Shell for each work stream. Shell may comment on, and may make recommendations to, such proposed Research Plan from Codexis. The Parties shall submit such proposed Research Plan to the Research Committee for consideration and recommendation to the Oversight Committee for approval.

2.8 Milestones.

(a) Year One Final Milestone. Shell acknowledges that, as of the Execution Date, Codexis has achieved the Year One Final Milestone.

(b) Annual Milestones. Prior to beginning work, Codexis shall provide a proposal to Shell for annual milestones for each work stream. The Parties shall submit such proposed milestones to the Research Committee for consideration and recommendation to the Oversight Committee for approval.

(c) Year Four Goal(s). Unless otherwise agreed by the Parties in writing, prior to [*], Codexis shall provide a proposal to Shell for Program progress goal(s) to be achieved as of the fourth (4th) anniversary of the Effective Date (the "**Year Four Goal(s)**"). The Parties shall submit such proposed Year Four Goal(s) to the Research Committee for consideration and recommendation to the Oversight Committee for approval. For purposes of clarification, it is the intent of the Parties that the Year Four Goal(s) will be more technically challenging to achieve than the annual Milestones established in accordance with Section 2.8(b).

(d) Year Six Goal(s). Unless otherwise agreed by the Parties in writing, prior to [*], Codexis shall provide a proposal to Shell for Program progress goal(s) to be achieved as of the sixth (6th) anniversary of the Effective Date (the "**Year Six Goal(s)**"). The Parties shall submit such proposed Year Six Goal(s) to the Research Committee for consideration and recommendation to the Oversight Committee for approval. For purposes of clarification, it is the intent of the Parties that the Year Six Goal(s) will be more technically challenging to achieve than the annual Milestones established in accordance with Section 2.8(b).

(e) Milestone Verification.

(i) In the event that Codexis reasonably believes that it has achieved a particular annual Milestone, the Year Four Goal(s) or the Year Six Goal(s), Codexis shall deliver written notice thereof to Shell (each such notice, a "**Milestone Notice**"). Within ten (10) business days after delivery of a particular Milestone Notice, Codexis shall provide to Shell sufficient quantities of any relevant Biocatalyst to permit Shell to verify that the annual Milestone, Year Four Goal(s) or Year Six Goal(s), as the case may be, in such Milestone Notice has been achieved.

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(ii) In the event that Shell cannot verify Codexis' assertion that Codexis has achieved the annual Milestone, Year Four Goal(s) or Year Six Goal(s), as the case may be, identified in a particular Milestone Notice, Shell shall provide written notice thereof to Codexis (each such notice, a "**Nonreplication Notice**"). The annual Milestone, Year Four Goal(s) or Year Six Goal(s), as the case may be, identified in each Milestone Notice shall be deemed to have been achieved unless Shell provides a Nonreplication Notice within ninety (90) days after Shell's receipt of such Milestone Notice; provided that upon written notice provided prior to the expiration of such ninety (90) day period, Shell may seek an extension of such ninety (90) day period of up to forty-five (45) days to provide such Nonreplication Notice, not to be unreasonably withheld by Codexis. Upon Codexis' receipt of a Nonreplication Notice, the Parties will determine a mutually agreeable time to perform the applicable tests necessary to replicate the identified annual asserted Milestone, Year Four Goal(s) or Year Six Goal(s), as the case may be, that is the subject of such Nonreplication Notice, such tests to be performed, at Shell's sole option and expense (1) by Shell at a Shell facility, with Codexis observing; (2) by Codexis at a Codexis facility, with Shell observing; or (3) by a mutually agreeable Third Party at such Third Party's facilities, with both Codexis and Shell observing. The outcome of such test shall be determinative of whether the annual Milestone, Year Four Goal(s) or Year Six Goal(s), as the case may be, has been achieved. In the event that Shell elects to have such test performed by a mutually agreeable Third Party, Codexis shall first execute a sponsored research agreement with such Third Party substantially in the form attached hereto as Exhibit 2.8(e)(ii).

ARTICLE 3

FEES AND PAYMENTS

3.1 Codexis Technology Access Fee. In consideration of the use of Codexis' Technology and Codexis' related technical knowledge and expertise during the first (1st) Contract Year of the Term, Shell shall pay to Codexis a non-refundable, non-creditable technology access fee of Two Million Eight Hundred Thousand United States Dollars ($2,800,000) on the Effective Date. The Parties acknowledge and agree that, as of the Execution Date, such technology access fee has been fully (a) earned by Codexis and (b) paid by Shell.

3.2 Exclusivity Fee. During the Term, Codexis (a) will act exclusively with Shell regarding the rights and research described herein; and (b) will not (i) conduct research, discover or develop Biocatalysts, and associated processes for the use of such Biocatalysts, in the Field of Use for any other party or (ii) enter into any other agreements to conduct research, discover or develop Biocatalysts, and associated processes for the use of such Biocatalysts, in the Field of Use (including without limitation any agreement to convert Biomass to fermentable sugars unless such other party has provided express assurance in a written agreement that such fermentable sugars shall be used only outside the Field of Use), as more fully described with respect to both (a) and (b) in this Amended and Restated Research Agreement and pursuant to the covenant in Section 9.3. In consideration of such research activities performed exclusively for Shell in the Field of Use, Shell shall pay to Codexis an exclusivity fee of Twenty Million United States Dollars ($20,000,000) on the Execution Date. Except as expressly provided in Section 11.4(a), such exclusivity fee shall be non-refundable and non-creditable. For purposes of clarification, Shell acknowledges and agrees that such covenant regarding such exclusivity shall expire upon termination or expiration of this Agreement; provided that in the event of any

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Renewal Term in accordance with Section 11.1, Shell shall not be required to pay any additional exclusivity fee beyond that set forth in this Section 3.2 in order to maintain the research exclusivity as described herein and in Section 9.3 for the duration of this Agreement, including during the Initial Term and any such Renewal Term.

3.3 FTE Payments.

(a) First Contract Year. During the first (1st) Contract Year of the Term, Shell shall pay to Codexis a research funding fee based on an FTE rate equal to [*] per year for each of the FTEs assigned by Codexis to perform Codexis' obligations under the Program during such first (1st) Contract Year. Such FTE rate includes any and all associated overhead expenses, normal laboratory supplies and consumables expenses, and typical operational research expenses. The Parties acknowledge and agree that, as of the Execution Date, the FTE payments for the first (1st) Contract Year of the Term have been paid by Shell.

(b) After the First Contract Year. During the second (2nd) Contract Year of the Term, Shell shall pay to Codexis a research funding fee based on an FTE rate equal to [*] per year for each of the FTEs assigned by Codexis to perform Codexis' obligations under the Program during the second (2nd) Contract Year of the Term. Such FTE rate shall be increased annually at the beginning of each subsequent Contract Year of the Term by an amount equal to [*] of the FTE rate for the preceding Contract Year. Such FTE rate includes any and all associated overhead expenses, normal laboratory supplies and consumables expenses, and typical operational research expenses. Such FTE payments in each Contract Year shall be made in six (6) equal installments (each an "**FTE Installment**"), each in advance of work actually performed based on the planned utilization of FTEs for the following two (2) months; provided, however, that, in the event either Party elects to reduce the number of FTEs working on the Program pursuant to Section 2.6(c), a corresponding reduction will be made to the amount of the next FTE Installment. In the event that Codexis dedicates FTEs to the Program in advance of the schedule set forth in Section 2.6(b)(iii) in accordance with Section 2.6(b)(iv), Shell shall make an additional payment to Codexis on or before the date such increase shall become effective, which amount shall be equal to (i) the then-current FTE rate, times (ii) the number of additional FTEs, times (iii) the number of days until the date on which the next FTE Installment is required to be paid pursuant to this Section 3.3(b), above, divided by (iv) three hundred sixty-five (365).

3.4 Milestone Payments.

(a) Shell shall pay to Codexis a one-time, non-refundable, non-creditable milestone payment equal to One Million United States Dollars ($1,000,000) within thirty (30) days after the receipt by Shell of the report due from Codexis at six (6) months after the Effective Date, as provided in Section 2.4(a)(i)(1). The Parties acknowledge and agree that, as of the Execution Date, such Milestone payment has been fully (i) earned by Codexis and (ii) paid by Shell.

(b) For each Contract Year during the Initial Term beginning with the third (3rd) Contract Year, Shell shall pay to Codexis a non-refundable, non-creditable Milestone payment equal to [*] (for a total of [*] upon achievement of the Milestones for each of the then-current Research Plans established in accordance with Section 2.8(b), such amount to be

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distributed equally among all such then-current Research Plans. By way of example, if there are five (5) Research Plans in a Contract Year and Codexis achieves the Milestone established for each of three (3) of the five (5) Research Plans before the end of such Contract Year, Shell shall pay to Codexis a payment equal to [*] for that Contract Year; provided that, if Codexis achieves the Milestones established for the fourth (4th) or fifth (5th) Research Plans after such Contract Year and before the three (3) month anniversary of the expiration of such Contract Year, Shell shall pay Codexis a payment equal to [*] for each such Milestone after such Milestone has been achieved. For purposes of clarification, for purposes of this Section 3.4(b), "achievement of the applicable Milestone" means that Codexis delivers to Shell a Milestone Notice for such Milestone within the relevant time period, even if the verification of such Milestone Notice occurs after the expiration of such time period; provided, however, that payment for any Milestone due pursuant to this Section 3.4(b) will be due and payable in accordance with Section 3.6 only after the achievement of such Milestone has been verified in accordance with Section 2.8(e).

(c) Upon the achievement of the Year Four Goal(s), Shell shall pay to Codexis a one-time, non-refundable, non-creditable Milestone payment equal to [*]; provided, however, that payment for the Year Four Goal(s) due pursuant to this Section 3.4(c) will be due and payable in accordance with Section 3.6 only after the achievement of such Year Four Goal(s) has been verified in accordance with Section 2.8(e).

(d) Upon the achievement of the Year Six Goal(s), Shell shall pay to Codexis a one-time, non-refundable, non-creditable Milestone payment equal to [*]; provided, however, that payment for the Year Six Goal(s) due pursuant to this Section 3.4(d) will be due and payable in accordance with Section 3.6 only after the achievement of such Year Six Goal(s) has been verified in accordance with Section 2.8(e).

(e) For each Contract Year, if any, of (i) the Initial Term beyond the sixth (6th) Contract Year in the event that the Parties agree to extend the Initial Term beyond the six (6) year anniversary of the Effective Date in accordance with Section 11.1, and (ii) each Renewal Term, Shell shall pay to Codexis a non-refundable, non-creditable Milestone payment equal to [*] upon achievement of the Milestones for each of the then-current Research Plans established in accordance with Section 2.8(b), such amount to be distributed equally among all then-current Research Plans. By way of example, if there are five (5) Research Plans in a Contract Year and Codexis achieves the Milestone established for each of three (3) of the five (5) Research Plans before the end of such Contract Year, Shell shall pay to Codexis a payment equal to [*] for that Contract Year; provided that, if Codexis achieves the Milestones established for the fourth (4th) or fifth (5th) Research Plans after such Contract Year and before the expiration of this Agreement, Shell shall pay Codexis a payment equal to [*] for each such Milestone after such Milestone has been achieved. For purposes of clarification, for purposes of this Section 3.4(e), "achievement of the applicable Milestone" means that Codexis delivers to Shell a Milestone Notice for such Milestone within the relevant time period, even if the verification of such Milestone Notice occurs after the expiration of such time period; provided, however, that payment for any such Milestone due pursuant to this Section 3.4(e) will be due and payable in accordance with Section 3.6 only after the achievement of such Milestone has been verified in accordance with Section 2.8(e).

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3.5 Equity Payments.

(a) Series D Stock Purchase Agreement. Upon the Effective Date, Shell shall purchase Three Million United States Dollars ($3,000,000) of Series D Preferred Stock of Codexis, pursuant to the terms and conditions of a stock purchase agreement in the form attached hereto as Schedule A, appended to and made part of this Amended and Restated Research Agreement, (the "**Series D Stock Purchase Agreement**") at Three United States Dollars and Ninety-Seven Cents ($3.97) per share. The Parties acknowledge and agree that, as of the Execution Date, such Series D Preferred Stock has been (i) issued to Shell by Codexis and (ii) paid for in full by Shell.

(b) Series E Stock Purchase Agreement. On or before the Execution Date, Shell shall purchase a sufficient number of shares of Series E Preferred Stock of Codexis, pursuant to the terms and conditions of a stock purchase agreement substantially in the form attached hereto as Schedule B, appended to and made part of this Amended and Restated Research Agreement, (the **"Series E Stock Purchase Agreement**") at Eight United States Dollars and Fifty Cents ($8.50) per share, such that immediately after such purchase, Shell shall own ten percent (10.0%) of the equity securities of Codexis on a fully diluted basis; provided that at each Subsequent Closing (as defined in the Series E Stock Purchase Agreement), if any, Shell shall purchase an additional number of shares of Series E Preferred Stock such that immediately after each such Subsequent Closing Shell shall own ten percent (10.0%) of the equity securities of Codexis on a fully diluted basis. Notwithstanding anything to the contrary, the Parties acknowledge and agree that the maximum amount that Shell shall be required to invest under the Series E Stock Purchase Agreement shall be [*]. For purposes of this Section 3.5(b) only, "fully diluted basis" means all shares of Codexis common stock then outstanding, assuming full exercise and/or conversion of all outstanding Codexis securities exercisable and/or convertible into Codexis common stock and including shares reserved for issuance in connection with options not yet granted under any Codexis equity incentive plan.

(c) On or before the Execution Date, Shell will exercise, in full, the Warrant Agreement.

3.6 Mode of Payment. All payments made pursuant to this Amended and Restated Research Agreement, other than those due on the Execution Date or the Effective Date or under Section 5.2, shall be due and payable within sixty (60) days following receipt by Shell of a relevant invoice from Codexis. Such payments shall be made by direct wire transfer of United States Dollars in immediately available funds in the requisite amount to such bank account as Codexis may from time to time designate by written notice to Shell. Payments will be free and clear of any taxes (and net of any withholding and other taxes imposed on the payee), fees or charges, to the extent applicable.

3.7 Late Payment Interest. Any payment due and payable to Codexis under the terms and conditions of Section 3.3, 3.4, or 5.2 made by Shell later than sixty (60) days after the date such payment is due and payable shall bear interest as of the day after the date such payment was due and payable and shall continue to accrue such interest until such payment is made at a rate equal to the lesser of either (a) two percent (2%) above the prime rate as reported by Citibank, New York, New York, as of the date such payment was due and payable, or (b) the

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maximum rate permitted by applicable law. The Parties acknowledge and agree that, as of the Execution Date, there are no outstanding late payments due to Codexis that would be subject to interest payments pursuant to this Section 3.7.

ARTICLE 4

INTELLECTUAL PROPERTY RIGHTS

4.1 Ownership.

(a) Shell Technology. Subject to the rights expressly granted to Codexis under the terms and conditions of this Amended and Restated Research Agreement and the Amended and Restated License Agreement, Shell or its Affiliates owns or otherwise controls and shall own or otherwise control all right, title and interest in, to and under any and all Shell Technology.

(b) Codexis Technology. Subject to the rights expressly granted to Shell under the terms and conditions of this Amended and Restated Research Agreement and the Amended and Restated License Agreement, Codexis owns or otherwise controls and shall own or otherwise control all right, title and interest in, to and under any and all Codexis Technology.

(c) Program Technology. Subject to the rights expressly granted to Shell under the terms and conditions of this Amended and Restated Research Agreement and the Amended and Restated License Agreement, Codexis owns or otherwise controls and shall own or otherwise control all right, title and interest in, to and under any and all Program Technology.

4.2 Grant of Research Licenses.

(a) Codexis grants to Shell a non-exclusive, irrevocable, worldwide, royalty-free license, including the right to grant sublicenses to its Affiliates, to make and use Codexis Technology and Program Technology solely to conduct activities in accordance with Shell's responsibilities, to be articulated under each Research Plan; provided, however, that this license does not include and Shell shall not acquire, by virtue of this license, any rights in, to or under the Shuffling Technology.

(b) Shell grants to Codexis a non-exclusive, irrevocable, worldwide, royalty-free license, including the right to grant sublicenses to its Affiliates, to make and use Shell Technology solely to conduct activities in accordance with Codexis' responsibilities, to be articulated under each Research Plan.

4.3 Limitation. Except as expressly provided in this Amended and Restated Research Agreement and the Amended and Restated License Agreement, no right, title or interest is granted by either Party to the other Party.

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ARTICLE 5

PATENT PROSECUTION AND MAINTENANCE

5.1 Filing, Prosecution and Maintenance by Codexis. With respect to the Program Patent Rights arising from the Program, Codexis shall have the right, but not an obligation to:

(a) file applications for letters patent on any invention included in such Patent Rights;

(b) take all reasonable steps to prosecute all pending and new patent applications included within such Program Technology;

(c) respond to oppositions, nullity actions, re-examinations, revocation actions and similar proceedings filed by Third Parties against the grant of letters patent for such applications; and

(d) maintain in force any letters patent included in such Patent Rights by duly filing all necessary papers and paying any fees required by the patent laws of the particular country in which such letters patent were granted.

In addition, Codexis shall have the right, but not the obligation, to initiate and prosecute oppositions, nullity actions, re-examinations, revocation actions and similar proceedings against the grant of letters patent owned by Third Parties that may limit the ability of the Parties to exploit the Program Technology.

Notwithstanding the foregoing, Codexis shall consult with Shell regarding countries in which such patent applications or issued patents, as applicable, should be filed, prosecuted, and/or maintained. If Codexis agrees to file, prosecute, and/or maintain such patent applications or issued patents, as applicable, Codexis shall do so as set forth in this Section 5.1, above, in those countries where Shell requests that Codexis file, prosecute, and/or maintain such applications; provided that Codexis, at its option and exercise, may file prosecute, and/or maintain applications in countries where Shell does not request that Codexis file, prosecute, and/or maintain such applications. If Codexis does not agree to file, prosecute, and/or maintain such patent applications or issued patents, as applicable, Codexis shall provide Shell with written notice of any decision to not file a patent application or to abandon a pending application or an issued patent included in such Patent Rights, such notice to be delivered at least thirty (30) days prior to any action required to obtain or maintain such pending application or such issued patent, as the case may be. Thereafter, Shell shall have the option, at its expense, of filing such an application, or continuing to prosecute any such pending patent application or of keeping the issued patent in force, as applicable. In the event that Shell exercises such option for any such pending application or such issued patent, Codexis shall assign to Shell such pending application or such issued patent, as the case may be. Codexis shall cooperate fully with, and take all necessary actions requested by, Shell in connection with the preparation, prosecution and maintenance of any such letters patent included in such Patent Rights.

5.2 Reimbursement of Costs for Filing, Prosecuting and Maintaining Patent Rights. Within thirty (30) days after receipt of an invoice from Codexis, Shell shall reimburse

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Codexis for a portion of the costs of (a) filing, prosecuting, responding to opposition and maintaining patent applications and patents in countries where Shell requests that patent applications be filed, prosecuted and maintained, and (b) filing, prosecuting, and responding to oppositions, nullity actions, re-examinations, revocation actions and similar proceedings against the grant of letters patent owned by Third Parties that may limit the ability of the Parties to exploit the Program Technology. Such reimbursement shall equal [*] of such costs actually incurred in the [*], and [*] of such costs elsewhere, and in each case, shall be in addition to payments under Article 3. However, Shell may, upon sixty (60) days notice, request that Codexis discontinue filing or prosecution of patent applications in any country and shall have no obligation after the effective date of such notice to reimburse Codexis for the costs of filing, prosecuting, responding to opposition or maintaining such patent application or patent in such country. Codexis shall pay all costs in those countries in which Shell does not request that Codexis file, prosecute or maintain patent applications and patents, but in which Codexis, at its option, elects to do so.

ARTICLE 6

CONFIDENTIALITY

6.1 Confidentiality Obligations. The Parties agree that, during the Term and for five (5) years thereafter, all Confidential Information disclosed by one Party to the other Party hereunder shall be received and maintained by the receiving Party in strict confidence, shall not be used for any purpose other than the purposes expressly permitted by this Amended and Restated Research Agreement, and shall not be disclosed to any Third Party. The Parties acknowledge and agree that the structure and composition of each particular Biocatalyst developed under the Program shall be deemed Confidential Information of Codexis, subject to the confidentiality and non-use obligations set forth in this Article 6. Shell shall limit the disclosure of Third Party Information to Codexis to that required for the Program. No Third Party Information shall be disclosed until (i) Shell has described the general nature and scope of the information to be disclosed and the terms and conditions attaching to disclosure and use; and (ii) Codexis has agreed to receive such information in confidence under such terms and conditions. The obligations of confidentiality and non-use set forth in the first sentence of this Section 6.1 will not apply to any information to the extent that it can be established by the receiving Party that such information:

(a) was already known to the receiving Party or its Affiliates at the time of disclosure without restriction as to confidentiality or use, as evidenced by competent evidence;

(b) was generally available to the public or was otherwise part of the public domain at the time of its disclosure to the receiving Party or its Affiliates;

(c) became generally available to the public or otherwise becomes part of the public domain after its disclosure and other than through any fault of the receiving Party or its Affiliates in breach of this Amended and Restated Research Agreement;

(d) was subsequently lawfully disclosed to the receiving Party or its Affiliates by a Third Party without restriction as to confidentiality or use and other than in contravention of a confidentiality obligation of such Third Party to the disclosing Party or its Affiliates; or

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(e) is independently developed by employees or agents of the receiving Party or its Affiliates without reliance upon or access to Confidential Information of the disclosing Party or its Affiliates, as evidenced by competent evidence.

Each Party represents and warrants that it has or will obtain written agreements from each of its consultants who perform work on the Program or otherwise have a need to know the other Party's Confidential Information, which agreements will obligate such persons to obligations of confidentiality and non-use no less restrictive than those assumed by the Parties herein, and to assign to such Party all inventions made by such persons during the course of performing any tasks associated with the Program. Further, each Party represents and warrants that those of its employees which perform work on the Program or otherwise have a need to know the other Party's Confidential Information are bound by obligations of confidentiality and non-use to the employer Party. Either Party may disclose Confidential Information of the other Party to such Party's Affiliates, provided that any such Affiliate agrees prior to such disclosure to be bound by obligations of confidentiality and non-use no less restrictive than those assumed by such disclosing Party herein.

Notwithstanding this Article 6 the receiving Party may disclose any Confidential Information of the disclosing Party that the receiving Party is required to disclose under applicable laws or regulations or an order by a court or other regulatory body having competent jurisdiction; provided, however, that except where impracticable, the receiving Party shall give the disclosing Party reasonable advance notice of such disclosure requirement (which shall include a copy of any applicable subpoena or order) and shall afford the disclosing Party a reasonable opportunity to oppose, limit or secure confidential treatment for such required disclosure. In the event of any such required disclosure, the receiving Party shall disclose only that portion of the Confidential Information of the disclosing Party that the receiving Party is legally required to disclose and, in the event a protective order is obtained by the disclosing Party, nothing in this Article 6 shall be construed to authorize the receiving Party to use or disclose any disclosing Party Confidential Information to parties other than such court or regulatory body or beyond the scope of the protective order. Codexis and its Affiliates may disclose this Amended and Restated Research Agreement if required to be disclosed by applicable State or federal tax or securities laws to the extent, and only to the extent, such laws require such disclosure and Codexis provides Shell a reasonable opportunity to review and comment on the general text of such disclosure.

6.2 Press Releases. Except to the extent required by law or regulation or as otherwise permitted in accordance with this Section 6.2, no Party shall make any public announcements concerning this Amended and Restated Research Agreement or the terms hereof without the prior written consent of the other Party and the Parties shall agree on the content and timing of any such public announcement. Notwithstanding the foregoing, the Parties will issue a mutually acceptable joint press release within sixty (60) days after the first anniversary of the Effective Date.

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ARTICLE 7

ACQUISITION OF RIGHTS FROM THIRD PARTIES

7.1 Acquisition of Rights from Third Parties. In the event that during the Term, either Party makes a determination that there may be an opportunity to acquire technology or patents or information from a Third Party that may be useful in the Program (collectively, the "**Acquired Technology**"), such Party, at its sole discretion, will notify the other Party thereof through the Research Committee. Codexis and Shell shall decide, considering the recommendations of the Research Committee and the Oversight Committee, if such rights of a Third Party should be acquired in connection with the Program and, if so, whether by Codexis, Shell or both. If acquired, such rights shall become part of the Confidential Information, Technology or Patent Rights, whichever is appropriate, of the acquiring Party or Parties. Notwithstanding anything to the contrary, the decision to acquire such rights shall not be considered a "technical aspect" for purposes of section 2.2(f) of this Restated and Amended Research Agreement.

7.2 Payments. [*].

ARTICLE 8

OTHER AGREEMENTS

8.1 Amended and Restated License Agreement. Concurrently with the execution of this Amended and Restated Research Agreement, Codexis and Shell shall enter into the Amended and Restated License Agreement substantially in the form attached hereto as Schedule C, appended to and made part of this Amended and Restated Research Agreement.

8.2 Issuance of Warrants. On the Effective Date, Codexis issued a warrant agreement, as attached hereto as Schedule D, and appended to and made part of this Amended and Restated Research Agreement (the "**Warrant Agreement**"), wherein Codexis agreed to issue warrants for the purchase of Three Million United States Dollars ($3,000,000) of preferred stock by Shell at the following price per share, as more fully set forth in the Warrant Agreement:

(a) In the event that Codexis fails to achieve the Year One Final Milestone, the purchase price per share shall equal Three United States Dollars and Ninety-Seven Cents ($3.97); and

(b) In the event that Codexis achieves the Year One Final Milestone, the purchase price per share shall equal Seven United States Dollars ($7.00).

Notwithstanding anything to the contrary, Shell acknowledges that the Year One Final Milestone has been achieved for purposes of this Section 8.2(b). On or before the Execution Date, Shell will exercise, in full, the Warrant Agreement.

8.3 Entire Agreement. This Amended and Restated Research Agreement, the Amended and Restated License Agreement, the Series D Stock Purchase Agreement, and the Series E Stock Purchase Agreement are the sole agreements with respect to the subject matter

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hereof and supersede all other prior and contemporaneous agreements and understandings between the Parties with respect to same, including without limitation that certain Non-Binding Term Sheet by and between Codexis and Shell dated as of [*], that certain Collaborative Research Agreement by and between Codexis and Shell effective as of November 1, 2006, as amended, and that certain License Agreement by and between Codexis and Shell effective as of November 1, 2006.

ARTICLE 9

REPRESENTATIONS AND WARRANTIES

9.1 Representations by Codexis. Codexis represents and warrants that, as of the Execution Date: (a) it is duly organized and validly existing under the laws of the jurisdiction of its incorporation and has full corporate power and authority to enter into this Amended and Restated Research Agreement; (b) it is in good standing with all relevant governmental authorities; (c) it has taken all corporate actions necessary to authorize the execution and delivery of this Amended and Restated Research Agreement and the performance of its obligations under this Amended and Restated Research Agreement; (d) the performance of its obligations under this Amended and Restated Research Agreement do not conflict with, or constitute a default under its charter documents, any contractual obligation of Codexis or any court order; (e) it Controls the Codexis Technology and it has the right to make the grants set forth in this Amended and Restated Research Agreement; (f) it is not aware of, and has not been served with, any suit or action pending in any court against Codexis, alleging patent infringement based on the use of Codexis Technology by Codexis or any Affiliate or licensee of Codexis, and Codexis has not received any communications or notice alleging any such patent infringement; and (g) it has not (i) provided any Third Party, including the United States government or agency thereof, any claim to rights relating to the Codexis Technology or the Program Technology, or (ii) entered into any agreements, commitments or other arrangement with any Third Party, including the United States government or agency thereof, in each case that would (1) prohibit Codexis from fulfilling its obligations hereunder or (2) be inconsistent or in conflict with the rights granted to Shell hereunder.

9.2 Representations by Shell. Shell represents and warrants that, as of the Execution Date: (a) it is duly organized and validly existing under the laws of the jurisdiction of its formation and has full corporate power and authority to enter into this Amended and Restated Research Agreement; (b) it is in good standing with all relevant governmental authorities; (c) it has taken all corporate actions necessary to authorize the execution and delivery of this Amended and Restated Research Agreement and the performance of its obligations under this Amended and Restated Research Agreement; (d) the performance of its obligations under this Amended and Restated Research Agreement does not constitute either a default under its charter documents or a violation of any court order; and (e) it or one of its Affiliates Controls the Shell Technology and it has the right to make the grants set forth in this Amended and Restated Research Agreement.

9.3 Covenants of Codexis. Codexis covenants that, during the Term, without the prior written consent of Shell, it (a) will act exclusively with Shell regarding the rights and research described herein; (b) will not (i) conduct research, discover or develop biocatalysts, and

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associated processes for the use of such biocatalysts, in the Field of Use for any other party or (ii) enter into any other agreements to conduct research, discover or develop biocatalysts, and associated processes for the use of such biocatalysts, in the Field of Use (including without limitation any agreement to convert [*] unless such other party has provided express assurance in a written agreement that such [*] shall be used only outside the Field of Use); (c) will maintain technical personnel with sufficient skill, experience and expertise to perform its obligations under the Program; and (d) will not (i) provide any Third Party, including the United States government or agency thereof, any claim to rights relating to the Codexis Technology or the Program Technology, or (ii) enter into any agreements, commitments or other arrangement with any Third Party, including the United States government or agency thereof, in each case that would (1) prohibit Codexis from fulfilling its obligations hereunder or (2) be inconsistent or in conflict with the rights granted to Shell hereunder. Codexis further covenants that, during the Term, (A) Codexis will provide written notice to Shell in the event that Codexis has a bona fide business opportunity with a Third Party available to Codexis that would involve the conversion of [*], such [*] to be used to generate product(s) outside the Field of Use and, to the extent that Codexis is not precluded, whether by confidentiality obligations or other similar restrictions, Codexis shall inform Shell of the name of such Third Party and such product(s) outside the Field of Use; and (B) in the event that Codexis reasonably believes that any Third Party with which Codexis entered into an agreement in accordance with Section 9.3(b)(ii) above is practicing intellectual property owned or otherwise controlled by Codexis to convert [*], where such [*] are being used in the Field of Use for the benefit of such Third Party or any party other than Shell or a Shell Affiliate, Codexis shall take reasonable steps, including appropriate legal action, to enforce its rights to stop such use.

9.4 Covenants of Shell. Shell covenants that it will not, without the prior written consent of Codexis, (a) reverse engineer, deconstruct or in any way determine, or attempt to reverse engineer, deconstruct or in any way determine, the structure or composition of any Biocatalyst developed by Codexis hereunder, except as expressly provided under 7.3(a) of the Amended and Restated License Agreement for any particular identified Biocatalyst; or (b) modify or otherwise create any derivative of any such Biocatalyst; or (c) do indirectly, either through a Third Party or a Shell Affiliate, any of the activities contained in (a) or (b) above that Shell itself agrees not to do. Notwithstanding the foregoing, in the event that Shell desires to modify or otherwise create any derivative of any Biocatalyst developed by Codexis hereunder and Codexis notifies Shell in writing within one hundred twenty (120) days after receipt by Codexis of a written request by Shell to modify or otherwise create any derivative of any such Biocatalyst that it is unwilling or unable to perform such modification or otherwise create such derivative under commercially reasonable terms, then Shell shall be relieved of its obligations under this Section 9.4 with respect to such Biocatalyst.

9.5 Disclaimer of Warranties. EXCEPT AS SPECIFICALLY SET FORTH IN THIS ARTICLE 9, NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, NON-INFRINGEMENT, AND ANY OTHER STATUTORY WARRANTY.

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ARTICLE 10

INDEMNIFICATION

10.1 Employees and Property. Each of Codexis and Shell (each, the "**Indemnitor**") shall indemnify, defend and hold the other Party and its Affiliates and their respective agents, employees, consultants, officers and directors (the "**Indemnitees**") harmless from and against any and all liability, damage, loss, cost or expense (including reasonable attorneys' fees) (collectively "**Losses**"), arising from any claims or suits arising from (a) bodily injuries, including fatal injury or disease, to the Indemnitor's employees, and (b) damage to tangible, real or personal property of Indemnitor and/or Indemnitor's employees arising from or in connection with the performance of this Amended and Restated Research Agreement. This indemnity shall apply in full even though the cause of the injuries, loss or damage was the negligence of the Indemnitee or the Indemnitee's representatives.

10.2 Third Parties.

(a) Indemnification by Codexis: Codexis shall indemnify, defend and hold the Shell Indemnitees harmless from and against any and all Losses arising out of any Third Party claims or suits arising from: (i) breach by Codexis of any of its representations, warranties or covenants under this Amended and Restated Research Agreement; or (ii) Codexis' failure to perform its obligations under this Amended and Restated Research Agreement; or (iii) during the Term, infringement of patent rights owned or otherwise controlled by such Third Party as a result of Codexis' research activities under this Amended and Reseated Research Agreement; provided that Codexis' indemnification obligations pursuant to this Section 10.2(a)(iii) shall not extend to any such Loss that arises from Codexis' activities with respect to intellectual property provided to Codexis or any Affiliate of Codexis by or on behalf of Shell or any Affiliate of Shell, or to such activities with respect to improvements made by Codexis or any Affiliate of Codexis to such intellectual property under the Program; or (iv) the negligence, willful misconduct or strict liability of Codexis or its Affiliates, and its or their directors, officers, agents, employees, sublicensees or consultants; except in any such case for Losses to the extent, and only to the extent, reasonably attributable to a breach by Shell of its representations and warranties set forth in this Amended and Restated Research Agreement or the Shell Indemnitees having committed an act or acts of gross negligence, recklessness or willful misconduct. For purposes of clarification, the Parties acknowledge and agree that Codexis' indemnification obligations pursuant to Section 10.2(a)(iii) shall not apply to any liability, damage, loss, cost or expense (including attorneys' fees) as a result of any activities conducted under the Amended and Restated License Agreement.

(b) Indemnification by Shell: Shell shall fully indemnify, defend and hold the Codexis Indemnitees harmless from and against any and all Losses arising out of any Third Party claims or suits arising from: (i) breach by Shell of its representations, warranties or covenants under this Amended and Restated Research Agreement; or (ii) Shell's failure to perform its obligations under this Amended and Restated Research Agreement; or (iii) the use under this Amended and Restated Research Agreement by Shell of any Biocatalyst except to the extent such Losses relate to the infringement of any intellectual property right of a Third Party; or (iv) infringement of patent rights owned or otherwise controlled by such Third Party as a result of intellectual property provided to Codexis or any Affiliate of Codexis by or on behalf of Shell or any Affiliate of Shell, or to such activities with respect to improvements made by Codexis or any Affiliate of Codexis to such intellectual property under the Program; or (v) the negligence, willful

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misconduct or strict liability of Shell or its Affiliates, and its or their directors, officers, agents, employees, sublicensees or consultants; or (v) the activities of Shell employees carrying out Research Plans in Codexis' facilities pursuant to Section 2.5(b); except in any such case for Losses to the extent, and only to the extent, reasonably attributable to a breach by Codexis of its representations and warranties set forth in this Amended and Restated Research Agreement or the Codexis Indemnitees having committed an act or acts of gross negligence, recklessness or willful misconduct.

10.3 Environmental. Notwithstanding any other indemnification obligation in this Amended and Restated Research Agreement, and in addition to any rights the Parties may have under relevant federal, state, or local statutory and common laws, each Party shall fully indemnify, defend and hold the other Party and its Affiliates harmless from and against any and all Losses incurred as a result of Environmental Matters; provided, however, that this indemnification shall not apply to the extent any such Losses result from the acts or omissions of personnel of the indemnified Party or its Affiliates which occur at any site of the indemnified Party or the site of any supplier of the indemnified Party. For purposes of this Section 10.3, "**Environment Matters**" shall mean:

(a) the operation by the indemnifying Party, its Affiliates, sublicensees or subcontractors of any site or facility in a manner that is not in compliance with and in violation of any Environmental Law;

(b) any release of Hazardous Materials into the environment by the indemnifying Party, its Affiliates, sublicensees or subcontractors; or any Hazardous Materials that have been Disposed of at a site of the indemnifying Party or any site of any supplier (other than Codexis as supplier) of the indemnifying Party or other site or facility operated by the indemnifying Party, its Affiliates or its subcontractors, as the term Disposed is defined in applicable Environmental Laws;

(c) any failure to obtain or maintain all permits and provide all notices required by Environmental Laws for the lawful operation of any site of the indemnifying Party or any site of any supplier of the indemnifying Party or other facilities or sites operated by the indemnifying Party, its Affiliates, sublicensees or subcontractors; and

(d) any other actual or alleged act or omission relating to the handling or disposal of Hazardous Materials at any site of the indemnifying Party or any site of any supplier of the indemnifying Party or the handling or disposal of Hazardous Materials by the indemnifying Party, its Affiliates, sublicensees or subcontractors at any other facility or site.

For purposes of this Section 10.3, "**Environmental Law**" shall mean any treaty, law, ordinance, regulation or order of any jurisdiction, relating to environmental matters, including, but not limited to, matters governing air pollution; water pollution; the use, handling, reporting, release, storage, transport, or disposal of Hazardous Materials as defined herein above; exposure to or discharge of Hazardous Materials; occupational safety and health; and public health.

For purposes of this Section 10.3, "**Hazardous Materials**" includes, but is not limited to, air contaminant, water pollutant, hazardous material, hazardous waste, hazardous substance, toxic

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and hazardous substance, medical waste, infectious waste, "chemicals know to the State of California to cause cancer or reproductive toxicity", asbestos and PCB's, as such substances are defined under any applicable federal, state or local statute, regulation, rule or ordinance.

10.4 Notification of Claim; Conditions to Indemnification Obligations. As a condition to a Party's right to receive indemnification under this Article 10, it shall: (a) promptly notify ("**Claim Notice**") the other Party as soon as it becomes aware of a claim or suit for which indemnification may be sought pursuant hereto; provided that the failure to give a Claim Notice promptly shall not prejudice the rights of an indemnified Party except to the extent that the failure to give such prompt notice materially adversely affects the ability of the indemnifying Party to defend the claim or suit); (b) cooperate with the indemnifying Party in the defense of such claim or suit, at the expense of the indemnifying Party; and (c) if the indemnifying Party confirms in writing to the indemnified Party its intention to defend such claim or suit within fifteen (15) business days of receipt of the Claim Notice, permit the indemnifying Party to control the defense of such claim or suit, including without limitation the right to select defense counsel; provided that if the indemnifying Party fails to (i) provide such confirmation in writing within the fifteen (15) business day period; or (ii) diligently and reasonably defend such suit or claim at any time, its right to defend the claim or suit shall terminate immediately in the case of (i) and otherwise upon twenty (20) days' written notice to the indemnifying Party and the indemnified Party may assume the defense of such claim or suit at the sole expense of the indemnifying Party and may settle or compromise such claim or suit without the consent of the indemnifying Party. In no event, however, may the indemnifying Party compromise or settle any claim or suit in a manner which admits fault or negligence on the part of any indemnified Party or that otherwise materially affects such indemnified Party's rights under this Amended and Restated Research Agreement or requires any payment by an indemnified Party without the prior written consent of such indemnified Party. Except as expressly provided above, the indemnifying Party will have no liability under this Article 10 with respect to claims or suits settled or compromised without its prior written consent. The indemnified Party shall have the right, but not the duty, at its sole cost and expense, to participate in the defense of any claim or suit hereunder with attorneys of its own selection without relieving the indemnifying Party of any of its obligations hereunder.

ARTICLE 11

TERM AND TERMINATION

11.1 Term. The initial term of this Amended and Restated Research Agreement will commence on the Effective Date and, unless earlier terminated in accordance with Section 11.2, 11.3, 12.2 or 12.4 below, shall continue in effect until six (6) years after the Effective Date ("**Initial Term**"); provided, however, that on or before the [*] anniversary of the Effective Date, the Parties will engage in discussions concerning the progress of the research under the Program, applicable future Milestones and Program needs, including the projected number of FTEs to complete the work under the Program, and the Parties shall determine whether the Initial Term will be extended under the same terms and conditions of this Restated and Amended Research Agreement. The term of this Amended and Restated Research Agreement may be extended after the Initial Term by consecutive, successive [*] year periods (each, a "**Renewal Term**") upon the mutual written agreement of the Parties at least six (6) months prior to the end of the Initial Term or the current Renewal Term, as applicable (the Initial Term, together with any and all Renewal Terms, the "**Term**").

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11.2 Termination for Convenience.

(a) At any time after the third (3rd) anniversary of the Effective Date, Shell may, in its sole discretion, terminate this Amended and Restated Research Agreement upon six (6) months written notice to Codexis.

(b) If at any time after the [*] of the Effective Date, Shell determines, in accordance with Section 2.6(c), to decrease the number of FTEs assigned by Codexis to perform Codexis' obligations under the Program to less than [*], Codexis shall have the right, but not the obligation, to terminate this Amended and Restated Research Agreement upon ninety (90) days written notice to Shell; provided, however that in the event that (i) each such FTE reduction by Shell occurs after successful achievement of the applicable Milestone for each Research Plan and (ii) Shell (or a Shell Affiliate or sublicensee) is actively developing the Program Technology for commercial application, then Codexis shall have no right to terminate this Amended and Restated Research Agreement pursuant to this Section 11.2(b).

11.3 Termination Upon Material Breach. Material failure by a Party to comply with any of its obligations contained herein shall entitle the Party not in default to give to the Party in default written notice (a "**Default Notice**") specifying the nature of the default in reasonable detail, requiring such defaulting Party to make good or otherwise cure such default, and stating the non-defaulting Party's intention to terminate this Amended and Restated Research Agreement if such default is not cured. If such default is not cured within sixty (60) days after the date the Default Notice was sent, then the Party not in default shall be entitled, without prejudice to any other rights conferred on it by this Amended and Restated Research Agreement, and in addition to any other remedies available to it by law or in equity, to terminate this Amended and Restated Research Agreement by written notice of termination to the defaulting Party; provided, however, that if the Party receiving such Default Notice (the "**Disputing Party**") has a reasonable basis for disputing that it is in default and such Party provides written notice thereof to the other Party before the expiration of such sixty (60) day cure period, then the Disputing Party shall have the right, prior to the expiration of such sixty (60) day period, to submit such dispute for resolution in accordance with the provisions of Section 12.7; provided further that in the event that as a result of such resolution, the Disputing Party is found to be in default and such default is not cured within forty-five (45) days after the date of such resolution, then the Party not in default shall be entitled, without prejudice to any other rights conferred on it by this Amended and Restated Research Agreement, and in addition to any other remedies available to it by law or in equity, to terminate this Amended and Restated Research Agreement by written notice of termination to the Disputing Party.

11.4 Consequences of Expiration or Termination.

(a) If Shell terminates this Amended and Restated Research Agreement pursuant to Section 11.3 (Material Breach), 12.2 (Assignment) or 12.4 (Force Majeure), or if Codexis terminates this Amended and Restated Research Agreement pursuant to Section 11.2(b) (Termination for Convenience), then (i) the Amended and Restated License Agreement shall

continue according to its terms; and (ii) Codexis shall pay to Shell any amount previously paid to Codexis pursuant to Section 3.3 that, as of the effective date of such termination, has not been spent on performing Codexis' obligations under the Program and does not correspond to a non-cancellable commitment with respect to such performance; provided, however, that in the event that Shell terminates this Amended and Restated Research Agreement prior to the [*] anniversary of the Effective Date pursuant to Section 11.3 (Material Breach), 12.2 (Assignment) or 12.4 (Force Majeure) (provided such termination pursuant to Section 12.4 occurs no sooner than [*] after the applicable force majeure event and provided further that Codexis is the Party affected by such force majeure event and provides Shell with the full particulars thereof as soon as it becomes aware of the same (including its best estimate of the likely extent and duration of the interference with its activities), and Codexis can represent in good faith that it can resume its performance under this Amended and Restated Research Agreement, no later than nine (9) months after such force majeure event), Codexis shall refund the exclusivity fee paid by Shell to Codexis in accordance with Section 3.2 on a *pro rata* basis based on the quotient obtained by dividing (A) the duration of time remaining between the effective date of such termination and the [*] anniversary of the Effective Date by (B) [*]. By way of example, if Shell terminates this Amended and Restated Research Agreement pursuant to Section 11.3 on the fourth (4th) anniversary of the Effective Date, then Codexis shall refund [*] to Shell.

(b) The following Articles and Sections of this Amended and Restated Research Agreement shall survive its termination or expiration: Articles 4, 5, 10 and 12, and Sections 2.4(a)(iii), 6.1, 8.3, 9.4, 9.5 and 11.4.

(c) Termination of this Amended and Restated Research Agreement for any reason shall be without prejudice to (i) the rights and obligations of the Parties set forth in any Articles or Sections which provide by their terms performance by either Party subsequent to termination; (ii) Codexis' rights to receive all payments accrued under Article 3 (subject to Section 11.4(a) above, if applicable), or (iii) any other remedies which either Party may otherwise have.

ARTICLE 12
GENERAL PROVISIONS

12.1 Relationship of the Parties. The Parties shall perform their obligations under this Amended and Restated Research Agreement as independent contractors and nothing contained in this Amended and Restated Research Agreement shall be construed to make either Codexis or Shell partners, joint venturers, principals, representatives or employees of the other. In particular, without limiting the generality of the foregoing, (a) none of the FTEs assigned by Codexis to perform its obligations under the Program shall be construed, or deemed to be, employees of Shell, and (b) none of the personnel assigned by Shell to perform its obligations under the Program shall be construed, or deemed to be, employees of Codexis. Neither Party shall have any right, power or authority, express or implied, to bind the other. Shell and Codexis agree that this Amended and Restated Research Agreement shall not constitute a partnership for tax purposes. In the event, however, that this Amended and Restated Research Agreement were so construed, then Shell and Codexis agree to be excluded from the provisions of Subchapter K of the United States Internal Revenue Code of 1986, as amended.

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12.2 Assignments. Except as expressly provided herein, neither this Amended and Restated Research Agreement nor any interest hereunder may be assigned, nor any other obligation delegated, by a Party without the prior written consent of the other Party; provided, however, that each Party shall have the right to assign this Amended and Restated Research Agreement without consent to an Affiliate of such Party or to any successor in interest to such Party by way of merger, consolidation or other business reorganization or the sale of all or substantially all of its assets and further provided that in the event the non-assigning Party believes, in its sole discretion, that the assignment is to a direct competitor of such non-assigning Party in the Field of Use, such non-assigning Party may immediately terminate this Amended and Restated Research Agreement. This Amended and Restated Research Agreement shall be binding upon successors and permitted assigns of the Parties. Any assignment not in accordance with this Section 12.2 will be null and void.

12.3 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments and to do all such other acts as may be necessary or appropriate in order to carry out the express provisions of this Amended and Restated Research Agreement.

12.4 Force Majeure. Neither Party shall be liable to the other for failure or delay in the performance of any of its obligations under this Amended and Restated Research Agreement for the time and to the extent such failure or delay is caused by earthquake, riot, civil commotion, war, terrorist acts, strike, flood, or governmental acts or restriction that is beyond the control of the respective Party. The Party affected by such force majeure will provide the other Party with full particulars thereof as soon as it becomes aware of the same (including its best estimate of the likely extent and duration of the interference with its activities), and will use commercially reasonable efforts to overcome the difficulties created thereby and to resume performance of its obligations as soon as practicable. If the performance of any obligation under this Amended and Restated Research Agreement is delayed owing to a force majeure for any continuous period of more than ninety (90) days, either Party may terminate this Amended and Restated Research Agreement by giving to the other Party not less than ten (10) business days notice in writing. In the event of any force majeure event that delays the performance of either Party under this Amended and Reseated Research Agreement, the Term shall automatically be extended for the period of time that such performance is delayed. In the event of any force majeure event that delays Codexis' performance under this Amended and Restated Research Agreement, Shell's payment obligations pursuant to Section 3.3 shall be suspended for the duration of such delay. Notwithstanding anything to the contrary, the payment of money shall not be subject to this Section 12.4.

12.5 Captions. The captions to this Amended and Restated Research Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Amended and Restated Research Agreement.

12.6 Governing Law. This Amended and Restated Research Agreement will be governed by and interpreted in accordance with the laws of the State of New York, applicable to contracts entered into and to be performed wholly within the State of New York, excluding conflict of laws principles.

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12.7 Dispute Resolution; Jurisdiction and Venue. Any controversy or claim (**"Dispute**"), whether based on contract, tort, statute or other legal or equitable theory (including but not limited to any claim of fraud, misrepresentation or fraudulent inducement or any question of validity or effect of this Amended and Restated Research Agreement including this clause) arising out of or related to this Amended and Restated Research Agreement (including but not limited to any amendments, annexations, and extensions) or the breach thereof shall be settled by consultation between the Parties initiated by written notice of the Dispute to the other Party. In the event such consultation does not settle the Dispute within thirty (30) days after written notice of such Dispute, then the Dispute shall be settled by binding arbitration in accordance with the then current commercial arbitration rules of the American Arbitration Association and this provision. The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. §§ 1-16 (the "**Act**") to the exclusion of any provision of state law inconsistent therewith or which would produce a different result. Judgment upon the award rendered by the arbitrator may be entered by any court having jurisdiction. The arbitration shall be held in Chicago, Illinois. The Parties shall attempt in good faith to agree on a single neutral arbitrator with relevant industry experience to conduct the arbitration. If the Parties do not agree on a single neutral arbitrator within ten (10) days after receipt of an arbitration notice, each Party shall select one (1) arbitrator and the two (2) Party-selected arbitrators shall select a third arbitrator with relevant industry experience to constitute a panel of three (3) arbitrators to conduct the arbitration in accordance with the Act. In the event that only one of the Parties selects an arbitrator, then such arbitrator shall be entitled to act as the sole arbitrator to resolve the Dispute or any and all unresolved issues subject to the arbitration. Each and all arbitrator(s) of the arbitration panel conducting the arbitration must and shall agree to render an opinion within twenty (20) days after the final hearing before the panel. The arbitrator(s) shall determine the claim of the Parties and render a final award in accordance with the substantive law of the State of New York, excluding the conflicts provisions of such law. The arbitrator shall set forth the reasons for the award in writing. The terms hereof shall not limit any obligations of a Party to defend, indemnify or hold harmless another Party against court proceedings or other claims, losses damages or expenses. All proceedings and decisions of the arbitrator(s) shall be deemed Confidential Information of each of the Parties, and shall be subject to Article 6 hereof. Notwithstanding anything herein to the contrary, a Party may seek a temporary restraining order or a preliminary injunction from any court of competent jurisdiction in order to prevent immediate and irreparable injury, loss, or damage on a provisional basis, pending the decision of the arbitrator(s) on the ultimate merits of any Dispute. Each Party agrees that all Disputes arising under this Amended and Restated Research Agreement shall be brought only against the Parties of this Agreement, as applicable and neither Party shall name an Affiliate company, except as may be required by Article 12.2.

12.8 Notices and Deliveries. Any notice, request, delivery, approval or consent required or permitted to be given under this Amended and Restated Research Agreement will be in writing and will be deemed to have been sufficiently given on the date of receipt if delivered in person, transmitted by telecopier (receipt verified) or by express courier service (signature required) or five (5) days after it was sent by registered letter, return receipt requested (or its equivalent), provided that no postal strike or other disruption is then in effect or comes into effect within two (2) days after such mailing, to the Party to which it is directed at its address or facsimile number shown below or such other address or facsimile number as such Party will have last given by notice to the other Party.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

If to Codexis, addressed to:

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Attention: Chief Executive Officer
Telephone: [*]
Fax: [*]

with a copy to:

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Attention: General Counsel
Telephone: [*]
Fax: [*]

If to Shell, addressed to:

Shell Oil Products (US)
910 Louisiana Street
Houston, TX 77002
Attention: [*]
Telephone: [*]
Fax: [*]

with a copy to:

Shell Oil Company
Associate General Counsel, Intellectual Property Services
910 Louisiana
Houston, TX 77002
Fax: [*]

12.9 No Consequential Damages. EXCEPT PURSUANT TO ARTICLE 10 OR AS A RESULT OF ANY CONFIDENTIALITY AGREEMENT ENTERED INTO BETWEEN CODEXIS AND A SHELL EMPLOYEE IN ACCORDANCE WITH SECTION 2.5(b), IN NO EVENT WILL A PARTY OR ANY OF ITS RESPECTIVE AFFILIATES BE LIABLE TO THE OTHER PARTY OR ANY OF ITS AFFILIATES FOR SPECIAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUE, OR CLAIMS OF CUSTOMERS OF ANY OF THEM OR OTHER THIRD PARTIES FOR SUCH DAMAGES.

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12.10 Waiver. A waiver by a Party of any of the terms and conditions of this Amended and Restated Research Agreement in any instance will not be deemed or construed to be a waiver of such term or condition for the future, or of any subsequent breach hereof. All rights, remedies, undertakings, obligations and agreements contained in this Amended and Restated Research Agreement will be cumulative and none of them will be in limitation of any other remedy, right, undertaking, obligation or agreement of either Party.

12.11 Severability. When possible, each provision of this Amended and Restated Research Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Amended and Restated Research Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective but only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or of this Amended and Restated Research Agreement. The Parties will make a good faith effort to replace the invalid or unenforceable provision with a valid one which in its economic effect is most consistent with the invalid or unenforceable provision.

12.12 Counterparts. This Amended and Restated Research Agreement may be executed simultaneously in counterparts, any one of which need not contain the signature of more than one Party but both such counterparts taken together will constitute one and the same agreement.

12.13 Compliance with Laws. Each Party shall comply with all applicable statutes, laws, regulations, enactments, directives and ordinances and all injunctions, decisions, directives, judgments and orders of any governmental authority in effect at any time in connection with the performance of its obligations under this Amended and Restated Research Agreement.

12.14 Amendment. No amendment of any provision of this Amended and Restated Research Agreement shall be binding on a Party to this Amended and Restated Research Agreement unless consented to in writing and signed by such Party. Signatures and writings in an electronic form do not constitute or create a writing signed by a Party.

[Signature page follows]

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IN WITNESS WHEREOF, the Parties have caused this Amended and Restated Research Agreement to be executed by their respective duly authorized officers as of the Execution Date, each copy of which will for all purposes be deemed to be an original.

CODEXIS, INC.

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President

EQUILON ENTERPRISES LLC

DBA SHELL OIL PRODUCTS US

By: /s/ David A. Sexton
Name: David A. Sexton
Title: President

EXHIBIT 1.21

Research Plans

[*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT 1.32

Year One Final Milestone

[*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT 2.8(E)(II)

Form Sponsored Research Agreement

SPONSORED RESEARCH AGREEMENT

THIS SPONSORED RESEARCH AGREEMENT ("**Agreement**"), is made as of the __ day of _____, 200_ (the "**Effective Date**"), by and between **CODEXIS, INC.**, with principal place of business at 200 Penobscot Drive, Redwood City, California 94063 USA ("**Codexis**"), and _____, with a principal place of business at_____ ("**Company**").

In consideration of the mutual agreement between the parties hereto, it is agreed as follows:

Section 1. PRINCIPAL INVESTIGATOR AND RESEARCH PLAN

(a) Company will undertake the research project entitled "_____" ("**Study**"), in accordance with the research plan attached hereto as **Exhibit A** (the "**Research Plan**"), under the direction of _____ (the "**Principal Investigator**"). Any change in the scope of work to be performed with respect to the Study requires Codexis' prior written approval. The work will be commenced on _____, 200_ and will be completed within five (5) days thereafter.

(b) Company represents and warrants that it is in possession of all necessary equipment to accomplish the Study, including the specific equipment listed in Section __ of the Research Plan (the "will be due and payable in accordance with Section 3.6 only after the achievement of") and it will utilize such Necessary Equipment in the conduct of the Study.

(c) Company and Principal Investigator agree that all work for the Study will be performed at Company's facility located at_____ ("**Facility**"). Company and Principal Investigator agree that a single representative of Codexis (the "**Codexis Representative**") and a single representative (the "**Shell Representative**") of Equilon Enterprises LLC dba Shell Oil Products US ("**Shell**") shall be present at all times during the conduct of the Study at the Facility, which shall be scheduled at the mutual convenience of the Principal Investigator, the Codexis Representative and the Shell Representative.

Section 2. CODEXIS ENZYMES.

(a) Codexis will provide Principal Investigator with sufficient amounts of its [proprietary enzymes or microbes] identified on **Exhibit B** hereto (the "**Codexis Enzymes**") to conduct the Study as provided in the Research Plan. Company and Principal Investigator agree

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to use the Codexis Enzymes in strict accordance with the Research Plan, and not for any other purpose. Company and Principal Investigator shall not attempt to reverse engineer, deconstruct, in any way determine the structure or composition of any of the Codexis Enzymes, or modify the Codexis Enzymes in any way. Codexis Enzymes will not be used in humans under any circumstances, and will not be transferred to others outside of Principal Investigator's laboratory except with Codexis' prior written approval. Upon termination or expiration of the Study, Company and Principal Investigator will return any and all remaining quantities of Codexis Enzymes to Codexis.

(b) Company and Principal Investigator understand and agree that the Codexis Enzymes are experimental in nature and should be used with caution and prudence since all of their characteristics are not known. THE CODEXIS ENZYMES ARE SUPPLIED WITH NO WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(c) Company and Principal Investigator acknowledge and agree that the Codexis Enzymes are and shall remain the sole property of Codexis.

(d) Company and Principal Investigator agree, to the extent permitted by governing law, to hold Codexis harmless from any claims or liability resulting from use of the Codexis Enzymes, except insofar as such claims or liability arise out of the gross negligence or wrongdoing of Codexis.

Section 3. PAYMENT

The total cost to Codexis for the work under this Agreement (inclusive of direct and indirect costs) is_____ Dollars (US$_____.00) to be paid to Company as follows: **[FILL IN SPECIFIC PAYMENT TERMS; WHAT FOLLOWS IS A SAMPLE APRPOACH]** (a) _____ Dollars (US$_____.00) promptly after signing of this Agreement by each of the parties and the Principal Investigator, and receipt by Codexis (attn: Accounts Payable) of an invoice requesting such payment; and (b) _____ Dollars (US$_____.00) promptly after receipt by Codexis (attn: _____) of a satisfactory final report for the Study (as set forth in Section 4) and receipt by Codexis (attn: Accounts Payable) of an invoice requesting such payment. Each check shall include the title of the Study and the name of the Company and the Principal Investigator.

Section 4. REPORT

(a) Principal Investigator will provide a written report to Codexis (to the attention of_____) regarding the work performed under the Research Plan, such report to be due no later than two (2) weeks after such work is completed. All reports shall be considered Confidential Information of Codexis (as defined below), and shall not be provided or disclosed to any party other than Codexis, except that a single copy of the report shall also be sent to Shell at the following address: _____.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Section 5. TERM OF AGREEMENT AND TERMINATION

(a) This Agreement shall be in effect from the Effective Date through _____, 200_, unless earlier terminated as provided herein. The parties may extend the term of this Agreement by mutual written agreement.

(b) Either party may terminate this Agreement, such termination to be effective upon thirty (30) days' prior written notice to the other party, for any reason. If such termination is by Company, it shall refund any unused funding promptly to Codexis.

(c) If the Principal Investigator leaves the Company or is unable or unwilling to perform the Services required under this Agreement, Codexis may terminate this Agreement, with such termination to be effective thirty (30) days after written notice to the Company. The Company shall refund any unused funding promptly to Codexis.

(d) If Codexis terminates this Agreement pursuant to Section 5(c), Codexis will reimburse Company for all noncancellable obligations and expenses incurred through the date of termination. The provisions of Sections 2(b), 2(c), 2(d), 6, 7, 8, 10 and this Section 5(d) will survive expiration or termination of this Agreement.

Section 6. CONFIDENTIALITY

(a) Company and Principal Investigator agree to maintain in confidence and not to disclose or transfer to any other party the following: the existence and terms and conditions of this Sponsored Research Agreement; the Research Plan; all data and results of the work under this Agreement; all know-how, practices, processes, patentable and non-patentable inventions arising from the work under this Agreement; and all other information disclosed by Codexis to Company or Principal Investigator under this Agreement, whether in written, oral, graphic or electronic form (collectively referred to as "**Confidential Information**"). Company and Principal Investigator will use the Confidential Information only for purposes of conducting the Study and for no other purpose. Notwithstanding the foregoing, Company may disclose the Confidential Information to those of its employees who need to know such Confidential Information to perform its obligations under this Agreement, provided that such employees agree in writing to be bound by the terms of this Agreement.

(b) Disclosure of Confidential Information shall not be precluded if such disclosure is required under court order or applicable law or regulation, provided that Company first gives written notice to Codexis of the need for such disclosure so that Codexis may seek a protective order or other confidential treatment (if available).

(c) Upon termination or expiration of the Study, Company and Principal Investigator will return any and all Confidential Information to Codexis, except that Principal Investigator may retain one (1) copy solely for archival purposes.

(d) Notwithstanding anything to the contrary, Company and Principal Investigator may disclose (i) Confidential Information to the Shell Representative during the conduct of the Study, and (ii) the written report to Shell pursuant to Section 4(a).

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(e) Without limiting the generality of the foregoing, Company and Principal Investigator acknowledge and agree that Confidential Information may not be published or disclosed in any scientific or other publication and this Section 6 precludes any such scientific or other publication or disclosure of any Confidential Information.

Section 7. PATENTS AND INVENTIONS

(a) At no additional cost, Company and Principal Investigator hereby assign to Codexis title to all know-how, all patentable and non-patentable inventions, and all other proprietary technology arising from the work under this Agreement or resulting from use of the Codexis Enzymes. Company warrants that each Company employee and other persons, if any, performing work under this Agreement is under obligation to assign all rights in any know-how, all patentable and non-patentable inventions, and all other proprietary technology resulting from the use of the Codexis Enzymes to Company. Codexis is free to use for any purposes information or materials supplied to it under this Agreement, and shall have the option (but not the obligation) to file at its own expense patent applications describing and claiming inventions it believes to be patentable. Company and Principal Investigator agree to cooperate, at Codexis' expense, in filing such applications (if any) and in the prosecution and maintenance of them before patent offices.

(b) No right or license is granted to Company or Principal Investigator with respect to the Codexis Enzymes, either expressly or by implication, other than the right to use the same for the work under the Research Plan in accordance with this Agreement.

Section 8. USE OF NAME

Company and Principal Investigator agree not to use Codexis' name without prior consent, except as necessary to identify Company as the Study site and Principal Investigator when required or desired to do so.

Section 9. NOTICES

Any notice to be given pursuant to this Agreement must be in writing and sent by telecopy or by overnight courier to the addresses set forth below. Notice shall be deemed to have been received on the same business day as telecopy (with machine confirmation of receipt) or three (3) business days following delivery of the document(s) to the courier.

If to Company:

_____
_____
_____
_____
_____

If to Codexis

Codexis, Inc.
Attn: General Counsel
200 Penobscot Drive
Redwood City, California 94063
Telecopy: [*]

With a copy to:

_____
Telecopy: _____

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Section 10. ASSIGNMENT

This Agreement shall not be assigned or otherwise transferred by Company or Principal Investigator to any party without Codexis' prior written consent.

Section 11. MISCELLANEOUS

(a) This Agreement, including **Exhibits A and B**, contains the entire agreement of the parties on the subject matter to which it relates, and supersedes all prior and contemporaneous proposals, discussions, and writings, by and between the parties, on such subject. No commitment or modification hereof shall be valid or binding upon the parties unless made in writing and signed by authorized representatives of the parties. No delay or omission by any party in exercising any right hereunder, at law or in equity, or any otherwise, shall impair any such right, or be construed as a waiver thereof, or any acquiescence therein, nor shall any single or partial exercise of any right preclude other or further exercise thereof, or the exercise of any other right. This Agreement shall be governed by the laws of _____, without regard to its conflict of laws principles.

(b) Company and Principal Investigator represent to Codexis that the terms of this Agreement do not violate and will not cause a breach of the terms of any other agreement or, to Company or Principal Investigator's knowledge, any applicable law, decree or regulations, to which Company or Principal Investigator is a party or by which it is subject or bound. Company and Principal Investigator further covenant that Company and Principal Investigator will not enter into any third party agreement where the terms of this Agreement will violate or cause a breach of the terms of such third party agreement.

(c) This Agreement may be executed in counterparts, each of which shall be treated as an original, but which together shall constitute a single instrument.

(d) No Third Party Beneficiaries. The parties to this Agreement do not intend that any terms hereof should be enforceable by any person who is not a party to this Agreement.

IN WITNESS WHEREOF, a duly authorized representative of each party has executed this Agreement as of the Effective Date set forth above.

CODEXIS, INC.		**[COMPANY]**	
By:	_____	By:	_____
Name:	_____	Name:	_____
Its:	_____	Its:	_____

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

I am the Principal Investigator for the Study described in this Agreement. By signing below, I indicate that I have reviewed this Agreement prior to committing to undertake the Study and agree to comply with the terms and conditions of this Agreement.

Principal Investigator Signature: _____

Name: _____

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE A

Series D Stock Purchase Agreement

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE B

Form of Series E Stock Purchase Agreement

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE C

Form of Amended and Restated License Agreement

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE D

Warrant Agreement

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

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AMENDED AND RESTATED LICENSE AGREEMENT

THIS AMENDED AND RESTATED LICENSE AGREEMENT, together with exhibits attached hereto, (the "**Amended and Restated License Agreement**") is entered into as of the Execution Date and effective as of November 1, 2006 (the "**Effective Date**"), by and between **Equilon Enterprises LLC dba Shell Oil Products US**, a Delaware limited liability company, having a place of business at 910 Louisiana Street, Houston, Texas 77002 ("**Shell**"), and **Codexis, Inc.**, a Delaware corporation, having a place of business at 200 Penobscot Drive, Redwood City, California 94063 ("**Codexis**"). Shell and Codexis may each be referred to herein individually as a "**Party**" or, collectively, as the "**Parties**."

RECITALS

WHEREAS, Shell and Codexis entered into a certain License Agreement effective as of November 1, 2006, pursuant to which Codexis granted to Shell certain license rights under Codexis Patent Rights, Codexis Licensed Technology, Program Patent Rights and Program Technology (in each case, as defined below) so that Shell can manufacture, use, sell, offer for sale and import Licensed Products, including without limitation through the grant of sublicense rights for such purposes under such Codexis Patent Rights, Codexis Licensed Technology, Program Patent Rights and Program Technology.

WHEREAS, the Parties desire to amend and restate such License Agreement, all on the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the promises and undertakings set forth herein, the Parties agree as follows:

ARTICLE 1

DEFINITIONS

Capitalized terms not otherwise defined herein will have the meaning set forth below.

1.1 "Acquired Technology" has the meaning set forth in the Amended and Restated Research Agreement.

1.2 "Affiliate" means,

(a) with respect to Codexis, any business entity controlling, controlled by, or under common control with Codexis. For the purpose of this Section 1.2(a) only, "control" means (i) the possession, directly or indirectly, of the power to direct the management or policies of a business entity, whether through the ownership of voting securities, by contract or otherwise, or (ii) the ownership, directly or indirectly, of at least fifty percent (50%) of the voting securities or other ownership interest of a business entity; provided that, if local law requires a minimum

percentage of local ownership, control will be established by direct or indirect beneficial ownership of one hundred percent (100%) of the maximum ownership percentage that may, under such local law, be owned by foreign interests; and

(b) with respect to Shell, Royal Dutch Shell plc and any company (other than Shell) which is from time to time directly or indirectly affiliated with Royal Dutch Shell plc. For the purpose of this Section 1.2(b) only, a particular company is (i) directly affiliated with another company or companies if that latter company beneficially owns or those latter companies together beneficially own fifty per cent or more of the voting rights attached to the ownership interest of the particular company; and (ii) is indirectly affiliated with company or companies if a series of companies can be specified, beginning with that latter company or companies and ending with the first mentioned company, so related that each company of the series (except the latter company or companies) is directly affiliated with one or more of the companies earlier in the series.

1.3 "Amended and Restated Research Agreement" means the Amended and Restated Collaborative Research Agreement entered into by Shell and Codexis on the Execution Date and effective as of the Effective Date.

1.4 "Biocatalyst" means an enzyme or a Microbe that can enzymatically catalyze a particular chemical reaction, and which enzyme or Microbe arose out of the Program.

1.5 "Biomass" means organic, non-fossil, plant-derived matter available on a renewable basis, including, for example, crops and/or trees grown or harvested for use for fuel and/or fuel additive production, agricultural food and feed crops, aquatic plants and, in each case, organic wastes derived from the foregoing, including municipal wastes (e.g., newspapers).

1.6 "Codexis Licensed Technology" means any Technology and Materials Controlled by Codexis as of the earlier of the expiration or termination of the Program that is necessary or useful for the practice of the Program Technology; provided that the Codexis Licensed Technology shall expressly exclude the Shuffling Technology.

1.7 "Codexis Patent Rights" means all Patents Controlled by Codexis covering Codexis Licensed Technology.

1.8 "Confidential Information" means any and all non-public and proprietary Information that is specifically designated as such and that is disclosed by either Party to the other in written or other similar form in connection with this Amended and Restated License Agreement and that, if orally or visually disclosed, shall be summarized in writing in detail and specifically designated as proprietary and such summary delivered to the receiving Party within thirty (30) days after such disclosure.

1.9 "Contract Year" means a year beginning on the Effective Date, or an anniversary of the Effective Date during the Term, and ending one (1) year after such respective date.

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1.10 "Control" means, with respect to an item, Information, Patent or an intellectual property right, possession of the ability, whether arising by ownership or license or otherwise, to grant a license or sublicense as provided for herein under such item, Information, Patent or right without violating the terms of any written agreement with any Third Party.

1.11 "Execution Date" means November 1, 2007.

1.12 "First Sale" means the first transfer by Shell or a Shell Affiliate or a sublicensee of a Licensed Product to (a) Shell or a Shell Affiliate (where Shell or such Shell Affiliate is the end-user of such Licensed Product) or (b) a Third Party, in exchange for cash, or cash equivalent to which value can be assigned after production of the [*] (i) [*] of Licensed Product in the [*] Field of Use, (ii) [*] of Licensed Product in the [*] Field of Use, and (iii) [*] of Licensed Product in the [*] Field of Use.

1.13 "Fuel Field of Use" means the conversion of fermentable sugars derived from Biomass into liquid fuel and/or liquid fuel additives. For purposes of this Section 1.13 only, (a) "liquid" means [*], and (b) "fuel additive" means [*].

1.14 "Index" means the U.S. Department of Labor, Bureau of Labor Statistics published Index: [*]. In the event that such index becomes unavailable, the Parties will agree on an index to be used in substitution of such unavailable index within sixty (60) days after the date that such index is no longer available.

1.15 "Information" means data, results, evaluations, inventories, Microbes, show-how, know-how, computer chip and programs, processes, machines, biological chemicals, intermediates, trade secrets, techniques, methods, developments, materials, methods of analysis, compositions of matter, copyrights or other information.

1.16 "Intermediate Field of Use" means the conversion of Biomass into fermentable sugars, such sugars to be converted into (a) liquid fuel and/or liquid fuel additives and/or (b) Lubricants. For purposes of this Section 1.16 only, (i) "liquid" means [*], and (ii) "fuel additive" means [*]. For purposes of clarification, the Intermediate Field of Use shall not include the Fuel Field of Use or the Lubricant Field of Use.

1.17 "Licensed Field of Use" means the Fuel Field of Use, the Intermediate Field of Use and the Lubricant Field of Use.

1.18 "Licensed Product" means any product, the manufacture, use, offer for sale, sale or importation of which, (a) is covered by one or more claims within the Program Patent Rights or the Codexis Patent Rights which has not expired and has not been held invalid or unenforceable by a court of competent jurisdiction from which no appeal can be taken, or (b) utilizes the Program Technology or the Codexis Licensed Technology.

1.19 "Lubricant" means [*].

1.20 "Lubricant Field of Use" means the conversion of fermentable sugars derived from Biomass into a Lubricant.

1.21 "Microbes" means whole (live or dead) prokaryotic organisms and/or yeasts and/or fungi or extracts thereof. Microbes shall not include land plants, including nonseed plants (Bryophytes, Tracheophytes) such as liverworts, mosses, ferns, and seed plants, such as gymnosperms and angiosperms (monocot and dicots); and/or non-land plants, including Prasinophytes, Chlorophyceae, Trebouxiouphyceae, Ulvophyceae, Chlorokybales, Streptophyta, Klebsormidiales, Zygnematales, Charales, Coleochaetales and Embryophytes.

1.22 "Monthly Index Average" means the sum of the monthly values for the Index in the relevant period divided by the number of months in such period.

1.23 "Patents" means all patent applications and patents, whether domestic or foreign, covering patentable inventions within the Codexis Licensed Technology or the Program Technology, as applicable, all continuations, continuations in part and divisions of such patent applications and of patent applications from which such patents issued, all patents issuing from any of such patent applications, and all renewals, reissues, re-examinations and extensions of any of such patents.

1.24 "Program" has the meaning set forth in the Amended and Restated Research Agreement.

1.25 "Program Licensed Technology" means any Technology and Materials developed under the Amended and Restated Research Agreement related to the Program; provided, however, that Program Licensed Technology expressly excludes Shuffling Technology.

1.26 "Program Patent Rights" means the Patents covering Program Technology set forth onExhibit 1.26 attached hereto, as updated by the Parties from time to time in accordance with Section 4.1.

1.27 "Royalty Adjustment Date" means the date of First Sale of the first Licensed Product in the Licensed Field of Use or each anniversary of such date, as the context requires.

1.28 "Shuffling" means the characterization, development and optimization of genes and proteins for commercial uses through the recombination and/or rearrangement and/or mutation of genetic material for the creation of genetic diversity.

1.29 "Shuffling Technology" means any and all techniques, methodologies, processes, materials and/or instrumentation Controlled by Codexis, including without limitation any and all patent rights, know-how, confidential information and materials relating thereto, that, in each case, relates to Shuffling, and generally applicable screening techniques, methodologies, or processes of using the resulting genetic material to identify potential usefulness.

1.30 "Technology and Materials" means and includes all materials, technology, technical information, intellectual property, know-how, expertise and trade secrets related to the Licensed Field of Use.

1.31 "Third Party" means any party other than Codexis, Shell or Affiliates of either Party.

ARTICLE 2

LICENSE GRANT

2.1 Grants to Shell. Subject to the terms and conditions of this Amended and Restated License Agreement:

(a) Codexis hereby grants to Shell, under all of Codexis' rights and interest in Program Patent Rights and Program Licensed Technology, an exclusive, worldwide, royalty-free license to manufacture and have manufactured (such have manufactured right subject to Section 2.4) Biocatalysts developed under the Program solely for the purpose of using such Biocatalysts in the manufacture of a Licensed Product in the Licensed Field of Use, such use in accordance with the license granted by Codexis to Shell under Section 2.1(b) and such license to include the right to grant sublicenses provided that any such grant of a sublicense is made together with a grant of a sublicense under the rights granted to Shell pursuant to Section 2.1(b); and

(b) Codexis hereby grants to Shell, under all of Codexis' rights and interest in Program Patent Rights and Program Licensed Technology, an exclusive, worldwide, royalty-bearing license, including the right to grant sublicenses, to manufacture, have manufactured, use, sell, offer for sale and import any Licensed Product in the Licensed Field of Use; and

(c) Codexis hereby grants to Shell, under all of Codexis' rights and interest in Codexis Patent Rights and Codexis Licensed Technology, a non-exclusive, worldwide, royalty-free (subject to Acquired Technology Third Party Payments in Section 3.2) license to:

(i) manufacture and have manufactured (such have manufactured right subject to Section 2.4) Biocatalysts developed under the Program solely for the purpose of using such Biocatalysts in the manufacture of a Licensed Product in the Licensed Field of Use, such use in accordance with the license granted by Codexis to Shell under Section 2.1(b) and such license to include the right to grant sublicenses provided that any such grant of a sublicense is made together with a grant of a sublicense under the rights granted to Shell pursuant to Section 2.1(b); and

(ii) manufacture, have manufactured, use, sell, offer for sale and import any Licensed Product in the Licensed Field of Use, such license to include the right to grant sublicenses provided that any such grant of a sublicense is made together with a grant of a sublicense under the rights granted to Shell pursuant to Section 2.1(b).

For purposes of clarification, Shell and Codexis acknowledge and agree that use of a Biocatalyst to manufacture a Licensed Product may generate by-products and other materials other than Licensed Products, and that the disposition of such by-products and other materials, whether by sale, use or disposal, is the exclusive responsibility and solely within the control and discretion of Shell, without any obligation to Codexis.

2.2 Reservation. Notwithstanding anything to the contrary, Codexis retains the right to use Program Patent Rights and Program Technology for internal research purposes in the Licensed Field of Use in accordance with the terms and conditions of the Amended and Restated Research Agreement.

2.3 Limitation.

(a) Except as expressly provided in this Amended and Restated License Agreement and the Amended and Restated Research Agreement, no right, title, or interest is granted by Codexis to Shell.

(b) Notwithstanding anything to the contrary, the licenses granted by Codexis to Shell under Section 2.1 do not include, and Shell shall not acquire by virtue of such license grants, any right in, to or under the Shuffling Technology.

2.4 Right of First Negotiation – Biocatalyst Manufacturing. In the event Shell, either itself or through an Affiliate of Shell, seeks to out-source the manufacture of any particular Biocatalyst developed under the Program, Shell shall provide written notice to Codexis and Codexis shall have a right of first negotiation for the manufacture of such particular Biocatalyst, under the terms and conditions of a separate Biocatalyst supply agreement which will be negotiated. The date of Codexis' receipt of such written notice will be the start of a one hundred twenty (120) day period during which, upon Codexis' election, the terms and conditions of such supply agreement will be negotiated. If mutually acceptable terms and conditions have not been agreed prior to the end of such one hundred twenty (120) day period, Shell, either itself or through an Affiliate of Shell, will be free to negotiate with Third Parties for the manufacture of such particular Biocatalyst, but may not enter into any agreement for such manufacture under terms and conditions that are less favorable to Shell (or its Affiliate) than the terms and conditions last offered to Codexis. For purposes of clarification, in the event that Shell grants a sublicense right under the Program Patent Rights or the Codexis Patent Rights to a Third Party pursuant to Section 2.1, Shell shall use best efforts to include similar rights of negotiation in favor of Codexis in any such sublicense.

ARTICLE 3

PAYMENTS, REPORTS AND RECORDS

3.1 Consideration.

(a) In consideration of the rights and license granted herein, Shell shall pay to Codexis [*] cents per gallon of Licensed Product, where such Licensed Product is sold or

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

transferred in exchange for cash or cash equivalent or other consideration to which value can be assigned for use in the Intermediate Field of Use, by either Shell or a Shell Affiliate or a sublicensee to (1) Shell or a Shell Affiliate (where Shell or such Shell Affiliate is the end-user of such Licensed Product) or (2) a Third Party, in each case after the First Sale (in all cases, the "**Intermediate Royalty**"); provided that the Intermediate Royalty shall be adjusted on each Royalty Adjustment Date according to changes in the Index as set forth below:

(i) The initial adjustment shall be made on the date of First Sale of the first Licensed Product in the Licensed Field of Use by multiplying the initial Intermediate Royalty by (A/B), where A = the Monthly Index Average during the most recent twelve (12) month period for which final, corrected data are available preceding the date of First Sale of such first Licensed Product in the Licensed Field of Use, and B = the Monthly Index Average between November 1, 2007 and the most recent date for which final, corrected data are available prior to the date of First Sale of such Licensed Product.

(ii) After the year following the date of First Sale of the first Licensed Product in the Licensed Field of Use, the Intermediate Royalty shall be adjusted annually on each Royalty Adjustment Date by multiplying the then-current Intermediate Royalty by (X/Y), where X = the Monthly Index Average during the most recent twelve (12) month period preceding such Royalty Adjustment Date for which final, corrected data are available, and Y = the Monthly Index Average for the twelve (12) month period beginning sixteen (16) months prior to such Royalty Adjustment Date and ending twenty-seven (27) months prior to such Royalty Adjustment Date.

The adjustments to the Intermediate Royalty shall be rounded to the nearest [*]. The Intermediate Royalty obtained after each adjustment shall be the Intermediate Royalty due from the applicable Royalty Adjustment Date until the subsequent Royalty Adjustment Date.

By way of example, if the Monthly Index Average during the twelve (12) month period preceding the date of First Sale of the first Licensed Product in the Licensed Field of Use for which final, corrected data are available equals two hundred twenty (220) and the Monthly Index Average between November 1, 2007 and the most recent date for which final, corrected data are available prior to the date of First Sale of such Licensed Product equals two hundred (200), then the Intermediate Royalty shall be adjusted by an amount equal to 220/200, or 1.1, such that the Intermediate Royalty for the subsequent twelve (12) month period shall equal [*] cents per gallon of Licensed Product in the Intermediate Field of Use times 1.1, or [*] cents per gallon of Licensed Product in the Intermediate Field of Use.

By way of further example, if the Monthly Index Average during the most recent twelve (12) month period preceding the subsequent Royalty Adjustment Date for which final, corrected data are available equals two hundred nine (209), and the Monthly Index Average for the twelve (12) month period beginning sixteen (16) months prior to such Royalty Adjustment Date and ending twenty-seven (27) months prior to such Royalty Adjustment Date equals two hundred twenty (220), then on such Royalty Adjustment Date the Intermediate Royalty shall be adjusted by an amount equal to 209/220, or 0.95, such that, if the Intermediate Royalty on such Royalty

Adjustment Date is equal to [*] cents per gallon, the Intermediate Royalty for the subsequent twelve (12) month period shall equal [*] cents per gallon of Licensed Product in the Intermediate Field of Use times 0.95, or [*] cents per gallon of Licensed Product in the Intermediate Field of Use.

(b) Subject to the last sentence of this paragraph, in consideration of the rights and license granted herein, Shell shall pay to Codexis [*] cents per gallon of Licensed Product, where such Licensed Product is sold or transferred in exchange for cash or cash equivalent or other consideration to which value can be assigned for use in the Fuel Field of Use, by either Shell or a Shell Affiliate or a sublicensee to (1) Shell or a Shell Affiliate (where Shell or such Shell Affiliate is the end-user of such Licensed Product) or (2) a Third Party, in each case after the First Sale (in all cases, the "**Fuel Royalty**"). Notwithstanding the foregoing, Shell and Codexis acknowledge and agree that as of Execution Date, there is insufficient data available to definitively determine the appropriate royalty rate for the manufacture, use, offer for sale, sale or importation of Licensed Product(s) in the Fuel Field of Use. The Parties thus agree to engage in negotiations regarding such royalty on or before [*]; provided, however, that, if the Parties are unable to agree upon such royalty rate after such negotiations, the royalty rate shall equal [*] cents per gallon of such Licensed Product; provided, further, that the Fuel Royalty shall be adjusted on each Royalty Adjustment Date according to changes in the Index as set forth below.

(i) The initial adjustment shall be made on the date of First Sale of the first Licensed Product in the Licensed Field of Use by multiplying the initial Fuel Royalty by (A/B), where A = the Monthly Index Average during the most recent twelve (12) month period for which final, corrected data are available preceding the date of First Sale of such first Licensed Product in the Licensed Field of Use, and B = the Monthly Index Average between November 1, 2007 and the most recent date for which final data are available prior to the date of First Sale of such Licensed Product.

(ii) After the year following the date of First Sale of the first Licensed Product in the Licensed Field of Use, the Fuel Royalty shall be adjusted annually on each Royalty Adjustment Date by multiplying the then-current Fuel Royalty by (X/Y), where X = the Monthly Index Average during the most recent twelve (12) month period preceding such Royalty Adjustment Date for which final, corrected data are available, and Y = the Monthly Index Average for the twelve (12) month period beginning sixteen (16) months prior to such Royalty Adjustment Date and ending twenty-seven (27) months prior to such Royalty Adjustment Date.

The adjustments to the Fuel Royalty shall be rounded to the nearest [*]. The Fuel Royalty obtained after each adjustment shall be the Fuel Royalty due from the applicable Royalty Adjustment Date until the subsequent Royalty Adjustment Date.

By way of example, if the Monthly Index Average during the twelve (12) month period preceding the date of First Sale of the first Licensed Product in the Licensed Field of Use for which final, corrected data are available equals two hundred twenty (220) and the Monthly Index Average between November 1, 2007 and the most recent date for which final, corrected data are available prior to the date of First Sale of such Licensed Product equals two hundred (200), then the Fuel Royalty shall be adjusted by an amount equal to 220/200, or 1.1, such that the Fuel

Royalty for the subsequent twelve (12) month period shall equal [*] cents per gallon of Licensed Product in the Fuel Field of Use times 1.1, or [*] cents per gallon of Licensed Product in the Fuel Field of Use.

By way of further example, if the Monthly Index Average during the most recent twelve (12) month period preceding the subsequent Royalty Adjustment Date for which final, corrected data are available equals two hundred nine (209), and the Monthly Index Average for the twelve (12) month period beginning sixteen (16) months prior to such Royalty Adjustment Date and ending twenty-seven (27) months prior to such Royalty Adjustment Date equals two hundred twenty (220), then on such Royalty Adjustment Date the Fuel Royalty shall be adjusted by an amount equal to 209/220, or 0.95, such that, if the Fuel Royalty on such Royalty Adjustment Date is equal to [*] cents per gallon, the Fuel Royalty for the subsequent twelve (12) month period shall equal [*] cents per gallon of Licensed Product in the Fuel Field of Use times 0.95, or [*] cents per gallon of Licensed Product in the Fuel Field of Use.

(c) Shell and Codexis acknowledge and agree that Codexis will initiate work to develop Program Patent Rights and Program Licensed Technology with respect to Licensed Product(s) in the Lubricant Field of Use only after an appropriate royalty rate for such Licensed Products [*] by the Parties and, as of Execution Date, there is insufficient data available to definitively determine the appropriate royalty rate for the manufacture, use, offer for sale, sale or importation of Licensed Product(s) in the Lubricant Field of Use. The Parties thus agree to engage in negotiations regarding such royalty [*]. Notwithstanding, Codexis agrees to grant a right for the Lubricant Field of Use in similar scope to Section 2.1 at an agreed upon price per gallon or percentage of gross revenues.

(d) Shell shall notify Codexis promptly, in writing, of the date of the First Sale for each Licensed Product and, in the case where such First Sale is made by a sublicensee of Shell or a Shell Affiliate, the identity of such sublicensee.

(e) Beginning with the date of the First Sale of any Licensed Product, Shell, within ninety (90) days after the end of each calendar quarter after such date, shall provide to Codexis a statement of royalties due to Codexis pursuant to Sections 3.1(a), 3.1(b) and/or 3.1(c) and, together with such statement, the payments due to Codexis pursuant to such Sections 3.1(a), 3.1(b) and/or 3.1(c). All such reports will be held as Confidential Information in accordance with Article 5.

3.2 Third Party Payments. [*].

3.3 Mode of Payment. All payments made pursuant to this Amended and Restated License Agreement shall be made by direct wire transfer of United States Dollars in immediately available funds in the requisite amount to such bank account as Codexis may from time to time designate by written notice to Shell. To the extent permitted under applicable law, the Parties shall use diligent efforts to utilize any exemption available to minimize any taxes, fees or other charges imposed on payments to Codexis under the terms of this Amended and Restated License Agreement.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

3.4 Late Payment Interest. Any payment due and payable to Codexis under the terms and conditions of this Amended and Restated License Agreement made by Shell after the date such payment is due to be paid shall bear interest as of the day after the date such payment was due to be paid and shall continue to accrue such interest until payment of the amount due is made. The interest rate to be applied to any payment not paid when due shall be equal to the lesser of either (a) two percent (2%) above the prime rate as reported by Citibank, New York, New York on the date such payment was due to be paid, or (b) the maximum rate permitted by applicable law on such date, and shall apply until the date that payment is issued by Shell to Codexis.

3.5 Records.

(a) Shell will keep, and will require its Affiliates and sublicensees to keep, complete, true and accurate books of account and records for the purpose of showing the derivation of all Royalties payable to Codexis under this Amended and Restated License Agreement. Said books and records will be kept for at least three (3) years following the end of the calendar year to which they pertain and shall be available, after not less than fifteen (15) business days prior written notice, for inspection by an independent public accountant, certified in the U.S. and affiliated with an internationally recognized accounting firm selected by Codexis and reasonably acceptable to Shell, for the purpose of verifying statements provided to Codexis pursuant to Section 3.1(e) regarding royalties due to Codexis. Such independent public accountant will be obliged by Codexis to treat all materials made available for inspection by Shell as Confidential Information in accordance with Article 5.

(b) In the event that the independent public accountant described in Section 3.5(a) alleges that an underpayment or an overpayment has been made, and the Parties agree on the amount of such underpayment or such overpayment, Shell, in the event of an underpayment, will pay to Codexis the full amount of such underpayment within ten (10) days after such agreement between the Parties or, in the event of an overpayment, may credit the amount of such overpayment against any future payment due to Codexis under this Amended and Restated License Agreement. Codexis shall bear the full cost of the performance of any audit performed under Section 3.5(a), unless such audit discloses a variance to the detriment of Codexis of more than ten percent (10%) (determined on an aggregate basis for all payments covered by the audit), and the Parties agree that such variance is correct, in which case, Shell shall bear the full cost of the performance of such audit.

(c) Notwithstanding the provisions of Section 10.7, in the event that the independent public accountant described in Section 3.5(a) alleges that an underpayment or an overpayment has been made, and the Parties do not agree on the amount of such underpayment or such overpayment, the Parties, within thirty (30) days, shall mutually select a U.S.-based internationally recognized public accounting firm which shall review the amount in dispute (including supporting documentation) and resolve such dispute within thirty (30) days after selection of such firm. Such U.S.-based internationally recognized public accounting firm will be obliged to Codexis to treat all materials made available for inspection as Confidential Information of Codexis or Shell in accordance with Article 5. In the event that such U.S.-based internationally

recognized public accounting firm determines that an underpayment or an overpayment has been made, Shell, in the event of an underpayment, will pay to Codexis the full amount of such underpayment within ten (10) days after such agreement between the Parties or, in the event of an overpayment, may credit the amount of such overpayment against any future payment due to Codexis under this Agreement. Each Party shall pay fifty percent (50%) of the expenses for such public accounting firm; provided, however, that if the audit performed by such accounting firm discloses a variance to the detriment of Codexis of more than ten percent (10%) (determined on an aggregate basis for all payments covered by the audit), Shell shall reimburse Codexis for Codexis' portion of the expenses for such audit with fifteen (15) days after Codexis' written request for such reimbursement and, in addition, the cost of the initial audit by Codexis pursuant to Section 3.5(a). The recommendation of such U.S.-based internationally recognized public accounting firm pursuant to this Section 3.5(c) shall be final and binding upon the Parties.

3.6 Payment Term. Unless otherwise terminated as provided herein, Shell's payment obligations to Codexis pursuant to Section 3.1 of this Amended and Restated License Agreement shall continue:

(a) In the Intermediate Field of Use until the later of (i) twenty (20) years after the First Sale of a Licensed Product in the Intermediate Field of Use or (ii) the expiration of the last to expire patent included in the Codexis Patent Rights and Program Patent Rights;

(b) In the Fuel Field of Use until the later of (i) twenty (20) years after the First Sale of a Licensed Product in the Fuel Field of Use or (ii) the expiration of the last to expire patent included in the Codexis Patent Rights and Program Patent Rights; and

(c) In the Lubricant Field of Use until the later of (i) twenty (20) years after the First Sale of a Licensed Product in the Lubricant Field of Use or (ii) the expiration of the last to expire patent included in the Codexis Patent Rights and Program Patent Rights;

provided, however, in the event of the expiration of this Amended and Restated License Agreement as a result of expiration of the last to expire patent included in the Codexis Patent Rights and Program Patent Rights, or in the event of termination by Shell pursuant to Section 9.2, all licenses granted by Codexis to Shell pursuant to Section 2.1 shall remain in place in perpetuity.

ARTICLE 4

PATENT MATTERS

4.1 Provisions Concerning Filing, Prosecution and Maintenance of Patent Rights. The filing, prosecution and maintenance of Program Patent Rights during the term of this Amended and Restated License Agreement will be governed by Article 5 of the Amended and Restated Research Agreement. From time to time during the term of this Amended and Restated License Agreement, but at least once per each Contract Year, the Parties will update the list of patent applications and patents within the Program Patent Rights set forth on Exhibit 1.26 based on the filing, issuance or lapse of the relevant patent applications and patents.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

4.2 Notice. Each Party shall promptly provide written notice to the other Party of any (a) alleged infringement by a Third Party of any Patents licensed to Shell hereunder, or (b) claim of infringement by a Third Party that the activities of a Party infringe patent rights of such Third Party. Together with such notice, the notifying Party shall provide the other Party with all available evidence of such alleged infringement which is not under confidentiality obligations with respect to a Third Party.

4.3 Enforcement by Codexis. During the term of this Amended and Restated License Agreement, Codexis shall have the right, but not the obligation, to institute legal action against a Third Party for infringement of any Patents licensed to Shell hereunder. Codexis shall bear the entire cost of such legal action, and shall be entitled to retain the entire amount of any recovery.

4.4 Enforcement by Shell. In the event that Codexis elects not to initiate legal action for infringement of any Patents exclusively licensed to Shell hereunder, Shell, after not less than twenty (20) business days prior written notice to Codexis, may initiate legal action for patent infringement and, to the extent necessary to initiate and maintain such legal action, join Codexis as a party plaintiff; provided that credible evidence of continuing infringement exists. Shell shall have the right to compromise, litigate, settle or otherwise dispose of any such legal action; provided, however, Shell shall keep Codexis informed of the status of any such legal action in a timely manner, and shall obtain Codexis' prior written consent to such part of any settlement which contemplates payment or other action by Codexis or has a material adverse effect on Codexis' business or the Program Patent Rights or the Codexis Patent Rights. In any such legal action, Codexis shall have the right, but not the obligation, at Codexis' expense, to be represented by counsel of Codexis' choosing.

4.5 Defense. [*] shall, at [*] expense, initiate legal action in defense of any claim of infringement by a Third Party of patents owned or otherwise controlled by such Third Party by the practice of the Program Licensed Technology or the Codexis Licensed Technology in the Licensed Field of Use. [*] shall have the right to compromise, litigate, settle or otherwise dispose of any such legal action; provided, however, [*] shall keep [*] informed of the status of any such legal action in a timely manner, and shall not settle any such legal action under terms which would contemplate payment or other similar action by [*] or would have a material adverse effect on [*] business with respect to the Program Patent Rights or the Codexis Patent Rights in the Field of Use without [*] prior written consent. In any such legal action, [*] shall have the right, but not the obligation, at [*] expense (such expense not to be reimbursed by [*]), to be represented by counsel of [*] choosing.

4.6 Cooperation. In any suit or legal action to enforce and/or defend the Program Patent Rights or the Codexis Patent Rights, the Party not in control of such suit or legal action, at the reasonable request of the controlling Party, shall cooperate in all respects and, to the extent reasonably possible, have its employees testify when requested and make available relevant documents and information, including, for example, records, papers, samples, specimens, and the like.

ARTICLE 5

CONFIDENTIALITY

5.1 Confidentiality Obligations. The Parties agree that, during the term of this Amended and Restated License Agreement and for five (5) years thereafter, all Confidential Information disclosed by one Party to the other Party hereunder shall be received and maintained by the receiving Party in strict confidence, shall not be used for any purpose other than the purposes expressly permitted by this Amended and Restated License Agreement, and shall not be disclosed to any Third Party except to the extent necessary to grant a sublicense to the rights granted to Shell hereunder; provided that such disclosure is made under obligations of confidentiality and non-use no less restrictive than the obligations placed upon Shell herein. The Parties acknowledge and agree that the structure and composition of each particular Biocatalyst developed under the Program shall be deemed Confidential Information of Codexis, subject to the confidentiality and non-use obligations set forth in this Article 5. The obligations of confidentiality and non-use set forth in the first sentence of this Section 5.1 will not apply to any information to the extent that it can be established by the receiving Party that such information:

(a) was already known to the receiving Party or its Affiliates at the time of disclosure without restriction as to confidentiality or use, as evidenced by competent evidence;

(b) was generally available to the public or was otherwise part of the public domain at the time of its disclosure to the receiving Party or its Affiliates;

(c) became generally available to the public or otherwise becomes part of the public domain after its disclosure and other than through any fault of the receiving Party or its Affiliates in breach of this Amended and Restated License Agreement;

(d) was subsequently lawfully disclosed to the receiving Party or its Affiliates by a Third Party without restriction as to confidentiality or use and other than in contravention of a confidentiality obligation of such Third Party to the disclosing Party or its Affiliates; or

(e) is independently developed by employees or agents of the receiving Party or its Affiliates without reliance upon or access to Confidential Information of the disclosing Party or its Affiliates, as evidenced by competent evidence.

Each Party represents and warrants that it has or will obtain written agreements from each person who has a need to know the other Party's Confidential Information, which agreements will obligate such person to obligations of confidentiality and non-use no less restrictive than the obligations set forth herein, and to assign to such Party all inventions made by such person during the course of performing any tasks associated with the other Party's Confidential Information. Further, each Party represents and warrants that those of its employees which have a need to know the other Party's Confidential Information are bound by obligations of confidentiality and non-use to the employer Party. Either Party may disclose Confidential Information of the other Party to such Party's Affiliates or to sublicensees or, in the case of Shell, Third Parties for purposes of having any Biocatalyst manufactured in accordance with

Section 2.4; provided that any such Affiliate, sublicensee or Third Party agrees prior to such disclosure to be bound by obligations of confidentiality and non-use no less restrictive than those assumed by such disclosing Party herein.

Notwithstanding this Article 5 the receiving Party may disclose any Confidential Information of the disclosing Party that the receiving Party is required to disclose under applicable laws or regulations or an order by a court or other regulatory body having competent jurisdiction; provided, however, that except where impracticable, the receiving Party shall give the disclosing Party reasonable advance notice of such disclosure requirement (which shall include a copy of any applicable subpoena or order) and shall afford the disclosing Party a reasonable opportunity to oppose, limit or secure confidential treatment for such required disclosure. In the event of any such required disclosure, the receiving Party shall disclose only that portion of the Confidential Information of the disclosing Party that the receiving Party is legally required to disclose and, in the event a protective order is obtained by the disclosing Party, nothing in this Article 5 shall be construed to authorize the receiving Party to use or disclose any disclosing Party Confidential Information to parties other than such court or regulatory body or beyond the scope of the protective order. Codexis and its Affiliates may disclose this Amended and Restated License Agreement if required to be disclosed by applicable State or federal tax or securities laws to the extent, and only to the extent, such laws require such disclosure and Codexis provides Shell a reasonable opportunity to review and comment on the general text of such disclosure.

ARTICLE 6

OTHER AGREEMENTS

6.1 Other Agreements. Concurrently with the execution of this Amended and Restated License Agreement, Codexis and Shell shall enter into the Amended and Restated Research Agreement and the Series E Stock Purchase Agreement (as defined in the Amended and Restated Research Agreement).

6.2 Entire Agreement. This Amended and Restated License Agreement, the Amended and Restated Research Agreement, the Series D Stock Purchase Agreement (as defined in the Amended and Restated Research Agreement), and the Series E Stock Purchase Agreement are the sole agreements with respect to the subject matter hereof and supersede all other prior and contemporaneous agreements and understandings between the Parties with respect to same, including without limitation that certain Non-Binding Term Sheet by and between Codexis and Shell dated as of [*], that certain Collaborative Research Agreement by and between Codexis and Shell effective as of November 1, 2006, as amended, and that certain License Agreement by and between Codexis and Shell effective as of November 1, 2006.

ARTICLE 7

REPRESENTATIONS AND WARRANTIES

7.1 Representations by Codexis. Codexis represents and warrants that, as of the Execution Date: (a) it is duly organized and validly existing under the laws of the jurisdiction of

its incorporation and has full corporate power and authority to enter into this Amended and Restated License Agreement; (b) it is in good standing with all relevant governmental authorities; (c) it has taken all corporate actions necessary to authorize the execution and delivery of this Amended and Restated License Agreement and the performance of its obligations under this Amended and Restated License Agreement; (d) the performance of its obligations under this Amended and Restated License Agreement do not conflict with, or constitute a default under its charter documents, any contractual obligation of Codexis or any court order; (e) it has the right to make the license grants set forth in this Amended and Restated License Agreement; and (f) there are no preexisting agreements, commitments or other arrangements with any Third Party, including the United States government or any agency thereof, which will inhibit or restrict Codexis from carrying out the terms of this Amended and Restated License Agreement. Codexis further represents and warrants that it shall not, during the term of this Amended and Restated License Agreement, without the prior written consent of Shell (i) provide any Third Party, including the United States government or agency thereof, any claim to rights relating to the Codexis Licensed Technology (to the extent such Codexis Licensed Technology is licensed to Shell hereunder) or the Program Technology, or (ii) enter into any agreements, commitments or other arrangement with any Third Party, including the United States government or agency thereof, in each case that would (1) prohibit Codexis from fulfilling its obligations hereunder or (2) be inconsistent with the rights granted by Codexis to Shell under Section 2.1 and its obligations under Articles 4 and 5.

7.2 Representations by Shell. Shell represents and warrants that, as of the Execution Date: (a) it is duly organized and validly existing under the laws of the jurisdiction of its formation and has full corporate power and authority to enter into this Amended and Restated License Agreement; (b) it is in good standing with all relevant governmental authorities; (c) it has taken all corporate actions necessary to authorize the execution and delivery of this Amended and Restated License Agreement and the performance of its obligations under this Amended and Restated License Agreement; and (d) the performance of its obligations under this Amended and Restated License Agreement do not conflict with, or constitute a default under its charter documents, any contractual obligation of Shell or any court order.

7.3 Covenants of Shell. Shell covenants that it will not, without the prior written consent of Codexis, (a) reverse engineer, deconstruct or in any way determine, or attempt to reverse engineer, deconstruct or in any way determine, the structure or composition of any Biocatalyst licensed to Shell hereunder; provided, however, that Shell may determine the structure and composition of a particular Biocatalyst developed under the Program for the purpose of manufacturing or having manufactured such a particular Biocatalyst solely for the purpose of manufacturing or having manufactured a Licensed Product in the Licensed Field of Use in accordance with the rights granted by Codexis to Shell pursuant to Section 2.1; or (b) modify or otherwise create any derivative of any such Biocatalyst; or (c) do indirectly, either through a Third Party or a Shell Affiliate, any of the activities contained in (a) or (b) above that Shell itself agrees not to do. Notwithstanding the foregoing, in the event that Shell desires to modify or otherwise create any derivative of any particular Biocatalyst developed under the Program and licensed by Codexis hereunder and Codexis notifies Shell in writing within one hundred twenty (120) days after receipt by Codexis of a written request by Shell to modify or

otherwise create any derivative of any such Biocatalyst that it is unwilling or unable to perform such modification or otherwise create such derivative under commercially reasonable terms, then Shell shall be relieved of its obligations under this Section 7.3 with respect to such particular Biocatalyst.

7.4 Disclaimer of Warranties. EXCEPT AS SPECIFICALLY SET FORTH IN THIS ARTICLE 7, NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, NON-INFRINGEMENT, AND ANY OTHER STATUTORY WARRANTY.

ARTICLE 8

INDEMNIFICATION

8.1 Indemnification by Codexis. Codexis shall fully indemnify, defend and hold Shell and its Affiliates, and their respective agents, employees, consultants, officers and directors (the "**Shell Indemnitees**") harmless from and against any and all liability, damage, loss, cost or expense (including reasonable attorneys' fees) arising out of Third Party claims or suits (collectively "**Losses")** arising from: (a) breach by Codexis of any of its representations and warranties under this Amended and Restated License Agreement; (b) failure to perform its obligations under this Amended and Restated License Agreement; (c) infringement of patent rights owned or otherwise controlled by such Third Party by the practice of the Program Patent Rights or the Program Licensed Technology pursuant to the terms of this Amended and Restated License Agreement; provided that Codexis' indemnification obligations pursuant to this Section 8.1(c) shall not extend to any intellectual property provided to Codexis or any Affiliate of Codexis by or on behalf of Shell or any Affiliate of Shell, or to improvements made by Codexis or any Affiliate of Codexis to such intellectual property; provided, further, that for purposes of this Section 8.1(c) only, "Losses" shall not include attorneys' fees; provided, further, that Codexis' indemnification obligations pursuant to this Section 8.1(c) shall not extend to any patent rights owned or otherwise controlled by a Third Party identified in a written notice by Codexis to Shell that would be infringed by the practice of the Program Patent Rights or the Program Licensed Technology, such notice to be provided to Shell within ninety (90) days after Codexis becomes aware of such patent rights and prior to the later of (1) the expiration or termination of the Amended and Restated Research Agreement and (2) the entry by Shell or a Shell Affiliate into a non-alterable commitment with respect to the use of the allegedly infringing Program Patent Rights or Program Licensed Technology; provided, further, that Codexis' indemnification obligations pursuant to this Section 8.1(c) shall be limited for any particular Loss [*] where, for purposes of clarity, such [*] shall not include attorneys' fees; and provided, further, that the aggregate indemnification obligations of Codexis pursuant to this Section 8.1(c) shall be capped for all Losses at [*] where, for purposes of clarity, such [*] shall not include attorneys' fees; or (d) the negligence or willful misconduct of Codexis or its Affiliates, and its or their directors, officers, agents, employees, sublicensees or consultants; except in any such case for Losses to the extent, and only to the extent, reasonably attributable to a breach by Shell of its representations and warranties set forth in this Amended and Restated License Agreement or the Shell Indemnitees having committed an act or acts of gross negligence, recklessness or willful misconduct.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

8.2 Indemnification by Shell. Shell shall fully indemnify, defend and hold Codexis and its Affiliates, and their respective agents, employees, consultants, officers and directors (the "**Codexis Indemnitees**") harmless from and against any and all Losses arising from: (a) breach by Shell of any of its representations and warranties under this Amended and Restated License Agreement; (b) failure to perform its obligations under this Amended and Restated License Agreement; (c) the use under this Amended and Restated License Agreement by Shell or a Shell Affiliate of any Biocatalyst except to the extent such Losses relate to the infringement of any intellectual property right of a Third Party; (d) the use under this Amended and Restated License Agreement by a Third Party sublicensee of any Biocatalyst except to the extent such Losses relate to the infringement of any intellectual property right of a Third Party; provided, however, that Shell's indemnification obligations pursuant to this Section 8.2(d) shall be limited for any particular Loss incurred as a result of activities conducted (i) in the Intermediate Field of Use to [*] and (ii) in the Fuel Field of Use to [*]; and provided, further, that the aggregate indemnification obligations of Shell pursuant to this Section 8.2(d) shall be capped for all Losses incurred as a result of activities conducted (i) in the Intermediate Field of Use at [*] and (ii) in the Fuel Field of Use at [*]; or (e) infringement of patent rights owned or otherwise controlled by such Third Party by the practice of intellectual property provided to Codexis or any Affiliate of Codexis by or on behalf of Shell or any Affiliate of Shell, or to improvements made by Codexis or any Affiliate of Codexis to such intellectual property; or (f) the negligence or willful misconduct of Shell or its Affiliates, and its or their directors, officers, agents, employees, sublicensees, or consultants; except in any such case for Losses to the extent, and only to the extent, reasonably attributable to a breach by Codexis of its representations and warranties set forth in this Amended and Restated License Agreement or the Codexis Indemnitees having committed an act or acts of gross negligence, recklessness or willful misconduct. Shell shall use commercially reasonable efforts to require Third Party sublicensees to indemnify Shell and Codexis against Losses due to such Third Party sublicensee's use of any Biocatalyst sublicensed to such Third Party sublicensee pursuant to this Amended and Restated License Agreement.

8.3 Environmental. Notwithstanding any other indemnification obligation in this Amended and Restated License Agreement, and in addition to any rights the Parties may have under relevant federal, state, or local statutory and common laws, each Party shall fully indemnify, defend and hold the other Party and its Affiliates harmless from and against any and all Losses incurred as a result of Environmental Matters; provided, however, that this indemnification shall not apply to the extent any such Losses result from the acts or omissions of personnel of the indemnified Party or its Affiliates which occur at any site of the indemnified Party or the site of any supplier of the indemnified Party. For purposes of this Section 8.3, "**Environment Matters**" shall mean:

(a) the operation by the indemnifying Party, its Affiliates, sublicensees, or subcontractors of any site or facility in a manner that is not in compliance with and in violation of any Environmental Law;

(b) any release of Hazardous Materials into the environment by the indemnifying Party, its Affiliates, sublicensees, or its subcontractors; or any Hazardous Materials that have been Disposed of at a site of the indemnifying Party or any site of any supplier (other than Codexis as supplier) of the indemnifying Party or other site or facility operated by the indemnifying Party, its Affiliates or its subcontractors, as the term Disposed is defined in applicable Environmental Laws;

(c) any failure to obtain or maintain all permits and provide all notices required by Environmental Laws for the lawful operation of any site of the indemnifying Party or any site of any supplier of the indemnifying Party or other facilities or sites operated by the indemnifying Party, its Affiliates, sublicensees, or its subcontractors; and

(d) any other actual or alleged act or omission relating to the handling or disposal of Hazardous Materials at any site of the indemnifying Party or any site of any supplier of the indemnifying Party or the handling or disposal of Hazardous Materials by the indemnifying Party, its Affiliates, sublicensees, or its subcontractors at any other facility or site.

For purposes of this Section 8.3, "**Environmental Law**" shall mean any treaty, law, ordinance, regulation or order of any jurisdiction, relating to environmental matters, including, but not limited to, matters governing air pollution; water pollution; the use, handling, reporting, release, storage, transport, or disposal of Hazardous Materials as defined herein above; exposure to or discharge of Hazardous Materials; occupational safety and health; and public health.

For purposes of this Section 8.3, "**Hazardous Materials**" includes, but is not limited to, air contaminant, water pollutant, hazardous material, hazardous waste, hazardous substance, toxic and hazardous substance, medical waste, infectious waste, "chemicals know to the State of California to cause cancer or reproductive toxicity", asbestos and PCB's, as such substances are defined under any applicable federal, state or local statute, regulation, rule or ordinance

8.4 Notification of Claim; Conditions to Indemnification Obligations.

(a) Except with respect to Shell's right to receive indemnification under Section 8.1(c), as a condition to a Party's right to receive indemnification under this Article 8, that Party shall: (a) promptly notify ("**Claim Notice**") the other Party as soon as it becomes aware of a claim or suit for which indemnification may be sought pursuant hereto (provided that the failure to give a Claim Notice promptly shall not prejudice the rights of an indemnified Party except to the extent that the failure to give such prompt notice materially adversely affects the ability of the indemnifying Party to defend the claim or suit); (b) cooperate with the indemnifying Party in the defense of such claim or suit, at the expense of the indemnifying Party; and (c) if the indemnifying Party confirms in writing to the indemnified Party its intention to defend such claim or suit within fifteen (15) business days of receipt of the Claim Notice, permit the indemnifying Party to control the defense of such claim or suit, including without limitation the right to select defense counsel; provided that if the indemnifying Party fails to (i) provide such confirmation in writing within the fifteen (15) business day period; or (ii) diligently and reasonably defend such suit or claim at any time, its right to defend the claim or suit shall terminate immediately in the case of (i) and otherwise upon twenty (20) days' written notice to the indemnifying Party and the

indemnified Party may assume the defense of such claim or suit at the sole expense of the indemnifying Party and may settle or compromise such claim or suit without the consent of the indemnifying Party. In no event, however, may the indemnifying Party compromise or settle any claim or suit in a manner which admits fault or negligence on the part of any indemnified Party or that otherwise materially affects such indemnified Party's rights under this Amended and Restated License Agreement or requires any payment by an indemnified Party without the prior written consent of such indemnified Party. Except as expressly provided above, the indemnifying Party will have no liability under this Article 8 with respect to claims or suits settled or compromised without its prior written consent. The indemnified Party shall have the right, but not the duty, at its sole cost and expense, to participate in the defense of any claim or suit hereunder with attorneys of its own selection without relieving the indemnifying Party of any of its obligations hereunder.

(b) As a condition to Shell's right to receive indemnification under Section 8.1(c), Shell shall (i) promptly provide Codexis with a Claim Notice as soon as it becomes aware of a claim or suit for which indemnification may be sought pursuant to Section 8.1(c) (provided that the failure to give a Claim Notice promptly shall not prejudice the rights of Shell except to the extent that the failure to give such prompt notice materially adversely affects the ability of Codexis to defend the claim or suit); (ii) cooperate with Codexis in the defense of any suit, action or proceeding alleging the infringement of the intellectual property rights of a Third Party by reason of the use of Program Patent Rights or Codexis Patent Rights in the manufacture, use or sale of a Licensed Product; and (iii) give to Codexis all authority (including the right to exclusive control of the defense of any such suit, action or proceeding and the exclusive right after consultation with Shell, to compromise, litigate, settle or otherwise dispose of any such suit, action or proceeding), at Codexis' expense, including by providing information and assistance necessary to defend or settle any such suit, action or proceeding; provided, however, Codexis shall keep Shell informed of the status of any such suit, action or proceeding in a timely manner, and must obtain Shell's prior written consent to such part of any settlement which contemplates payment or other action by Shell or has a material adverse effect on Shell's business or the use of Program Patent Rights or the Codexis Patent Rights. Codexis shall give Shell prompt written notice of the commencement of any such suit, action or proceeding or claim of infringement and will furnish Shell a copy of each communication relating to the alleged infringement. If it becomes necessary for defense of the suit, action or proceeding for Codexis to join Shell in any such suit, action or proceeding, Codexis may join Shell as a co-defendant if necessary or desirable, and thereafter Shell may participate in the prosecution of such suit, action or proceeding, at Shell's expense, and shall execute all documents and take all other actions, including giving testimony, which may reasonably be required in connection with such suit, action or proceeding.

ARTICLE 9

TERM AND TERMINATION

9.1 Term. The term of this Amended and Restated License Agreement will commence on the Effective Date and, unless earlier terminated in accordance with Section 9.2 or 9.3 below, shall continue in effect until the expiration of Shell's payments obligation to Codexis in accordance with Section 3.6.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

9.2 Termination Upon Material Breach. Material failure by a Party to comply with any of its obligations contained herein shall entitle the Party not in default to give to the Party in default written notice (a "**Default Notice**") specifying the nature of the default, requiring such defaulting Party to make good or otherwise cure such default, and stating the non-defaulting Party's intention to terminate this Amended and Restated License Agreement if such default is not cured. If such default is not cured within sixty (60) days after the date the Default Notice was sent, then the Party not in default shall be entitled, without prejudice to any other rights conferred on it by this Amended and Restated License Agreement, and in addition to any other remedies available to it by law or in equity, to terminate this Amended and Restated License Agreement by written notice of termination to the defaulting Party; provided, however, that if the Party receiving such Default Notice (the "**Disputing Party**") has a reasonable basis for disputing that it is in default and such Party provides written notice thereof to the other Party before the expiration of such sixty (60) day cure period, then the Disputing Party shall have the right, prior to the expiration of such sixty (60) day period, to submit such dispute for resolution in accordance with the provisions of Section 10.7; provided further that in the event that as a result of such resolution, the Party receiving such Default Notice is found to be in default and such default is not cured within forty-five (45) days after the date of such resolution, then the Party not in default shall be entitled, without prejudice to any other rights conferred on it by this Amended and Restated License Agreement, and in addition to any other remedies available to it by law or in equity, to terminate this Amended and Restated License Agreement by written notice of termination to the defaulting Party.

9.3 Termination by Shell. Shell shall have the right to terminate this Amended and Restated License Agreement at any time upon six (6) months prior written notice to Codexis.

9.4 Consequences of Expiration or Termination.

(a) The following Articles and Sections of this Amended and Restated License Agreement shall survive its termination or expiration: Articles 5, 8 and 10, and Sections 2.3, 3.5, 6.2, 7.3, 7.4 and 9.4. In addition, upon the expiration of this Amended and Restated License Agreement or in the event of termination by Shell pursuant to Section 9.2, Section 2.1 shall survive such expiration or termination, as the case may be.

(b) Termination of this Amended and Restated License Agreement for any reason shall be without prejudice to (i) the rights and obligations of the Parties set forth in any Articles or Sections which provide by their terms performance by either Party subsequent to termination; (ii) Codexis' rights to receive all payments accrued under Article 3 prior to the effective date of such termination, or (iii) any other remedies which either Party may otherwise have.

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ARTICLE 10

GENERAL PROVISIONS

10.1 Relationship of the Parties. The Parties shall perform their obligations under this Amended and Restated License Agreement as independent contractors and nothing contained in this Amended and Restated License Agreement shall be construed to make either Codexis or Shell partners, joint venturers, principals, representatives or employees of the other. Neither Party shall have any right, power or authority, express or implied, to bind the other. Shell and Codexis agree that this Amended and Restated License Agreement shall not constitute a partnership for tax purposes. In the event, however, that this Amended and Restated License Agreement were so construed, then Shell and Codexis agree to be excluded from the provisions of Subchapter K of the United States Internal Revenue Code of 1986, as amended.

10.2 Assignments. Neither Party may transfer or assign its rights and obligations under this Amended and Restated License Agreement without the prior written consent of the other Party; provided that either Party may transfer or assign its rights and obligations under this Amended and Restated License Agreement to a successor to all or substantially all of its business or assets relating to this Amended and Restated License Agreement whether by sale, acquisition, merger, operation of law or otherwise. Notwithstanding anything to the contrary, any transferee, assignee or successor of a Party shall agree in writing to be bound by the terms of this Amended and Restated License Agreement prior to the effective date of transfer or assignment of this Amended and Restated License Agreement and, thereafter, this Amended and Restated License Agreement shall be binding upon such transferee, assignee or successor. Any attempted transfer or assignment of this Amended and Restated License Agreement not in accordance with this Section 10.2 will be null and void.

10.3 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments and to do all such other acts as may be necessary or appropriate in order to carry out the express provisions of this Amended and Restated License Agreement.

10.4 Force Majeure. Except for the payment of money, neither Party shall be liable to the other for failure or delay in the performance of any of its obligations under this Amended and Restated License Agreement for the time and to the extent such failure or delay is caused by earthquake, riot, civil commotion, war, terrorist acts, strike, flood, or governmental acts or restriction that is beyond the control of the respective Party. The Party affected by such force majeure will provide the other Party with full particulars thereof as soon as it becomes aware of the same (including its best estimate of the likely extent and duration of the interference with its activities), and will use commercially reasonable efforts to overcome the difficulties created thereby and to resume performance of its obligations as soon as practicable.

10.5 Captions. The captions to this Amended and Restated License Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Amended and Restated License Agreement.

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10.6 Governing Law. This Amended and Restated License Agreement will be governed by and interpreted in accordance with the laws of the State of New York, applicable to contracts entered into and to be performed wholly within the State of New York, excluding conflict of laws principles.

10.7 Dispute Resolution; Jurisdiction and Venue. Any controversy or claim ("**Dispute**"), whether based on contract, tort, statute or other legal or equitable theory (including but not limited to any claim of fraud, misrepresentation or fraudulent inducement or any question of validity or effect of this Amended and Restated License Agreement including this clause) arising out of or related to this Amended and Restated License Agreement (including but not limited to any amendments, annexations, and extensions) or the breach thereof shall be settled by consultation between the Parties initiated by written notice of the Dispute to the other Party. In the event such consultation does not settle the Dispute within thirty (30) days after written notice of such Dispute, then the Dispute shall be settled by binding arbitration in accordance with the then current commercial arbitration rules of the American Arbitration Association and this provision. The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. §§ 1-16 (the "**Act**") to the exclusion of any provision of state law inconsistent therewith or which would produce a different result. Judgment upon the award rendered by the arbitrator may be entered by any court having jurisdiction. The arbitration shall be held in Chicago, Illinois. The Parties shall agree on a single neutral arbitrator with relevant industry experience to conduct the arbitration. If the Parties do not agree on a single neutral arbitrator within ten (10) days after receipt of an arbitration notice, each Party shall select one (1) arbitrator and the two (2) Party-selected arbitrators shall select a third arbitrator with relevant industry experience to constitute a panel of three (3) arbitrators to conduct the arbitration in accordance with the Act. In the event that only one of the Parties selects an arbitrator, then such arbitrator shall be entitled to act as the sole arbitrator to resolve the Dispute or any and all unresolved issues subject to the arbitration. Each and all arbitrator(s) of the arbitration panel conducting the arbitration must and shall agree to render an opinion within twenty (20) days after the final hearing before the panel. The arbitrator(s) shall determine the claim of the Parties and render a final award in accordance with the substantive law of the State of New York, excluding the conflicts provisions of such law. The arbitrator shall set forth the reasons for the award in writing. The terms hereof shall not limit any obligations of a Party to defend, indemnify or hold harmless another Party against court proceedings or other claims, losses damages or expenses. All proceedings and decisions of the arbitrator(s) shall be deemed Confidential Information of each of the Parties, and shall be subject to Article 5 hereof. Notwithstanding anything herein to the contrary, a party may seek a temporary restraining order or a preliminary injunction from any court of competent jurisdiction in order to prevent immediate and irreparable injury, loss, or damage on a provisional basis, pending the decision of the arbitrator(s) on the ultimate merits of any Dispute.

10.8 Notices and Deliveries. Any notice, request, delivery, approval or consent required or permitted to be given under this Amended and Restated License Agreement will be in writing and will be deemed to have been sufficiently given on the date of receipt if delivered in person, transmitted by telecopier (receipt verified) or by express courier service (signature required) or five (5) days after it was sent by registered letter, return receipt requested (or its equivalent), provided that no postal strike or other disruption is then in effect or comes into

effect within two (2) days after such mailing, to the Party to which it is directed at its address or facsimile number shown below or such other address or facsimile number as such Party will have last given by notice to the other Party.

If to Codexis, addressed to:

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Attention: Chief Executive Officer
Telephone: [*]
Fax: [*]

with a copy to:

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Attention: General Counsel
Telephone: [*]
Fax: [*]

If to Shell, addressed to:

Shell Oil Products (US)
910 Louisiana Street
Houston, TX 77002
Attention: [*]
Telephone: [*]
Fax: [*]

with a copy to:

Shell Oil Company
Associate General Counsel, Intellectual Property Services
910 Louisiana
Houston, TX 77002
Fax: [*]

10.9 No Consequential Damages. EXCEPT PURSUANT TO ARTICLE 8, IN NO EVENT WILL A PARTY OR ANY OF ITS RESPECTIVE AFFILIATES BE LIABLE TO THE OTHER PARTY OR ANY OF ITS AFFILIATES FOR SPECIAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUE, OR CLAIMS OF CUSTOMERS OF ANY OF THEM OR OTHER THIRD PARTIES FOR SUCH DAMAGES.

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10.10 Waiver. A waiver by a Party of any of the terms and conditions of this Amended and Restated License Agreement in any instance will not be deemed or construed to be a waiver of such term or condition for the future, or of any subsequent breach hereof. All rights, remedies, undertakings, obligations and agreements contained in this Amended and Restated License Agreement will be cumulative and none of them will be in limitation of any other remedy, right, undertaking, obligation or agreement of either Party.

10.11 Severability. When possible, each provision of this Amended and Restated License Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Amended and Restated License Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective but only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or of this Amended and Restated License Agreement. The Parties will make an effort to replace the invalid or unenforceable provision with a valid one which in its economic effect is most consistent with the invalid or unenforceable provision.

10.12 Counterparts. This Amended and Restated License Agreement may be executed simultaneously in counterparts, any one of which need not contain the signature of more than one Party but both such counterparts taken together will constitute one and the same agreement.

10.13 Compliance with Laws. Each Party shall comply with all applicable statutes, laws, regulations, enactments, directives and ordinances and all injunctions, decisions, directives, judgments and orders of any governmental authority in effect at any time in connection with the performance of its obligations under this Amended and Restated License Agreement.

10.14 Amendment. No amendment of any provision of this Amended and Restated License Agreement shall be binding on a Party to this Amended and Restated License Agreement unless consented to in writing and signed by such Party. Signatures and writings in an electronic form do not constitute or create a writing signed by a Party.

[Signature page follows]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, the Parties have caused this Amended and Restated License Agreement to be executed by their respective duly authorized officers as of the Execution Date, each copy of which will for all purposes be deemed to be an original.

CODEXIS, INC.

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President

EQUILON ENTERPRISES LLC

DBA SHELL OIL PRODUCTS US

By: /s/ David A. Sexton
Name: David A. Sexton
Title: President

[Signature Page to Amended and Restated License Agreement]

Exhibit 1.26

Program Patent Rights

[*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT 10.12

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

AGREEMENT

THIS AGREEMENT (the "**Agreement**"), effective as of August 1, 2006 (the "**Effective Date**"), is made and entered into by and between **Codexis, Inc.**, a Delaware corporation, having a place of business at 200 Penobscot Drive, Redwood City, California 94063, USA, ("**Codexis**"), **Codexis Laboratories India Private Limited**, a corporation organized and existing under the laws of India and having a place of business at G-01, Prestige Loka, 7/1 Brunton Road, Bangalore – 560 025, India ("**Codexis India**"), and **Arch Pharmalabs Limited**, a corporation organized and existing under the laws of India, having a place of business at H wing, 4th Floor, Tex Centre, Chandivali, Mumbai, 400072, India, ("**Arch**"). Codexis, Codexis India and Arch each may be referred to herein individually as a "**Party**," or collectively as the "**Parties**."

WHEREAS, Codexis and Arch entered into a certain Enzyme License and Supply Agreement, effective as of August 1, 2006, ("Enzyme Agreement") relating to the license of Codexis intellectual property covering Codexis Enzyme for an enzymatically catalyzed manufacturing process for [*], also known as TBIN and the supply of such Codexis Enzyme to Arch; and

WHEREAS, Arch and Codexis India entered into a certain Supply Agreement, effective as of August 1, 2006, ("Supply Agreement") relating to the supply of TBIN manufactured by Arch to Codexis India; and

WHEREAS, the Parties desire that in the event that if either the Enzyme Agreement or the Supply Agreement is terminated, the other such agreement is terminated in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and obligations set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Codexis, Codexis India and Arch agree as follows:

1. AGREEMENT

1.1 Termination of Enzyme Agreement. Subject to the terms and conditions of this Agreement, Codexis, Codexis India and Arch agree that, in the event that the Enzyme Agreement expires or is terminated, the Supply Agreement will terminate, effective immediately and without a requirement of written notice, such termination to be (a) effective as of the effective date of expiration or termination, as applicable, of the Enzyme Agreement, and (b) subject to any and all articles and sections of the Supply Agreement identified therein as surviving termination.

1.2 Termination of Supply Agreement. Subject to the terms and conditions of this Agreement, Codexis, Codexis India and Arch agree that, in the event that the Supply Agreement expires or is terminated, the Enzyme Agreement will terminate, effective immediately and

without a requirement of written notice, such termination to be (a) effective as of the effective date of expiration or termination, as applicable, of the Enzyme Agreement, and (b) subject to any and all articles and sections of the Enzyme Agreement identified therein as surviving termination.

2. DISPUTE RESOLUTION

2.1 Exclusive Dispute Resolution Mechanism. The Parties agree that the procedures set forth in this Article 2 shall be the exclusive mechanism for resolving any disputes, controversies, or claims (collectively, "**Disputes**") between the Parties that may arise from time to time pursuant to this Agreement relating to any Party's rights and/or obligations hereunder that cannot be resolved through good faith negotiation between the Parties.

2.2 Arbitration.

2.2.1 Any and all unresolved Disputes shall be exclusively and finally resolved by binding arbitration.

2.2.2 Any arbitration concerning a Dispute shall be conducted in New York, New York, United States of America, unless otherwise agreed to by the Parties in writing. Each and any arbitration shall be administered by the American Arbitration Association (the "**AAA**"), and shall be conducted in accordance with the Commercial Arbitration Rules of the AAA (the "**Rules**"), as such Rules may be amended from time to time.

2.2.3 Within ten (10) days after receipt of an arbitration notice from a Party, the Parties shall attempt in good faith to agree on a single neutral arbitrator with relevant industry experience to conduct the arbitration. If the Parties do not agree on a single neutral arbitrator within ten (10) days after receipt of an arbitration notice, each Party shall select one (1) arbitrator and the two (2) Party-selected arbitrators shall select a third arbitrator with relevant industry experience to constitute a panel of three (3) arbitrators to conduct the arbitration in accordance with the Rules. In the event that only one of the Parties selects an arbitrator, then such arbitrator shall be entitled to act as the sole arbitrator to resolve the Dispute or any all unresolved issues subject to the arbitration. Each and every arbitrator of the arbitration panel conducting the arbitration must and shall agree to render an opinion within twenty (20) days after the final hearing before the panel.

2.2.4 The decision or award of the arbitrator(s) shall be final, binding, and incontestable and may be used as a basis for judgment thereon in any jurisdiction. The Parties hereby expressly agree to waive the right to appeal from the decision of the arbitrator(s). Accordingly, there shall be no appeal to any court or other authority (government or private) from the decision of the arbitrator(s), and the Parties shall not dispute nor question the validity of such decision or award before any regulatory or other authority in any jurisdiction where enforcement action is taken by the Party in whose favor the decision or award is rendered, except in the case of fraud. The arbitrator(s) shall, upon the request of any Party, issue a written opinion of the findings of fact and conclusions of law and shall deliver a copy to each of the Parties.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Each Party shall bear its own costs and attorney's fees, and the Parties shall equally bear the fees, costs, and expenses of the arbitrator(s) and the arbitration proceedings; provided, however, that the arbitrator(s) may exercise discretion to award costs, including attorney's fees, to the prevailing Party. Without limiting any other remedies that may be available under applicable law, the arbitrator(s) shall have no authority to award provisional remedies of any nature whatsoever, or punitive, special, consequential, or any other similar form of damages.

2.3 Confidentiality. All proceedings and decisions of the arbitrator(s) shall be deemed confidential information of each of the Parties.

3. MISCELLANEOUS

3.1 Further Assurances. From time to time on and after the Effective Date, each Party shall at the reasonable request of another Party (a) deliver to the other Party such records, data, or other documents consistent with the provisions of this Agreement; (b) execute, and deliver or cause to be delivered, all assignments, consents, documents or further instruments of transfer or license; and (c) take or cause to be taken all other actions as such other Party may reasonably deem necessary or desirable in order for such Party to obtain the full benefits of this Agreement and the transactions contemplated hereby.

3.2 Limitation of Liability. IN NO EVENT SHALL ANY PARTY BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES OF ANOTHER PARTY ARISING OUT OF OR RELATED TO THIS AGREEMENT, HOWEVER CAUSED, UNDER ANY THEORY OF LIABILITY.

3.3 Governing Law. This Agreement shall be governed by, and construed and interpreted in accordance with, the internal laws of the State of New York, United States of America, without giving effect to any choice of law rule that would cause the application of the laws of any jurisdiction other than the internal laws of the State of New York to the rights and duties of the Parties.

3.4 Independent Contractors. The relationship of Codexis, Codexis India and Arch established by this Agreement is that of independent contractors. Nothing in this Agreement shall be constructed to create any other relationship between Codexis, Codexis India and Arch. No Party shall have any right, power, or authority to bind the other or assume, create, or incur any expense, liability, or obligation, express or implied, on behalf of any other Party.

3.5 Assignment. This Agreement is binding upon and inures to the benefit of the Parties, and to their permitted successors and assigns. The Parties agree that their rights and obligations under this Agreement may not be transferred or assigned to a Third Party without the prior written consent of the other Parties hereto. Notwithstanding the foregoing, Codexis shall have the right to transfer or assign its rights and obligations under this Agreement, without consent, to a successor to all or substantially all of its business or assets relating to this Agreement whether by sale, merger, or other business reorganization in a manner such that Codexis will remain liable and responsible for the performance and observance of all its duties and obligations hereunder. Any assignment not in conformance with this Section 3.5 shall be null, void, and of no legal effect.

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3.6 Notices. Any notice, report, communication, or consent required or permitted by this Agreement shall be in writing and shall be sent (a) by prepaid registered or certified mail, return receipt requested, (b) by overnight express delivery service by a nationally recognized courier, or (c) via confirmed facsimile or telecopy, followed within five (5) days by a copy mailed in the preceding manner, addressed to the other Party at the address shown below or at such other address as such Party gives notice hereunder. Such notice will be deemed to have been given when delivered or, if delivery is not accomplished by some fault of the addressee, when tendered.

If to Codexis:	Codexis, Inc. 200 Penobscot Drive Redwood City, California 94063 USA Attn: [*] Facsimile: [*]
If to Codexis India:	Codexis Laboratories India Private Limited G-01, Prestige Loka 7/1 Brunton Road Bangalore – 560 025 India Attn: [*] Facsimile: [*]
If to Arch:	Arch Pharmalabs Limited H wing, 4th Floor Tex Centre Off Saki Vihar Road Chandivali, Mumbai- 400072 India Attn: [*] Facsimile: [*]

3.7 Severability. If any provision of any provision of this Agreement shall be found by a court to be void, invalid, or unenforceable, the same shall be reformed to comply with Applicable Law or stricken if not so conformable, so as not to affect the validity or enforceability of this Agreement; provided that no such reformation or striking shall be effective if the result

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materially changes the economic benefit of this Agreement to either Codexis, Codexis India or Arch. In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be void, invalid, or unenforceable, and reformation or striking of such provision would materially change the economic benefit of this Agreement to either Codexis, Codexis India or Arch, Codexis, Codexis India and Arch shall modify such provision in accordance with Section 3.7 to obtain a legal, valid, and enforceable provision and provide an economic benefit to Codexis, Codexis India and Arch that most nearly effects Codexis', Codexis India's and Arch's intent on entering into this Agreement.

3.8 Modifications; Waivers. This Agreement may not be altered, amended, supplemented, or modified in any way except by a writing signed by each of the Parties. The failure of a Party to enforce any rights or provisions of the Agreement shall not be construed to be a waiver of such rights or provisions, or a waiver by such Party to thereafter enforce such rights or provision or any other rights or provisions hereunder.

3.9 Entire Agreement. The Parties hereto acknowledge that this Agreement, including the exhibits attached hereto, sets forth the entire agreement and understanding of the Parties as to the subject matter hereof, and supersedes all prior and contemporaneous discussions, agreements, and writings with respect hereto with respect to the subject matter hereof. No trade customs, courses of dealing or courses of performance by the Parties shall be relevant to modify, supplement, or explain any term(s) used in this Agreement.

3.10 No Third Party Beneficiaries. This Agreement is neither expressly nor impliedly made for the benefit of any party other than those executing it.

3.11 Interpretation.

(a) Captions and Headings. The captions and headings of clauses contained in this Agreement preceding the text of the articles, sections, subsections, and paragraphs hereof are inserted solely for convenience and ease of reference only and shall not constitute any part of this Agreement, or have any effect on its interpretation or construction.

(b) Singular and Plural. All references in this Agreement to the singular shall include the plural where applicable, and all references to gender shall include both genders and the neuter.

(c) Articles, Sections, and Subsections. Unless otherwise specified, references in this Agreement to any article shall include all sections, subsections, and paragraphs in such article; references in this Agreement to any section shall include all subsections and paragraphs in such section; and references in this Agreement to any subsection shall include all paragraphs in such subsection.

(d) Days. All references to days in this Agreement shall mean calendar days, unless otherwise specified.

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(e) Ambiguities. The Parties jointly drafted this Agreement. Ambiguities and uncertainties in this Agreement, if any, shall not be interpreted against either Party, irrespective of which Party may be deemed to have caused the ambiguity or uncertainty to exist.

3.12 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

[Signature page follows]

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IN WITNESS WHEREOF, Arch and Codexis have executed this Agreement by their respective duly authorized representatives as of the date first set forth above.

CODEXIS, INC.
("Codexis")

By: /s/ Robert S. Breuil
Name: Robert S. Breuil
Title: CFO

CODEXIS LABORATORIES INDIA PRIVATE LIMITED
("Codexis India")

By: /s/ Alan Shaw
Name: Alan Shaw
Title: President

ARCH PHARMALABS LIMITED
("Arch")

By: /s/ Ajit Kamath
Name: Ajit Kamath
Title: CMD

EXHIBIT 10.13

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SUPPLY AGREEMENT

THIS SUPPLY AGREEMENT (the "**Agreement**"), effective as August 1, 2006 (the "**Effective Date**"), is made and entered into by and between **Codexis Laboratories India Private Limited**, a corporation organized and existing under the laws of India and having a place of business at G-01, Prestige Loka, 7/1 Brunton Road, Bangalore – 560 025, India ("**Codexis**"), and **Arch Pharmalabs Limited**, a corporation organized and existing under the laws of India and having a place of business at H wing, 4th Floor, Tex Centre, Chandivali, Mumbai, 400072, India ("**Arch**"). Codexis and Arch each may be referred to herein individually as a "**Party**" or collectively as the "**Parties**."

WHEREAS, Arch has expertise and facilities for the manufacture of bulk pharmaceutical chemicals, including without limitation the manufacture of [*], also known as TBIN, from [*], also known as hydroxynitrile, by chemical synthetic routes; and

WHEREAS, Codexis would like Arch to manufacture and supply TBIN at the behest of Codexis.

NOW, THEREFORE, in consideration of the mutual covenants and obligations set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. DEFINITIONS

As used in this Agreement, the following terms are defined as indicated:

1.1 "Affiliate" shall mean any entity that is controlled by, controls, or is under common control with a Party, as the case may be. For purposes of this Section 1.1, the term "control" means (a) direct or indirect ownership of more than fifty percent (50%) of the voting interest in the entity in question, or more than fifty percent (50%) interest in the income of the entity in question; provided, however, that if local law requires a minimum percentage of local ownership, control will be established by direct or indirect beneficial ownership of one hundred percent (100%) of the maximum ownership percentage that may, under such local law, be owned by foreign interests, or (b) possession, directly or indirectly, of the power to direct or cause the direction of management or policies of the entity in question (whether through ownership of securities or other ownership interests, by contract or otherwise). Notwithstanding anything to the contrary, for purposes of this Agreement, Maxygen, Inc. shall not be considered, or deemed to be, an Affiliate of Codexis.

1.2 "Applicable Law" shall mean all laws, statutes, ordinances, codes, rules, and regulations that have been enacted by a Governmental Authority and are in force as of the Effective Date or come into force during the Term, in each case to the extent that the same are applicable to the performance by the Parties of their respective obligations under this Agreement.

1.3 "Certificate of Analysis" shall mean a certificate of analysis with respect to each batch of Product in a form to be mutually agreed upon by the Parties demonstrating compliance of the Product of such batch to the Specification.

1.4 "Certificate of Compliance" shall mean a certificate of compliance with respect to each batch of Product in a form to be mutually agreed upon by the Parties demonstrating that such batch was manufactured in accordance with cGMP and the requirements of this Agreement.

1.5 "cGMP" shall mean the current Good Manufacturing Practices regulations and implementing guidelines and General Biological Products Standards promulgated by the FDA and published at 21 CFR §§ 210, 211 and 610, as such regulations may be amended from time to time, and by the European Commission as set out in Directive 91/356 EEC of the Commission of the European Communities as may be amended from time to time and all relevant foreign equivalents, to the extent such regulations apply to "API intermediates" as defined in QA7 of the Quality Guidelines of the International Conference on Harmonization.

1.6 "Codexis Enzyme" shall mean any proprietary enzymes supplied by or on behalf of Codexis to Arch.

1.7 "Compound" shall mean [*], also known as TBIN.

1.8 "Confidential Information" shall mean any information of a confidential and proprietary nature disclosed by a Party to the other Party in written form marked "confidential," or in oral form if summarized in a writing marked "confidential" and delivered to the receiving Party within thirty (30) days after such oral disclosure. For purposes of this Agreement, the Codexis Enzyme shall be deemed to be Confidential Information of Codexis.

1.9 "Direct Manufacturing Costs" shall have the meaning set forth on Exhibit A.

1.10 "FDA" shall mean the U.S. Food and Drug Administration and any successor agency.

1.11 "GAAP" shall mean U.S. generally accepted accounting principles, consistently applied, as in effect from time to time.

1.12 "Governmental Authority" shall mean any supranational, national, regional, state or local government, court, governmental agency, authority, board, bureau, instrumentality, or regulatory body.

1.13 "Initial Period Manufacturing Costs" shall have the meaning set forth on Exhibit B.

1.14 "Manufacturing Facility" shall mean Arch's facility located at Vitalife Laboratories (a division of Arch), Village Patheri, Bilaspur-Tauru Road, Distt & Tehsil Gurgaon-Haryana, India.

1.15 "Material" shall mean [*], also known as hydroxynitrile.

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1.16 "Product" shall mean Compound manufactured using the Codexis Enzyme.

1.17 "Specification" shall mean the specifications for identity, purity and quality of the Product agreed upon by the Parties in writing prior to the Effective Date, which may be updated from time to time in a writing signed by both Parties.

1.18 "Term" shall have the meaning set forth in Section 10.1.

1.19 "Third Party" shall mean any party other than a Party or an Affiliate of any Party.

2. MATERIAL SUPPLY

2.1 Material Supply. For the purpose of manufacturing Product:

2.1.1 Prior to the date on which Arch achieves commercial scale production of Material, Arch may purchase from Codexis, and Codexis shall supply to Arch in accordance with the terms of a purchase order received from Arch, a quantity of Material sufficient to enable Arch to fulfill Codexis' orders for Product, at a fee payable in Rupees in an amount equal to [*] for each kilogram of Material. The timing and delivery of such supply by Codexis shall be consistent with the Rolling Requirement Forecast, as defined in Section 3.3.

2.1.2 The Parties intend to enter into a Technology Transfer and Manufacturing Agreement with respect to the manufacture of Material (the "**HN Agreement**"). After the date on which Arch achieves commercial scale production of Material pursuant to the terms of the HN Agreement**,** Arch shall use only Material manufactured by Arch in accordance with the terms of the HN Agreement, and shall use no other Material, in the production of Product.

3. PRODUCT SUPPLY

3.1 Manufacture and Supply. Arch shall manufacture and supply Product to Codexis or its designee in strict accordance with the Specification, cGMP, and Applicable Law.

3.2 Technical Supervision. During the Term, Codexis shall have the right, but not the obligation, to have at least one (1) employee of Codexis or its Affiliate present at the Manufacturing Facility in order to observe Arch's activities under this Agreement.

3.3 Rolling Requirement Forecasts. Prior to the beginning of each calendar month (M1) during the Term, Codexis shall provide Arch with a written forecast of Codexis' expected requirements for Product during the following twenty-four (24) months broken down by months (M1–M24), and which shall include projected order dates, quantities, and shipping dates ("**Rolling Requirement Forecast**"). In each Rolling Requirement Forecast, the terms set forth for (a) the first three (3) months (months M1–M3) shall be firm orders binding on Codexis; provided that Codexis shall have the right to increase or decrease the firm order for month M3 by

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twenty percent (20%) in the subsequent Rolling Requirement Forecast; and (b) the subsequent twenty-one (21) months (months M4–M24) shall be non-binding estimates. In the event Codexis requests additional quantity of Product in excess of the amount set forth for the first two (2) months, or in excess of twenty percent (20%) more than the amount set forth for the third (3rd) month, of the Rolling Requirement Forecast, Arch shall use commercially reasonable efforts to deliver such quantities and shall promptly provide Codexis written notice in the event that Arch will not able to delivery such quantities.

3.4 Purchase Orders. Products shall be ordered by Codexis by written or electronic purchase order (or by any other means agreed by the Parties), in a form to be mutually agreed by the Parties ("**Purchase Order**"). Arch shall deliver to Codexis, or a Third Party designated by Codexis, the amount of Product specified in each Purchase Order no later than the dates specified therein; provided that Arch shall not be required to deliver such amount prior to ninety (90) days after receiving such Purchase Order. The initial Purchase Order of Product by Codexis shall be provided before or with the initial Rolling Requirement Forecast. Prior to the beginning of each month, but at least ninety (90) days prior to the earliest desired date of delivery, Codexis shall place binding Purchase Orders for Product consistent with the Rolling Requirement Forecast.

3.5 Conflicts. Except as expressly set forth in Section 4.2, to the extent that there is any conflict or inconsistency between this Agreement and any Rolling Requirement Forecast, Purchase Order, or any other document pertaining to the manufacture or supply of Product, the terms of this Agreement shall govern.

3.6 Manufacturing Location. All Product shall be manufactured at and supplied from the Manufacturing Facility, and Arch shall not, without Codexis' prior written consent, manufacture Product at or supply Product from any facility other than the Manufacturing Facility.

3.7 Delivery of Product. All Product shall be shipped by Arch, at Arch's expense, by air, or as otherwise directed by Codexis, to a location designated in writing by Codexis. The Parties shall cooperate in selecting appropriate carriers, and title and risk of loss [*]. Arch shall ship Product under appropriate packaging and storage conditions, including, for example, using Envirotainers or similar temperature-control equipment for international shipments. All Product delivered by Arch hereunder shall have been manufactured no more than [*] prior to the date of delivery of such Product and all such deliveries shall be in whole batch increments.

3.8 Inspection of Product. Arch shall test and inspect all Product before shipment thereof for compliance with the Specification. Upon receipt of each shipment of Product, Codexis, or a Third Party designated by Codexis, shall test and inspect such Product for compliance with the Specification and Purchase Orders. Acceptance by Codexis of all or part of each shipment of Product delivered by Arch shall be subject to compliance of Product with the Specification as determined by such acceptance inspection. Codexis shall inform Arch of the result of the acceptance inspection including the judgment of acceptance or rejection of all or part of a shipment in writing within [*] after the receipt of such shipment of Product. If Codexis fails to notify Arch of a rejection within such [*] period, the shipment of Product shall be deemed accepted by Codexis.

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3.9 Replacement of Defective Product. In the event that Arch receives a notice of rejection from Codexis, Arch shall, at its sole expense, replace any shipment or portion thereof of such rejected Product within [*] after receiving Codexis' written notice of rejection. Codexis shall keep such defective Products at its premises until Arch's instruction for return or otherwise disposal of such defective Products. Notwithstanding anything to the contrary, Arch shall have no obligation to replace any shipment of Product or part thereof pursuant to this Section 3.9 in the event Arch can establish that such defect occurred after receipt of such shipment of Product by Codexis or a Third Party designated by Codexis.

3.10 Disputes. If Arch disputes Codexis' right to reject all or part of shipment of any Product as set forth in Section 3.8, Arch shall notify Codexis within [*] after such rejection. Such dispute shall be resolved by a Third Party, the identity of whom shall be mutually agreed upon by the Parties, and the appointment of whom shall not be unreasonably delayed by either Party. The determination of such Third Party with respect to all or part of any shipment of Product shall be final and binding upon the Parties, but only as to the reasons given by Codexis in rejecting the shipment or part thereof and shall have no effect on any matter for which such Third Party did not make a determination. The fees and expenses of such Third Party shall be paid by the Party against which the determination is made. Notwithstanding anything in this Section 3.10, Arch shall continue delivering Product pursuant to this Agreement during the dispute resolution process set forth in this Section 3.10.

3.11 Documentation. Unless otherwise agreed in writing by the Parties, each delivery of Product shall include a Certificate of Analysis and a Certificate of Compliance. In addition, Arch shall provide copies of such certificates directly to Codexis. Arch shall make available to Codexis and/or its Third Party customers (a) a completed batch record for each batch of Product delivered hereunder, (b) records demonstrating appropriate transportation conditions for each shipment of Product in accordance with Section 3.7, and (c) any and all invoices and documents evidencing delivery of product under the Indian Excise and VAT legislation required for Codexis and/or its Third Party customers to become entitled to the credit of taxes paid under such legislation, which can be offset against the output tax liability of Codexis and/or its Third Party customers.

3.12 Failure to Supply Product. In the event that Arch fails to deliver at least [*] of the amount of Product set forth in a particular Purchase Order in accordance with the terms of such Purchase Order, Codexis shall have the right to take any and all steps necessary to cover, at the sole cost and expense of Arch, any such shortfall in the supply of Product and to modify any then-outstanding Purchase Orders without penalty. Notwithstanding the foregoing, Arch acknowledges and agrees that (a) any failure by Arch to deliver at least [*] of the amount of Product set forth in a particular Purchase Order in accordance with the terms of such Purchase Order shall constitute a material breach of this Agreement by Arch, and (b) Codexis' rights pursuant to this Section 3.12 shall not limit any other rights of Codexis hereunder, including without limitation Codexis' right to terminate this Agreement pursuant to Section 10.4.1.

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4. CHANGES AND QUALITY CONTROL

4.1 Changes. Arch shall not make any change or alteration in the Specification or in the process for the manufacture of Product ("Change") without Codexis' prior written consent.

4.1.1 In the event that Arch requests a Change and Codexis consents to such Change, Arch shall bear the costs associated with implementing such Change, including without limitation any costs incurred in connection with testing such Change by Codexis or any Third Party laboratory designated by Codexis.

4.1.2 In the event that Codexis requests a Change, Codexis shall bear the costs associated with such Change, including without limitation any costs incurred in connection with testing such Change by any Third Party laboratory

4.2 Manufacturing Standards and Procedures. As soon as practicable after the Effective Date, the Parties will enter into a separate quality agreement ("**Quality Agreement**") which will address, among other things, mechanisms to ensure compliance, additional audit rights, and maintenance of records. In the event of a conflict specific to an issue of quality between the provisions of the Quality Agreement and any provisions of this Agreement, the provisions of the Quality Agreement shall govern; otherwise, the provisions of this Agreement shall govern. The Quality Agreement may be amended from time to time by written mutual consent of the Parties in the light of changing regulatory requirements or other circumstances. Arch shall adopt and maintain quality assurance procedures and perform quality control tests designed to ensure that all Product manufactured under this Agreement conforms to and is manufactured in accordance with the Quality Agreement.

4.3 Inspections of Manufacturing Facility.

4.3.1 Inspection by Codexis. Representatives of Codexis (a) shall upon Codexis' request be permitted to review Arch's QA Procedures and (b) may, during normal business hours and with reasonable advance notice, conduct a supplier audit of the Manufacturing Facility; provided that such audit shall not extend beyond [*] and, unless deficiencies are discovered during any such audit, shall not be conducted more than [*] per calendar year. Arch shall permit representatives of Codexis to inspect the Manufacturing Facility to verify that the Product is being manufactured and supplied in accordance with the Specification, cGMP, and Applicable Law. Arch shall promptly remedy or cause the remedy of any deficiencies that may be noted in any such inspection. Manufacturing Facility visits by Codexis shall be conducted during normal business hours on not less than [*] advance written notice.

4.3.2 Inspections by Third Party Customers of Codexis. Representatives of Codexis' Third Party customers for Product may, during normal business hours and with reasonable advance notice, conduct a supplier audit of the Manufacturing Facility; provided that each such audit shall not extend beyond [*] and, unless deficiencies are discovered during any such audit, shall not be conducted more than once by any particular Third Party customer in a particular calendar year. Arch shall permit such representatives to inspect the Manufacturing Facility to verify that the Product is being manufactured and supplied in accordance with the

Specification, cGMP, and Applicable Law. Arch shall promptly remedy or cause the remedy of any deficiencies that may be noted in any such inspection. Manufacturing Facility visits pursuant to this Section 4.3.2 shall be conducted during normal business hours on not less than [*] advance written notice.

4.3.3 Inspection by Governmental Authority. Arch agrees to provide access for Governmental Authority representatives to its facilities, including without limitation the Manufacturing Facility, for inspection at any time. Arch shall fully cooperate with any such inspection and, within [*], shall provide Codexis with copies of all correspondence to and from any Governmental Authorities in connection with any such inspection, including without limitation any formal reports.

5. PAYMENTS

5.1 Product Transfer Fee – Initial Period. In exchange for the supply of Product manufactured by Arch to Codexis under this Agreement, beginning on the Effective Date and continuing until [*] (the "**Initial Period**"), Codexis shall pay to Arch a transfer fee, for Product supplied during the Initial Period, in accordance with this Section 5.1. For clarity, payments for Product supplied on or after [*] shall be determined in accordance with Section 5.2.

5.1.1 Initial Period Manufacturing Costs. Codexis shall pay to Arch an amount equal to the [*] of (a) an amount equal to [*] or (b) the Initial Period Manufacturing Costs incurred by Arch with respect to such Product. Codexis shall determine such Initial Period Manufacturing Costs for each invoice submitted and, based on such determination, make the appropriate payment under this Section 5.1.1 to Arch on an invoice-by-invoice basis.

5.1.2 Profit Share. Codexis shall pay to Arch [*] of the Profits earned on sale of Product by Codexis during the Initial Period. For purposes of this Section 5.1.2, "**Profit**" shall mean an amount equal to Net Sales minus the Initial Period Manufacturing Costs, and **"Net Sales"** shall mean the [*]. Notwithstanding the foregoing, for purposes of clarification, in the event that the Initial Period Manufacturing Costs equal or exceed the Net Sales for a given sale of Product, [*].

5.2 Product Transfer Fee – After Initial Period. In exchange for the supply of Product manufactured by Arch to Codexis under this Agreement, beginning on [*] and continuing until expiration or termination of this Agreement, Codexis shall pay to Arch a transfer fee, for Product supplied during such period, based on the aggregate amount of Product supplied to Codexis in a calendar year, such fee to equal [*]. Such transfer fee for Product for such calendar year shall be based on the forecast of the aggregate amount of Product to be supplied by Codexis in such calendar year in accordance with the most recent Rolling Forecast Requirement for such calendar year; provided that the Parties will reconcile any difference between the transfer fee actually paid based on such forecasts and the fee due based on the actual amount of Product supplied in such calendar year no later than January 31st of the following year. Notwithstanding the foregoing, such transfer fee shall not exceed the amounts set forth in Table 1, below. For clarity, payments for Product supplied during the Initial Period shall be determined in accordance with Section 5.1.

Table 1

Amount of Product supplied per calendar year (in [*])	Fee per [*] of Product (in U.S. dollars)
[*]	[*]
[*]	[*]
[*]	[*]
[*]	[*]

For purposes of illustration, in the event Arch receives firm orders from Codexis for an aggregate of [*] of Product for delivery in the first calendar year after the Initial Period, Codexis shall pay Arch an aggregate transfer fee for such Product equal to [*], such fee comprised of a transfer fee of [*] of Product (unless the [*], in which case the transfer fee for such Product shall equal [*]).

5.3 Reports. Within [*] after [*], Arch shall deliver to Codexis a report setting forth in reasonable detail the average Initial Period Manufacturing Cost or Direct Manufacturing Cost, as applicable, incurred by Arch during the previous quarter. Such Initial Period Manufacturing Cost or Direct Manufacturing Cost, as applicable, shall serve as the basis for the calculation of the payments owed by Codexis to Arch pursuant to Section 5.1 or Section 5.2, as applicable, in [*].

5.4 General Payment Terms. All payments made under this Agreement shall be made in Indian Rupees, and such payments shall be made by check or wire transfer to one or more bank accounts to be designated in writing by the Party entitled to such payment. For purposes of calculating the exchange rate, the Parties shall use the Cross Currency rates as published in the Economic Times of India on the first market day after the date of invoice. Payments pursuant to Section 2.1.1, Section 5.1, and Section 5.2 shall be due and payable [*] after the date of the relevant invoice delivered to Arch by Codexis or its Affiliates.

5.5 Taxes and Duties.

5.5.1 Arch shall be solely and exclusively liable for payment of all taxes, duties and levies and any interest or penalties relating thereto, including Central Excise Duty, if any, on or in connection with the manufacture and subsequent sale to Codexis and/or its designees, of the Product sold by it under and in accordance with this Agreement and Codexis and/or its designees shall in no event be liable or responsible thereof. Arch shall be responsible for all compliance requirements under the applicable law in this respect.

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5.5.2 Arch will claim CENVAT on all the materials/services, wherever applicable and any benefit which may be available to or obtained by Arch pertaining to CENVAT or otherwise shall be passed on to Codexis.

5.5.3 It is agreed that if any claim or dispute or litigation is raised by the Excise authorities or any other authorities in relation to the Product, Arch shall contest such claim, dispute, fine and penalty or pursue any proceedings at its own cost. Any and all liability that may arise on that account shall be borne only by Arch.

5.5.4 Any duty, tax or VAT liability that may arise in the future from disputes with the Indian Government authorities in respect of positions taken by Arch for distribution or any other disposition of the Product shall be borne by Arch.

5.6 Late Payment Interest. Any payment due and payable under the terms and conditions of this Agreement made after the date such payment is due and payable shall bear interest as of the day after the date such payment was due and payable and shall continue to accrue such interest until such payment is made at a rate equal to the prime rate as reported by Federal Reserve Bank of New York, located in New York, New York, United States of America, as of the date such payment was due and payable.

5.7 Audit Rights. Arch shall permit Codexis to have access, during regular business hours and upon at least ten (10) days' written notice, to Arch's records and books, to the extent necessary to (a) determine the accuracy of Initial Period Manufacturing Costs or Direct Manufacturing Costs, as applicable, reported by Arch within the three (3) year period immediately preceding such an audit and (b) verify that Arch has not sold or transferred any Product or Codexis Enzymes to any Third Party in violation of the terms and conditions of this Agreement. If such examination results in a determination that Initial Period Manufacturing Costs or Direct Manufacturing Costs, as applicable, have been overstated leading to any overpayment by Codexis to Arch, such overpayments shall be promptly refunded plus interest in accordance with Section 5.5. If such examination reveals that Arch has sold or transferred Product and/or Codexis Enzyme to any Third Party in violation of the terms and conditions of this Agreement, Codexis shall have the right to terminate this Agreement pursuant to Section 10.4.2. The fees and expenses of such accountant shall be paid by Codexis, unless the examination results in a determination that (i) Initial Period Manufacturing Costs or Direct Manufacturing Costs, as applicable, have been overstated, or that payments have been overpaid, by more than five percent (5%) for the period examined, and/or (ii) Product and/or Codexis Enzyme have been sold or transferred to any Third Party in violation of the terms and conditions of this Agreement, in which case Arch shall pay all reasonable costs and expenses incurred by Codexis in the course of making such determination, including the fees and expenses of such accountant.

6. CONFIDENTIALITY

6.1 In General. Each Party (the **"Disclosing Party"**) has provided to the other Party (the **"Receiving Party"**) prior to the Effective Date, and in connection with this Agreement may

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in the future provide to the other Party, Confidential Information, including but not limited to the Disclosing Party's know-how, invention disclosures, patent applications, proprietary materials and/or technologies, economic information, business or research strategies, trade secrets, and material embodiments thereof.

6.2 Non-Disclosure and Non-Use. The Receiving Party shall maintain the Confidential Information of the Disclosing Party in confidence, shall not disclose such Confidential Information to any Third Party, and shall not use such Confidential Information for any purpose except as expressly permitted under the terms and conditions of this Agreement. Notwithstanding the previous sentence, the Receiving Party may disclose the Confidential Information of the Disclosing Party to its employees, agents, consultants, and professional, scientific, medical, and legal advisors who have a reasonable need to know such Confidential Information; provided that any such person to whom disclosure is made is bound by obligations of non-disclosure and non-use no less restrictive then those set forth herein. The Receiving Party shall take the same degree of care that the Receiving Party uses to protect its own confidential and proprietary information of a similar nature and importance, but in no event shall such care be less than reasonable care.

6.3 Exceptions. The obligations of non-disclosure and non-use under Section 6.2 will not apply as to particular Confidential Information of a Disclosing Party to the extent that such Confidential Information: (a) is at the time of receipt, or thereafter becomes, through no fault of the Receiving Party, published or publicly known or available; (b) is known by the Receiving Party or its Affiliates at the time of receiving such information, as evidenced by records; (c) is hereafter furnished to the Receiving Party or its Affiliates by a Third Party without breach of a duty to the Disclosing Party; or (d) is independently discovered or developed by the Receiving Party or its Affiliates without use of, application of, access to, or reference to Confidential Information of the Disclosing Party, as evidenced by records.

6.4 Disclosure Required by Law. Disclosure of Confidential Information shall not be precluded if such disclosure (a) is in response to a valid order of a court or other governmental body or (b) is required by law or regulation; provided, however, that the Receiving Party shall first have given reasonable prior notice to the Disclosing Party and shall have made a reasonable effort to obtain a protective order, or to cooperate with the Disclosing Party's efforts, as applicable, to obtain a protective order limiting the extent of such disclosure and requiring that the Confidential Information so disclosed be used only for the purposes for which such order was issued or as required by such law or regulation.

6.5 Remedies. The Receiving Party agrees that its obligations under this Article 6 are necessary and reasonable to protect the Disclosing Party's business interests and that the unauthorized disclosure or use of Confidential Information of a Disclosing Party will cause irreparable harm and significant injury, the degree of which may be difficult to ascertain. The Receiving Party further acknowledges and agrees that in the event of any actual or threatened breach of this Article 6, the Disclosing Party may have no adequate remedy at law and, accordingly, that the Disclosing Party will have the right to seek an immediate injunction enjoining any breach or threatened breach of this Article 6, as well as the right to pursue any and all other rights and remedies available at law or in equity for such breach or threatened breach.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6.6 Agreement Terms; Press Release. The terms and conditions of this Agreement shall be Confidential Information of the Parties, and subject to the terms of this Article 6. Notwithstanding the foregoing, upon or after the execution of this Agreement, the Parties shall issue a press release in a form and manner acceptable to each other.

6.7 Survival. All obligations of non-disclosure and non-use imposed pursuant to the terms and conditions of this Article 6 shall survive expiration or termination of this Agreement and continue in full force and effect for a period of seven (7) years after the effective date of such expiration or such termination.

7. REPRESENTATIONS, WARRANTIES AND COVENANTS

7.1 Representations and Warranties of Codexis. Codexis hereby represents and warrants that as of the Effective Date:

7.1.1 Codexis is a corporation organized under the laws of India and is authorized to do business to the extent necessary to fulfill its obligations hereunder;

7.1.2 Codexis has the full right and authority to enter into this Agreement, and no consent or authorization not obtained prior to the Effective Date is necessary to be obtained; and

7.1.3 To the knowledge of Codexis, there is no material impediment that would prevent, preclude, or otherwise inhibit its ability to perform its obligations, under this Agreement.

7.2 Representations and Warranties of Arch. Arch hereby represents and warrants that as of the Effective Date:

7.2.1 Arch is a corporation organized under the laws of India and is authorized to do business to the extent necessary to fulfill its obligations hereunder;

7.2.2 Arch has the full right and authority to enter into this Agreement, and no consent or authorization not obtained prior to the Effective Date is necessary to be obtained;

7.2.3 Arch has obtained all licenses, authorizations, and permissions necessary or requisite in law for the meeting and performing its obligations under this Agreement and all such licenses, authorizations, and permissions are in full force and effect;

7.2.4 There is no material impediment that would prevent, preclude or otherwise inhibit its ability to perform its obligations under this Agreement; and

7.2.5 Arch's manufacturing facilities and all manufacturing facilities utilized by it are registered with the appropriate Governmental Authorities and in compliance with all applicable Governmental Authority standards and Applicable Law.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

7.3 Covenants of Arch. Arch hereby covenants that:

7.3.1 All Product supplied by Arch hereunder shall (a) conform to the Specification; (b) be free of defects in materials or workmanship under normal use and service and be fit for the purpose for which such Product is intended; (c) not be adulterated or misbranded within the meaning of the U.S. Food, Drug and Cosmetic Act; (d) be manufactured and supplied in accordance with cGMP; and (e) be manufactured and supplied in accordance with the Quality Agreement;

7.3.2 Arch undertakes to keep all licenses, authorizations, and permissions necessary or requisite in law for the meeting and performing its obligations under this Agreement in full force and effect during the term of this Agreement;

7.3.3 Arch will use Material and Codexis Enzyme solely for the purpose of manufacture of Product and will not supply Material or Codexis Enzyme to any Third Party;

7.3.4 Arch will not supply Product to any Third Party except as otherwise expressly designated in writing by Codexis or its Affiliate;

7.3.5 As long as Arch or its successor is manufacturing Product at the behest of Codexis or its Affiliate, Arch's manufacturing facilities and all manufacturing facilities utilized by it will be registered with the appropriate Governmental Authorities and in compliance with all applicable Governmental Authority standards and Applicable Law;

7.3.6 Arch will not use the Codexis Enzymes otherwise than as required in the manufacture of Product at the behest of Codexis or its Affiliate;

7.3.7 Arch will use packing for the Product, including without limitation cartons, ship cases, and pallets, of industry standard strength in order to maintain the quality of the Product during normal transportation and storage; and

7.3.8 Arch shall at all times strictly comply with all applicable laws, rules, and regulations from time to time in force including, without prejudice to the generality of the foregoing, the provisions of the Drugs & Cosmetics Act 1940, prevailing Drugs Price Control Order, Central Excises Act 1944, The Industries (Development & Regulation) Act, 1951 and labour welfare legislation and the rules, regulations and notifications made or issued thereunder, relating to due and proper performance of its duties and obligations under this Agreement. In the event of Arch committing a breach of this clause, it shall indemnify and keep indemnified Codexis of, from and against all claims, demands, actions, proceedings, fines, penalties and expenses of whatsoever nature made or brought against, sustained or incurred by Codexis and paid for, arising out of or as a result of such breach by Arch.

7.4 For clarity, no right, title, or interest is granted by Codexis to Arch in, to, or under the Codexis Enzymes.

7.5 Limitation of Warranties. EXCEPT AS SPECIFICALLY SET FORTH IN THIS ARTICLE 7, NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY

OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ANY WARRANTY OF NON-INFRINGEMENT, OR ANY OTHER STATUTORY WARRANTY.

8. INDEMNIFICATION

8.1 Arch Indemnification. Arch shall indemnify, defend, and hold Codexis, and its directors, officers, employees, agents, and Affiliates, harmless from and against all claims, demands, damages, liabilities, losses, costs, and expenses, including without limitation attorney's fees (collectively, "**Claims**") resulting from or arising out of (a) any material breach by Arch of any of Arch's representations, warranties, or covenants delivered to Codexis under Article 7, (b) the development, testing, manufacture, use, exportation, storage, handling, transportation, distribution, or any other disposition of any Product made using the Codexis Enzymes by Arch or any Affiliate of Arch, or (c) the imposition of any tax or duty described in Section 5.5 on Codexis or any Affiliate of Codexis; provided, however, that Arch's indemnification obligations under this Section 8.1 shall not apply (i) to the extent that any such Claim arises out of any breach by Codexis of any of Codexis' representations or warranties delivered to Arch under Article 7, (ii) to any claim arising out of Codexis' negligence or willful misconduct, or (iii) to the extent such Claims are the responsibility of Codexis under Section 8.2.

8.2 Codexis Indemnification. Codexis shall indemnify, defend, and hold Arch, and its directors, officers, employees, agents, and Affiliates, harmless from and against all Claims resulting from or arising out of (a) any material breach by Codexis of any of Codexis' representations or warranties delivered to Arch under Article 7 or (b) the development, testing, manufacture, use, sale, offer for sale, importation, exportation, storage, handling, transportation, distribution, or any other disposition of any Product by Codexis or any Affiliate of Codexis; provided, however, that Codexis' indemnification obligations under this Section 8.2 shall not apply (i) to the extent that any such Claim arises out of any breach by Arch of any of Arch's representations, warranties or covenants under Article 7, (ii) to any claim arising out of Arch's negligence or willful misconduct, or (iii) to the extent such Claims are the responsibility of Arch under Section 8.1.

8.3 Procedure. For purposes of this Article 8, the indemnified Party shall give prompt written notice to the indemnifying Party of any suits, claims, or demands by Third Parties or the indemnified Party that may give rise to any Claim for which indemnification may be required under this Article 8; provided, however, that failure to give such notice shall not relieve the indemnifying Party of its obligation to provide indemnification hereunder except if and to the extent that such failure materially affects the ability of the indemnifying Party to defend the applicable suit, claim, or demand. The indemnifying Party shall be entitled to assume the defense and control of any such suit, claim, or demand of any Third Party at its own cost and expense; provided, however, that the indemnified Party shall have the right to be represented by its own counsel at its own cost in such matters. In the event that the indemnifying Party declines to or fails to timely assume control of any such suit, claim, or demand, the indemnified Party shall be entitled to assume such control, conduct the defense of, and settle such suit, claim, or

action, all at the sole cost and expense of the indemnifying Party. Neither the indemnifying Party nor the indemnified Party shall settle or dispose of any such matter in any manner that would adversely affect the rights or interests of the other Party without the prior written consent of the other Party, which shall not be unreasonably withheld or delayed. Each Party shall cooperate with the other Party and its counsel in the course of the defense of any such suit, claim, or demand, such cooperation to include without limitation using reasonable efforts to provide or make available documents, information, and witnesses.

9. DISPUTE RESOLUTION

9.1 Exclusive Dispute Resolution Mechanism. The Parties agree that the procedures set forth in this Article 9 shall be the exclusive mechanism for resolving any dispute, controversy, or claim (collectively, "**Disputes**") between the Parties that may arise from time to time pursuant to this Agreement relating to any Party's rights and/or obligations hereunder that cannot be resolved through good faith negotiation between the Parties.

9.2 Arbitration.

9.2.1 Any and all unresolved Disputes, except as set forth in Section 9.3 or Section 9.4, shall be exclusively and finally resolved by binding arbitration.

9.2.2 Any arbitration concerning a Dispute shall be conducted in New York, New York, United States of America, unless otherwise agreed to by the Parties in writing. Each and any arbitration shall be administered by the American Arbitration Association (the "**AAA**"), and shall be conducted in accordance with the Commercial Arbitration Rules of the AAA (the "**Rules**"), as such Rules may be amended from time to time.

9.2.3 Within ten (10) days after receipt of an arbitration notice from a Party, the Parties shall attempt in good faith to agree on a single neutral arbitrator with relevant industry experience to conduct the arbitration. If the Parties do not agree on a single neutral arbitrator within ten (10) days after receipt of an arbitration notice, each Party shall select one (1) arbitrator and the two (2) Party-selected arbitrators shall select a third arbitrator with relevant industry experience to constitute a panel of three (3) arbitrators to conduct the arbitration in accordance with the Rules. In the event that only one of the Parties selects an arbitrator, then such arbitrator shall be entitled to act as the sole arbitrator to resolve the Dispute or any all unresolved issues subject to the arbitration. Each and every arbitrator of the arbitration panel conducting the arbitration must and shall agree to render an opinion within twenty (20) days after the final hearing before the panel.

9.2.4 The decision or award of the arbitrator(s) shall be final, binding, and incontestable and may be used as a basis for judgment thereon in any jurisdiction. To the full extent permissible under Applicable Law, the Parties hereby expressly agree to waive the right to appeal from the decision of the arbitrator(s), there shall be no appeal to any court or other authority (government or private) from the decision of the arbitrator(s), and the Parties shall not dispute nor question the validity of such decision or award before any regulatory or other

authority in any jurisdiction where enforcement action is taken by the Party in whose favor the decision or award is rendered, except in the case of fraud. The arbitrator(s) shall, upon the request of any Party, issue a written opinion of the findings of fact and conclusions of law and shall deliver a copy to each of the Parties. Each Party shall bear its own costs and attorney's fees, and the Parties shall equally bear the fees, costs, and expenses of the arbitrator(s) and the arbitration proceedings; provided, however, that the arbitrator(s) may exercise discretion to award costs, including attorney's fees, to the prevailing Party. Without limiting any other remedies that may be available under applicable law, the arbitrator(s) shall have no authority to award provisional remedies of any nature whatsoever, or punitive, special, consequential, or any other similar form of damages.

9.3 Preliminary Injunctions. Notwithstanding anything in this Agreement to the contrary, a Party may seek a temporary restraining order or a preliminary injunction from any court of competent jurisdiction in order to prevent immediate and irreparable injury, loss, or damage on a provisional basis, pending the decision of the arbitrator(s) on the ultimate merits of any Dispute.

9.4 Patent Disputes. Notwithstanding anything in this Agreement to the contrary, any and all issues regarding the scope, construction, validity, and enforceability of one or more patents shall be determined in a court of competent jurisdiction under the local patent laws of the jurisdictions having issued the patent or patents in question.

9.5 Confidentiality. All proceedings and decisions of the arbitrator(s) shall be deemed Confidential Information of each of the Parties, and shall be subject to Article 6 of this Agreement.

10. TERM AND TERMINATION

10.1 Term. The term of this Agreement shall commence on the Effective Date and continue in full force and effect until [*], unless and until terminated at an earlier date in accordance with Section 10.2, Section 10.3, or Section 10.4 (the "**Term**").

10.2 Termination upon Notice. Codexis may, at its sole discretion, terminate this Agreement at any time upon [*] written notice to Arch.

10.3 Termination for Insolvency. To the extent permitted under Applicable Law, a Party may terminate this Agreement upon written notice to the other Party on or after the occurrence of any of the following events: (a) the appointment of a trustee, receiver or custodian for all or substantially all of the property of the other Party, or for any lesser portion of such property, if the result materially and adversely affects the ability of the other Party to fulfill its obligations hereunder, which appointment is not dismissed within sixty (60) days, (b) the determination by a court or tribunal of competent jurisdiction that the other Party is insolvent such that a Party's liabilities exceed the fair market value of its assets, (c) the filing of a petition for relief in bankruptcy by the other Party on its own behalf, or the filing of any such petition against the other Party if the proceeding is not dismissed or withdrawn within sixty (60) days thereafter, (d) an assignment by the other Party for the benefit of creditors, or (e) the dissolution or liquidation of the other Party.

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10.4 Termination for Cause.

10.4.1 If a Party materially breaches any term or condition of this Agreement, the other Party may notify the breaching Party in writing of such breach, setting forth the nature of the breach in reasonable detail. If the breaching Party fails to cure such breach within [*] after the receipt of the foregoing notice from the non-breaching Party, the non-breaching Party may terminate this Agreement effective immediately upon a second written notice to the breaching Party.

10.4.2 Notwithstanding Section 10.4.1, if Arch materially breaches any covenant contained in Section 7.3, Codexis shall have the right, but not the obligation, to terminate this Agreement effective immediately upon written notice to Arch.

10.5 Effect of Expiration or Termination.

10.5.1 Expiration of this Agreement for any reason shall not release any Party from any obligation that has accrued prior to the effective date of such expiration.

10.5.2 Upon expiration or termination of this Agreement for any reason, Arch shall cease use of all Codexis Enzymes.

10.5.3 Termination of this Agreement for any reason shall not (a) release any Party from any obligation that has accrued prior to the effective date of such termination (including the obligation to pay amounts accrued and due under this Agreement prior to the termination date but which are unpaid or become payable thereafter), (b) preclude any Party from claiming any other damages, compensation, or relief that it may be entitled to upon such termination, or (c) terminate any right to obtain performance of any obligation provided for in this Agreement that shall survive termination.

10.5.4 Upon expiration or termination of this Agreement by Codexis for any reason, each Party shall promptly return, or destroy and provide written certification of such destruction, any and all Confidential Information of the other Parties in such first Party's possession or control at the time of such termination.

10.6 Survival. Articles 1, 5, 6, 8, 9, and 11 and Sections 3.5, 7.3, 7.4, 7.5, 10.5, and 10.6 shall survive expiration or termination of this Agreement, as applicable.

11. MISCELLANEOUS

11.1 Further Assurances. From time to time on and after the Effective Date, each Party shall at the reasonable request of the other Party (a) deliver to the other Party such records, data, or other documents consistent with the provisions of this Agreement; (b) execute, and deliver or cause to be delivered, all assignments, consents, documents or further instruments of

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transfer or license; and (c) take or cause to be taken all other actions as such other Party may reasonably deem necessary or desirable in order for such Party to obtain the full benefits of this Agreement and the transactions contemplated hereby.

11.2 Limitation of Liability. EXCEPT WITH RESPECT TO UNAUTHORIZED EXPLOITATION OF CODEXIS' INTELLECTUAL PROPERTY RIGHTS OR BREACH OF THE CONFIDENTIALITY OBLIGATION UNDER THIS AGREEMENT, IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES OF THE OTHER PARTY ARISING OUT OF OR RELATED TO THIS AGREEMENT, HOWEVER CAUSED, UNDER ANY THEORY OF LIABILITY.

11.3 Governing Law. This Agreement shall be governed by, and construed and interpreted in accordance with, the laws of India.

11.4 Force Majeure. No Party shall be held responsible for any delay or failure in performance hereunder caused by strikes, embargoes, unexpected government requirements, civil or military authorities, acts of God, earthquake, or by the public enemy or other causes reasonably beyond such Party's control and without such Party's fault or negligence; provided that the affected Party notifies the unaffected Party as soon as reasonably possible and resumes performance hereunder as soon as reasonably possible following cessation of such force majeure event; and provided further that no such delay or failure in performance shall continue for more than three (3) months. In the event that a delay or failure in performance by a Party under this Section 11.4 continues longer than three (3) months, the other Party may terminate this Agreement in accordance with the terms and conditions of Section 10.4.

11.5 Independent Contractors.

11.5.1 Nothing in this Agreement shall constitute or be deemed to or is intended to constitute Arch as an agent of Codexis. It is hereby expressly agreed and declared that Arch shall not at any time:

a. enter into a contract in the name of or purporting to be made on behalf of Codexis unless to the extent as may be authorized under any agreement entered into between the Parties;

b. by any act, pledge the credit of Codexis or impose or attempt to impose any contractual obligations on Codexis; and

c. either in its own office, factories or depots or on invoices, bill heads or letter papers or any other place or by any other means, oral or written, make any statement to the effect or representation calculated or liable to induce others to believe that it is the agent of Codexis.

11.5.2 Arch shall not, except with the prior written approval of Codexis, sub-contract or delegate to any other person, firm or company the whole or any part of the manufacture or packing of the Product under this Agreement or assign any of its rights, duties or obligations thereunder. Arch shall continue to be liable to Codexis in respect of its obligations under this Agreement not withstanding such sub-contract or delegation.

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11.5.3 Nothing contained herein shall be deemed to constitute a partnership between the Parties.

11.6 Assignment. This Agreement is binding upon and inures to the benefit of the Parties, and to their permitted successors and assigns. The Parties agree that their rights and obligations under this Agreement may not be transferred or assigned to a Third Party without the prior written consent of the other Parties hereto. Notwithstanding the foregoing, Codexis shall have the right to transfer or assign its rights and obligations under this Agreement, without consent, to a successor to all or substantially all of its business or assets relating to this Agreement whether by operation of law, sale, merger, or otherwise in a manner such that Codexis will remain liable and responsible for the performance and observance of all its duties and obligations hereunder. Any assignment not in conformance with this Section 11.6 shall be null, void, and of no legal effect.

11.7 Notices. Any notice, report, communication, or consent required or permitted by this Agreement shall be in writing and shall be sent (a) by prepaid registered or certified mail, return receipt requested, (b) by overnight express delivery service by a nationally recognized courier, or (c) via confirmed facsimile or telecopy, followed within five (5) days by a copy mailed in the preceding manner, addressed to the other Party at the address shown below or at such other address as such Party gives notice hereunder. Such notice will be deemed to have been given when delivered or, if delivery is not accomplished by some fault of the addressee, when tendered.

If to Arch:

Arch Pharmalabs Limited
H wing, 4th Floor
Tex Centre
Off Saki Vihar Road
Chandivali, Mumbai- 400072
India
Attn: [*]
Facsimile: [*]

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If to Codexis:

Codexis Laboratories India Private Limited
G-01, Prestige Loka
7/1 Brunton Road
Bangalore – 560 025, India
Attn: [*]

Facsimile:

11.8 Severability. If any provision of any provision of this Agreement shall be found by a court to be void, invalid, or unenforceable, the same shall be reformed to comply with Applicable Law or stricken if not so conformable, so as not to affect the validity or enforceability of this Agreement; provided that no such reformation or striking shall be effective if the result materially changes the economic benefit of this Agreement to any Party. In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be void, invalid, or unenforceable, and reformation or striking of such provision would materially change the economic benefit of this Agreement to any Party, the Parties shall modify such provision in accordance with Section 11.9 to obtain a legal, valid, and enforceable provision and provide an economic benefit to the Parties that most nearly effects the Parties' intent on entering into this Agreement.

11.9 Modifications; Waivers. This Agreement may not be altered, amended, supplemented, or modified in any way except by a writing signed by each Party. The failure of a Party to enforce any rights or provisions of the Agreement shall not be construed to be a waiver of such rights or provisions, or a waiver by such Party to thereafter enforce such rights or provision or any other rights or provisions hereunder.

11.10 Entire Agreement. The Parties acknowledge that this Agreement, including the exhibit attached hereto sets forth the entire agreement and understanding of the Parties as to the subject matter hereof, and supersedes all prior and contemporaneous discussions, agreements, and writings with respect hereto with respect to the subject matter hereof. No trade customs, courses of dealing or courses of performance by the Parties shall be relevant to modify, supplement, or explain any term(s) used in this Agreement.

11.11 No Third Party Beneficiaries. This Agreement is neither expressly nor impliedly made for the benefit of any party other than those executing it.

11.12 Interpretation.

(a) Captions and Headings. The captions and headings of clauses contained in this Agreement preceding the text of the articles, sections, subsections, and paragraphs hereof are inserted solely for convenience and ease of reference only and shall not constitute any part of this Agreement, or have any effect on its interpretation or construction.

(b) Singular and Plural. All references in this Agreement to the singular shall include the plural where applicable, and all references to gender shall include both genders and the neuter.

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(c) Articles, Sections, and Subsections. Unless otherwise specified, references in this Agreement to any article shall include all sections, subsections, and paragraphs in such article; references in this Agreement to any section shall include all subsections and paragraphs in such section; and references in this Agreement to any subsection shall include all paragraphs in such subsection.

(d) Days. All references to days in this Agreement shall mean calendar days, unless otherwise specified.

(e) Ambiguities. The Parties jointly drafted this Agreement. Ambiguities and uncertainties in this Agreement, if any, shall not be interpreted against any Party, irrespective of which Party may be deemed to have caused the ambiguity or uncertainty to exist.

11.13 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

[*Signature page follows*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, the Parties have executed this Agreement by their respective duly authorized representatives as of the Effective Date.

CODEXIS LABORATORIES INDIA PRIVATE LIMITED
("Codexis")

By: /s/ Alan Shaw
Name: Alan Shaw
Title: Director

ARCH PHARMALABS LIMITED
("Arch")

By: /s/ Ajit Kamath
Name: Ajit Kamath
Title: CMD

Exhibit A

Direct Manufacturing Costs

[*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit B

Initial Period Manufacturing Costs

[*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT 10.14

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

ENZYME LICENSE AND SUPPLY AGREEMENT

THIS ENZYME LICENSE AND SUPPLY AGREEMENT (the "**Agreement**"), effective as of August 1, 2006 (the "**Effective Date**"), is made and entered into by and between **Codexis, Inc.**, a Delaware corporation, having a place of business at 200 Penobscot Drive, Redwood City, California 94063, USA ("**Codexis**"), and **Arch Pharmalabs Limited**, a corporation organized and existing under the laws of India, having a place of business at H wing, 4th Floor, Tex Centre, Chandivali, Mumbai, 400072, India ("**Arch**"). Codexis and Arch each may be referred to herein individually as a "**Party**," or collectively as the "**Parties**."

WHEREAS, Arch has expertise and facilities for the manufacture of bulk pharmaceutical chemicals, including without limitation the manufacture of TBIN from [*], also known as hydroxynitrile, by chemical synthetic routes;

WHEREAS, Codexis owns proprietary rights in certain chemical synthesis and biocatalysis process technology, and possesses certain valuable business and/or technical knowledge, information, and/or expertise, relating to an enzymatically catalyzed manufacturing process for [*], also known as TBIN; and

WHEREAS, Arch would like to use proprietary technology and enzymes of Codexis in the manufacture TBIN.

NOW, THEREFORE, in consideration of the mutual covenants and obligations set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. DEFINITIONS

As used in this Agreement, the following terms are defined as indicated:

1.1 "Affiliate" shall mean any entity that is controlled by, controls, or is under common control with a Party, as the case may be. For purposes of this Section 1.1, the term "control" means (a) direct or indirect ownership of more than fifty percent (50%) of the voting interest in the entity in question, or more than fifty percent (50%) interest in the income of the entity in question; provided, however, that if local law requires a minimum percentage of local ownership, control will be established by direct or indirect beneficial ownership of one hundred percent (100%) of the maximum ownership percentage that may, under such local law, be owned by foreign interests, or (b) possession, directly or indirectly, of the power to direct or cause the direction of management or policies of the entity in question (whether through ownership of securities or other ownership interests, by contract or otherwise). Notwithstanding anything to the contrary, for purposes of this Agreement, Maxygen, Inc. shall not be considered, or deemed to be, an Affiliate of Codexis.

1.2 "Applicable Law" shall mean all laws, statutes, ordinances, codes, rules, and regulations that have been enacted by a Governmental Authority and are in force as of the Effective Date or come into force during the Term, in each case to the extent that the same are applicable to the performance by the Parties of their respective obligations under this Agreement.

1.3 "Codexis Enzyme" shall mean any proprietary enzymes supplied by or on behalf of Codexis to Arch.

1.4 "Codexis Know-How" shall mean technology, information, expertise, know-how, and/or trade secrets Controlled by Codexis relating to the manufacture of Compound that is not within the Codexis Patent Rights but is necessary or useful for making Compound.

1.5 "Codexis Patent Rights" shall mean any and all patent rights Controlled by Codexis that are necessary or useful in the manufacture of Compound.

1.6 "Codexis Technology" shall mean the Codexis Know-How, the Codexis Patent Rights, and any discovery, invention, contribution, method, finding, or improvement, whether or not patentable, and all related know-how, that is conceived, reduced to practice, or otherwise developed by Arch, either solely or jointly with Codexis and/or a Third Party, during the Term that relate to Product, Codexis Technology, and/or Codexis Enzymes.

1.7 "Compound" shall mean [*], also known as TBIN.

1.8 "Confidential Information" shall mean any information of a confidential and proprietary nature disclosed by a Party to the other Party in written form marked "confidential," or in oral form if summarized in a writing marked "confidential" and delivered to the receiving Party within thirty (30) days after such oral disclosure. For purposes of this Agreement, the Codexis Enzyme shall be deemed to be Confidential Information of Codexis.

1.9 "Control" shall mean, with respect to an item or an intellectual property right, possession of the ability, whether arising by ownership or license, to grant a license or sublicense as provided for in this Agreement under such item or right without violating the terms of any written agreement with any Third Party.

1.10 "Governmental Authority" shall mean any supranational, national, regional, state or local government, court, governmental agency, authority, board, bureau, instrumentality, or regulatory body.

1.11 "Product" shall mean Compound manufactured using the Codexis Technology and/or the Codexis Enzyme.

1.12 "Term" shall have the meaning set forth in Section 10.1.

1.13 "Territory" shall mean India.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.14 "Third Party" shall mean any party other than a Party or an Affiliate of any Party.

2. LICENSE GRANTS

2.1 Grant of Rights to Arch. Subject to the terms and conditions of this Agreement, Codexis hereby grants to Arch a non-exclusive, royalty-free right and license, with no right to grant sublicense rights, under the Codexis Technology solely to manufacture Product at the behest of Codexis and/or its Affiliates in the Territory. For the purpose of clarification, Arch shall have no right to use, import, export, offer to sell, sell, market, or otherwise commercialize Codexis Technology or Product.

2.2 No Other Rights. Except as expressly provided herein, no right, title, or interest is granted by Codexis to Arch in, to, or under the Codexis Technology or the Codexis Enzymes.

3. CODEXIS ENZYME SUPPLY

3.1 Codexis Enzyme Supply. Arch shall exclusively purchase from Codexis, and Codexis shall supply to Arch, a quantity of Codexis Enzyme sufficient to enable Arch solely to fulfill Codexis' or its Affiliate's orders for Product. The timing and delivery of such supply shall be consistent with the Rolling Requirement Forecast, as defined in Section 3.2.

3.2 Rolling Requirement Forecasts. Prior to the beginning of each calendar month (M1) during the Term, Arch shall provide Codexis with a written forecast of Arch's expected requirements for Codexis Enzyme during the following twenty-four (24) months broken down by months (M1–M24), and which shall include projected order dates, quantities, and shipping dates ("**Rolling Requirement Forecast**"). In each Rolling Requirement Forecast, the terms set forth for (a) the first three (3) months (months M1–M3) shall be firm orders binding on Arch; provided that Arch shall have the right to increase or decrease the firm order for month M3 by twenty percent (20%) in the subsequent Rolling Requirement Forecast; and (b) the subsequent twenty-one (21) months (months M4–M24) shall be non-binding estimates. In the event Arch requests additional quantity of Codexis Enzyme in excess of the amount set forth for the first two (2) months, or in excess of twenty percent (20%) more than the amount set forth for the third (3rd) month, of the Rolling Requirement Forecast, Codexis shall use commercially reasonable efforts to deliver such quantities and shall promptly provide Arch written notice in the event that Codexis will not able to delivery such quantities.

3.3 Purchase Orders. Codexis Enzyme shall be ordered by Arch by written or electronic purchase order (or by any other means agreed by the Parties), in a form to be mutually agreed by the Parties ("**Purchase Order**"). Codexis shall deliver to Arch the amount of Codexis Enzyme specified in each Purchase Order no later than the dates specified therein; provided that Codexis shall not be required to deliver such amount prior to ninety (90) days after receiving

such Purchase Order. The initial Purchase Order of Codexis Enzyme by Arch shall be provided before or with the initial Rolling Requirement Forecast. Prior to the beginning of each month, but at least ninety (90) days prior to the earliest desired date of delivery, Arch shall place binding Purchase Orders for Codexis Enzyme consistent with the Rolling Requirement Forecast.

3.4 Conflicts. To the extent that there is any conflict or inconsistency between this Agreement and any Rolling Requirement Forecast, Purchase Order, or any other document pertaining to the manufacture or supply of Codexis Enzyme, the terms of this Agreement shall govern. For clarity, no term or condition added by Arch to a Purchase Order, other than quantity of Codexis Enzyme ordered and delivery date requested, shall be binding on Codexis unless such term or condition is specifically agreed to by Codexis in writing.

3.5 Delivery of Codexis Enzyme. All Codexis Enzyme shall be shipped by Codexis, at Codexis' expense, by air, or as otherwise directed by Arch, to Arch's manufacturing facility located at Vitalife Laboratories (a division of Arch), Village Patheri, Bilaspur-Tauru Road, Distt & Tehsil Gurgaon-Haryana, India. The Parties shall cooperate in selecting appropriate carriers, and title and risk of loss shall pass to Arch upon delivery by Codexis to such carrier(s). Codexis shall ship Codexis Enzyme under appropriate packaging and storage conditions, including, for example, using Envirotainers or similar temperature-control equipment for international shipments.

3.6 Inspection of Codexis Enzyme. Upon receipt of each shipment of Codexis Enzyme, Arch shall test and inspect such Codexis Enzyme for compliance with the Purchase Orders corresponding to such shipment. Arch shall inform Codexis of the result of the acceptance inspection including the judgment of acceptance or rejection of all or part of a shipment in writing within [*] after the receipt of such shipment of Codexis Enzyme. If Arch fails to notify Codexis of a rejection within such [*] period, the shipment of Codexis Enzyme shall be deemed accepted by Arch.

3.7 Replacement of Defective Codexis Enzyme. In the event that Codexis receives a notice of rejection from Arch, Codexis shall, at its sole expense, replace any shipment of such rejected Codexis Enzyme within [*] after receiving Arch's written notice of rejection. Arch shall keep such defective Codexis Enzyme at its premises until Codexis' instruction for return or otherwise disposal of such defective Codexis Enzyme. Notwithstanding anything to the contrary, Codexis shall have no obligation to replace any shipment of Codexis Enzyme or part thereof pursuant to this Section 3.7 in the event Codexis can establish that such defect occurred after receipt of such shipment of Codexis Enzyme by Arch.

3.8 Disputes. If Codexis disputes Arch's right to reject all or part of shipment of any Codexis Enzyme as set forth in Section 3.6, Codexis shall notify Arch within [*] after receipt of Arch's written notice of such rejection. Such dispute shall be resolved by a Third Party, the identity of whom shall be mutually agreed upon by the Parties, and the appointment of whom shall not be unreasonably delayed by either Party. The determination of such Third Party with respect to all or part of any shipment of Codexis Enzyme shall be final and binding upon the Parties, but only as to the reasons given by Arch in rejecting the shipment or part thereof and shall have no effect on any matter for which such Third Party did not make a determination. The

fees and expenses of such Third Party shall be paid by the Party against which the determination is made. Notwithstanding anything in this Section 3.8, Codexis shall continue delivering Codexis Enzyme pursuant to the terms of this Agreement during the dispute resolution process set forth in this Section 3.8.

4. PAYMENTS

4.1 Codexis Enzyme Transfer Fee. In exchange for the supply of Codexis Enzyme to Arch pursuant to Section 3.1, Arch shall pay Codexis a transfer fee equal to [*] Codexis Enzyme transferred to Arch; provided that such price shall increase based on increases in manufacturing cost incurred by Codexis with respect to the applicable Codexis Enzyme.

4.2 General Payment Terms. All payments made under this Agreement shall be made in U.S. dollars, and such payments shall be made by check or wire transfer to one or more bank accounts to be designated in writing by the Party entitled to such payment. Payments pursuant to Section 4.1 shall be due and payable [*] after the date of the relevant invoice.

4.3 Taxes and Duties.

4.3.1 Arch shall be solely and exclusively liable for payment of all taxes, duties and levies and any interest or penalties relating thereto, including Service Tax, if any, on or in connection with the transfer of Codexis Technology and import of Codexis Enzyme by it under and in accordance with this Agreement and Codexis shall in no event be liable or responsible thereof. Arch shall be responsible for all compliance requirements under the applicable law in this respect.

4.3.2 It is agreed that if any claim or dispute or litigation is raised by the concerned authorities in relation to the transfer of Codexis Technology and import of Codexis Enzyme, Arch shall contest such claim, dispute, fine and penalty or pursue any proceedings at its own cost. Any and all liability that may arise on that account shall be borne only by Arch.

4.3.3 Any duty, tax, service tax or VAT, liability that may arise in the future from disputes with the Indian Government authorities in respect of positions taken by Arch for transfer of technology and import of Codexis Enzyme shall be borne by Arch.

4.4 Late Payment Interest. Any payment due and payable under the terms and conditions of this Agreement made after the date such payment is due and payable shall bear interest as of the day after the date such payment was due and payable and shall continue to accrue such interest until such payment is made at a rate equal to the prime rate as reported by Federal Reserve Bank of New York, located in New York, New York, United States of America, as of the date such payment was due and payable.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5. CONFIDENTIALITY

5.1 In General. Each Party (the **"Disclosing Party"**) has provided to the other Party (the **"Receiving Party"**) prior to the Effective Date, and in connection with this Agreement may in the future provide to the other Party, Confidential Information, including but not limited to the Disclosing Party's know-how, invention disclosures, patent applications, proprietary materials and/or technologies, economic information, business or research strategies, trade secrets, and material embodiments thereof.

5.2 Non-Disclosure and Non-Use. The Receiving Party shall maintain the Confidential Information of the Disclosing Party in confidence, shall not disclose such Confidential Information to any Third Party, and shall not use such Confidential Information for any purpose except as expressly permitted under the terms and conditions of this Agreement. Notwithstanding the previous sentence, the Receiving Party may disclose the Confidential Information of the Disclosing Party to its employees, agents, consultants, and professional, scientific, medical, and legal advisors who have a reasonable need to know such Confidential Information; provided that any such person to whom disclosure is made is bound by obligations of non-disclosure and non-use no less restrictive then those set forth herein. The Receiving Party shall take the same degree of care that the Receiving Party uses to protect its own confidential and proprietary information of a similar nature and importance, but in no event shall such care be less than reasonable care.

5.3 Exceptions. The obligations of non-disclosure and non-use under Section 5.2 will not apply as to particular Confidential Information of a Disclosing Party to the extent that such Confidential Information: (a) is at the time of receipt, or thereafter becomes, through no fault of the Receiving Party, published or publicly known or available; (b) is known by the Receiving Party or its Affiliates at the time of receiving such information, as evidenced by records; (c) is hereafter furnished to the Receiving Party or its Affiliates by a Third Party without breach of a duty to the Disclosing Party; or (d) is independently discovered or developed by the Receiving Party or its Affiliates without use of, application of, access to, or reference to Confidential Information of the Disclosing Party, as evidenced by records.

5.4 Disclosure Required by Law. Disclosure of Confidential Information shall not be precluded if such disclosure (a) is in response to a valid order of a court or other governmental body or (b) is required by law or regulation; provided, however, that the Receiving Party shall first have given reasonable prior notice to the Disclosing Party and shall have made a reasonable effort to obtain a protective order, or to cooperate with the Disclosing Party's efforts, as applicable, to obtain a protective order limiting the extent of such disclosure and requiring that the Confidential Information so disclosed be used only for the purposes for which such order was issued or as required by such law or regulation.

5.5 Remedies. The Receiving Party agrees that its obligations under this Article 5 are necessary and reasonable to protect the Disclosing Party's business interests and that the unauthorized disclosure or use of Confidential Information of a Disclosing Party will cause irreparable harm and significant injury, the degree of which may be difficult to ascertain. The Receiving Party further acknowledges and agrees that in the event of any actual or threatened

breach of this Article 5, the Disclosing Party may have no adequate remedy at law and, accordingly, that the Disclosing Party will have the right to seek an immediate injunction enjoining any breach or threatened breach of this Article 5, as well as the right to pursue any and all other rights and remedies available at law or in equity for such breach or threatened breach.

5.6 Agreement Terms; Press Release. The terms and conditions of this Agreement shall be Confidential Information of the Parties, and subject to the terms of this Article 5. Notwithstanding the foregoing, upon or after the execution of this Agreement, the Parties shall issue a press release in a form and manner acceptable to each other.

5.7 Survival. All obligations of non-disclosure and non-use imposed pursuant to the terms and conditions of this Article 5 shall survive expiration or termination of this Agreement and continue in full force and effect for a period of seven (7) years after the effective date of such expiration or such termination.

6. INTELLECTUAL PROPERTY

6.1 Ownership.

6.1.1 As between the Parties, subject only to the licenses set forth in Article 2, Codexis shall retain all right, title, and interest in and to the Codexis Patent Rights, Codexis Know-How, and Codexis Enzymes.

6.1.2 Arch hereby assigns to Codexis all its right, title, and interest in, to, and under any and all any discovery, invention, contribution, method, finding, or improvement, whether or not patentable, and all related know-how, that is conceived, reduced to practice, or otherwise developed by Arch, either solely or jointly with Codexis and/or a Third Party, during the Term that relate to Product, Codexis Technology and/or Codexis Enzymes.

6.2 Filing, Prosecution, and Maintenance. Codexis, at Codexis' expense, shall have the right, but not the obligation, to file applications for and to control the prosecution and maintenance of (a) the Codexis Patent Rights and (b) any patents or patent applications claiming any Codexis Technology.

6.3 Enforcement.

6.3.1 At any time during the Term, if a Party determines that a Third Party is or may be infringing any patent, or may have misappropriated any other right, within the Codexis Technology, if any, the Party making such determination shall promptly provide written notice to the other Party thereof.

6.3.2 Codexis, at Codexis's expense, shall have the right, but not the obligation, to enforce all rights (a) in the Codexis Technology; and (b) with respect to any and all intellectual property covering any Codexis Technology.

6.3.3 In the event that Codexis enforces a right pursuant to this Section 6.3, Arch and its Affiliates, if applicable, shall cooperate fully with Codexis in such enforcement, including without limitation by joining as a party plaintiff and executing such documents as Codexis may reasonably request.

6.4 Allocation of Recovery. Any recovery awarded by a court of competent jurisdiction or final resort in an unreversed, unappealed, or unappealable decision or judgment from an action by Codexis to enforce any right within the Codexis Technology and/or any and all intellectual property covering any Codexis Technology shall be first applied to reimburse Codexis' unreimbursed expenses, and then Arch's unreimbursed expenses, including without limitation reasonable attorney's fees and court costs. Any remaining amount of such damages or other monetary awards shall then be applied between the Parties in such action or proceeding on a pro rata basis based upon the Parties' respective out-of-pocket expenses directly associated with such action or proceeding.

7. REPRESENTATIONS, WARRANTIES AND COVENANTS

7.1 Representations and Warranties of Codexis. Codexis hereby represents and warrants that as of the Effective Date:

7.1.1 Codexis has the full right and authority to enter into this Agreement, and no consent or authorization not obtained prior to the Effective Date is necessary to be obtained;

7.1.2 Codexis Controls the Codexis Patent Rights;

7.1.3 Codexis has not granted any right, license, or interest in, to, or under the Codexis Patent Rights that is materially inconsistent with the rights granted to Arch hereunder;

7.1.4 To the knowledge of Codexis, without investigation of any particular matter, there are no material actions, suits, investigations, claims, or proceedings pending or threatened relating to the Codexis Patent Rights;

7.1.5 To the knowledge of Codexis, there is no material infringement of any right within the Codexis Patent Rights by any Third Party; and

7.1.6 To the knowledge of Codexis, there is no material impediment that would prevent, preclude, or otherwise inhibit its ability to grant the rights and licenses granted, or to perform its obligations, under this Agreement.

7.2 Representations and Warranties of Arch. Arch hereby represents and warrants that as of the Effective Date:

7.2.1 Arch is a corporation organized under the laws of India and is authorized to do business to the extent necessary to fulfill its obligations hereunder;

7.2.2 Arch has the full right and authority to enter into this Agreement, and no consent or authorization not obtained prior to the Effective Date is necessary to be obtained;

7.2.3 Arch has obtained all licenses, authorizations, and permissions necessary or requisite in law for the meeting and performing its obligations under this Agreement and all such licenses, authorizations, and permissions are in full force and effect;

7.2.4 There is no material impediment that would prevent, preclude or otherwise inhibit its ability to perform its obligations under this Agreement; and

7.2.5 Arch's manufacturing facilities and all manufacturing facilities utilized by it are registered with the appropriate Governmental Authorities and in compliance with all applicable Governmental Authority standards and Applicable Law.

7.3 Covenants of Arch. Arch hereby covenants that:

7.3.1 Arch will use Codexis Technology and/or Codexis Enzyme solely for the purpose of manufacture of Product and will not supply Codexis Enzyme to any Third Party;

7.3.2 Arch will not use the Codexis Technology and/or Codexis Enzyme otherwise than as required in the manufacture of Product solely at the behest of Codexis or its Affiliate;

7.3.3 Arch undertakes to keep all licenses, authorizations, and permissions necessary or requisite in law for the meeting and performing its obligations under this Agreement in full force and effect during the term of this Agreement; and

7.3.4 Arch shall at all times strictly comply with all applicable laws, rules, and regulations from time to time in force including, without prejudice to the generality of the foregoing, the provisions of the Drugs & Cosmetics Act 1940, prevailing Drugs Price Control Order, Central Excises Act 1944, The Industries (Development & Regulation) Act, 1951 and labour welfare legislation and the rules, regulations and notifications made or issued thereunder, relating to due and proper performance of its duties and obligations under this Agreement. In the event of Arch committing a breach of this clause, it shall indemnify and keep indemnified Codexis of, from and against all claims, demands, actions, proceedings, fines, penalties and expenses of whatsoever nature made or brought against, sustained or incurred by Codexis and paid for, arising out of or as a result of such breach by Arch.

7.4 Limitation of Warranties. EXCEPT AS SPECIFICALLY SET FORTH IN THIS ARTICLE 7, NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ANY WARRANTY OF NON-INFRINGEMENT, OR ANY OTHER STATUTORY WARRANTY.

8. INDEMNIFICATION

8.1 Arch Indemnification. Arch shall indemnify, defend, and hold Codexis, and its directors, officers, employees, agents, and Affiliates, harmless from and against all claims, demands, damages, liabilities, losses, costs, and expenses, including without limitation attorney's fees (collectively, "**Claims**") resulting from or arising out of (a) any material breach by Arch of any of Arch's representations, warranties, or covenants delivered to Codexis under Article 7, (b) the development, testing, manufacture, use, exportation, storage, handling, transportation, distribution, or any other disposition of any Product made using the Codexis Technology and/or Codexis Enzyme by Arch or any Affiliate of Arch, or (c) the imposition of any tax or duty described in Section 4.3 on Codexis or any Affiliate of Codexis; provided, however, that Arch's indemnification obligations under this Section 8.1 shall not apply (i) to the extent that any such Claim arises out of any breach by Codexis of any of Codexis' representations or warranties delivered to Arch under Article 7, (ii) to any claim arising out of Codexis' negligence or willful misconduct, or (iii) to the extent such Claims are the responsibility of Codexis under Section 8.2.

8.2 Codexis Indemnification. Codexis shall indemnify, defend, and hold Arch, and its directors, officers, employees, agents, and Affiliates, harmless from and against all Claims resulting from or arising out of (a) any material breach by Codexis of any of Codexis' representations or warranties delivered to Arch under Article 7 or (b) the development, testing, manufacture, use, sale, offer for sale, importation, exportation, storage, handling, transportation, distribution, or any other disposition of any Product by Codexis or any Affiliate of Codexis; provided, however, that Codexis' indemnification obligations under this Section 8.2 shall not apply (i) to the extent that any such Claim arises out of any breach by Arch of any of Arch's representations, warranties or covenants under Article 7, (ii) to any claim arising out of Arch's negligence or willful misconduct, or (iii) to the extent such Claims are the responsibility of Arch under Section 8.1.

8.3 Procedure. For purposes of this Article 8, the indemnified Party shall give prompt written notice to the indemnifying Party of any suits, claims, or demands by Third Parties or the indemnified Party that may give rise to any Claim for which indemnification may be required under this Article 8; provided, however, that failure to give such notice shall not relieve the indemnifying Party of its obligation to provide indemnification hereunder except if and to the extent that such failure materially affects the ability of the indemnifying Party to defend the applicable suit, claim, or demand. The indemnifying Party shall be entitled to assume the defense and control of any such suit, claim, or demand of any Third Party at its own cost and expense; provided, however, that the indemnified Party shall have the right to be represented by its own counsel at its own cost in such matters. In the event that the indemnifying Party declines to or fails to timely assume control of any such suit, claim, or demand, the indemnified Party shall be entitled to assume such control, conduct the defense of, and settle such suit, claim, or action, all at the sole cost and expense of the indemnifying Party. Neither the indemnifying Party nor the indemnified Party shall settle or dispose of any such matter in any manner that would adversely affect the rights or interests of the other Party without the prior written consent of the other Party, which shall not be unreasonably withheld or delayed. Each Party shall cooperate with the other Party and its counsel in the course of the defense of any such suit, claim, or demand, such cooperation to include without limitation using reasonable efforts to provide or make available documents, information, and witnesses.

9. DISPUTE RESOLUTION

9.1 Exclusive Dispute Resolution Mechanism. The Parties agree that the procedures set forth in this Article 9 shall be the exclusive mechanism for resolving any dispute, controversy, or claim (collectively, "**Disputes**") between the Parties that may arise from time to time pursuant to this Agreement relating to any Party's rights and/or obligations hereunder that cannot be resolved through good faith negotiation between the Parties.

9.2 Arbitration.

9.2.1 Any and all unresolved Disputes, except as set forth in Section 9.3 or Section 9.4, shall be exclusively and finally resolved by binding arbitration.

9.2.2 Any arbitration concerning a Dispute shall be conducted in New York, New York, United States of America, unless otherwise agreed to by the Parties in writing. Each and any arbitration shall be administered by the American Arbitration Association (the "**AAA**"), and shall be conducted in accordance with the Commercial Arbitration Rules of the AAA (the "**Rules**"), as such Rules may be amended from time to time.

9.2.3 Within ten (10) days after receipt of an arbitration notice from a Party, the Parties shall attempt in good faith to agree on a single neutral arbitrator with relevant industry experience to conduct the arbitration. If the Parties do not agree on a single neutral arbitrator within ten (10) days after receipt of an arbitration notice, each Party shall select one (1) arbitrator and the two (2) Party-selected arbitrators shall select a third arbitrator with relevant industry experience to constitute a panel of three (3) arbitrators to conduct the arbitration in accordance with the Rules. In the event that only one of the Parties selects an arbitrator, then such arbitrator shall be entitled to act as the sole arbitrator to resolve the Dispute or any all unresolved issues subject to the arbitration. Each and every arbitrator of the arbitration panel conducting the arbitration must and shall agree to render an opinion within twenty (20) days after the final hearing before the panel.

9.2.4 The decision or award of the arbitrator(s) shall be final, binding, and incontestable and may be used as a basis for judgment thereon in any jurisdiction. To the full extent permissible under Applicable Law, the Parties hereby expressly agree to waive the right to appeal from the decision of the arbitrator(s), there shall be no appeal to any court or other authority (government or private) from the decision of the arbitrator(s), and the Parties shall not dispute nor question the validity of such decision or award before any regulatory or other authority in any jurisdiction where enforcement action is taken by the Party in whose favor the decision or award is rendered, except in the case of fraud. The arbitrator(s) shall, upon the request of any Party, issue a written opinion of the findings of fact and conclusions of law and shall deliver a copy to each of the Parties. Each Party shall bear its own costs and attorney's

fees, and the Parties shall equally bear the fees, costs, and expenses of the arbitrator(s) and the arbitration proceedings; provided, however, that the arbitrator(s) may exercise discretion to award costs, including attorney's fees, to the prevailing Party. Without limiting any other remedies that may be available under applicable law, the arbitrator(s) shall have no authority to award provisional remedies of any nature whatsoever, or punitive, special, consequential, or any other similar form of damages.

9.3 Preliminary Injunctions. Notwithstanding anything in this Agreement to the contrary, a Party may seek a temporary restraining order or a preliminary injunction from any court of competent jurisdiction in order to prevent immediate and irreparable injury, loss, or damage on a provisional basis, pending the decision of the arbitrator(s) on the ultimate merits of any Dispute.

9.4 Patent Disputes. Notwithstanding anything in this Agreement to the contrary, any and all issues regarding the scope, construction, validity, and enforceability of one or more patents shall be determined in a court of competent jurisdiction under the local patent laws of the jurisdictions having issued the patent or patents in question.

9.5 Confidentiality. All proceedings and decisions of the arbitrator(s) shall be deemed Confidential Information of each of the Parties, and shall be subject to Article 5 of this Agreement.

10. TERM AND TERMINATION

10.1 Term. The term of this Agreement shall commence on the Effective Date and continue in full force and effect until [*], unless and until terminated at an earlier date in accordance with Section 10.2, Section 10.3, or Section 10.4 (the "**Term**").

10.2 Termination upon Notice. Codexis may, at its sole discretion, terminate this Agreement at any time upon [*] written notice to Arch.

10.3 Termination for Insolvency. To the extent permitted under Applicable Law, a Party may terminate this Agreement upon written notice to the other Party on or after the occurrence of any of the following events: (a) the appointment of a trustee, receiver or custodian for all or substantially all of the property of the other Party, or for any lesser portion of such property, if the result materially and adversely affects the ability of the other Party to fulfill its obligations hereunder, which appointment is not dismissed within [*], (b) the determination by a court or tribunal of competent jurisdiction that the other Party is insolvent such that a Party's liabilities exceed the fair market value of its assets, (c) the filing of a petition for relief in bankruptcy by the other Party on its own behalf, or the filing of any such petition against the other Party if the proceeding is not dismissed or withdrawn within [*] thereafter, (d) an assignment by the other Party for the benefit of creditors, or (e) the dissolution or liquidation of the other Party.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

10.4 Termination for Cause.

10.4.1 If a Party materially breaches any term or condition of this Agreement, the other Party may notify the breaching Party in writing of such breach, setting forth the nature of the breach in reasonable detail. If the breaching Party fails to cure such breach within [*] after the receipt of the foregoing notice from the non-breaching Party, the non-breaching Party may terminate this Agreement effective immediately upon a second written notice to the breaching Party.

10.4.2 Notwithstanding Section 10.4.1, if Arch materially breaches any covenant contained in Section 7.3, Codexis shall have the right, but not the obligation, to terminate this Agreement effective immediately upon written notice to Arch.

10.5 Effect of Expiration or Termination.

10.5.1 Expiration of this Agreement for any reason shall not release any Party from any obligation that has accrued prior to the effective date of such expiration.

10.5.2 Upon expiration or termination of this Agreement for any reason, all rights and license granted by Codexis to Arch under this Agreement shall terminate and Arch shall cease use of all Codexis Technology and Codexis Enzymes.

10.5.3 Termination of this Agreement for any reason shall not (a) release any Party from any obligation that has accrued prior to the effective date of such termination (including the obligation to pay amounts accrued and due under this Agreement prior to the termination date but which are unpaid or become payable thereafter), (b) preclude any Party from claiming any other damages, compensation, or relief that it may be entitled to upon such termination, or (c) terminate any right to obtain performance of any obligation provided for in this Agreement that shall survive termination.

10.5.4 Upon expiration or termination of this Agreement by Codexis for any reason, each Party shall promptly return, or destroy and provide written certification of such destruction, any and all Confidential Information of the other Parties in such first Party's possession or control at the time of such termination.

10.6 Survival. Articles 1, 5, 6, 8, 9, and 11 and Sections 3.4, 4.2, 4.3, 4.4, 7.3, 7.4, 10.5, and 10.6 shall survive expiration or termination of this Agreement, as applicable.

11. MISCELLANEOUS

11.1 Further Assurances. From time to time on and after the Effective Date, each Party shall at the reasonable request of the other Party (a) deliver to the other Party such records, data, or other documents consistent with the provisions of this Agreement; (b) execute, and deliver or cause to be delivered, all assignments, consents, documents or further instruments of transfer or license; and (c) take or cause to be taken all other actions as such other Party may reasonably deem necessary or desirable in order for such Party to obtain the full benefits of this Agreement and the transactions contemplated hereby.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

11.2 Limitation of Liability. EXCEPT WITH RESPECT TO UNAUTHORIZED EXPLOITATION OF CODEXIS' INTELLECTUAL PROPERTY RIGHTS OR BREACH OF THE CONFIDENTIALITY OBLIGATIONS UNDER THIS AGREEMENT, IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES OF THE OTHER PARTY ARISING OUT OF OR RELATED TO THIS AGREEMENT, HOWEVER CAUSED, UNDER ANY THEORY OF LIABILITY.

11.3 Governing Law. This Agreement shall be governed by, and construed and interpreted in accordance with, the internal laws of the State of New York, United States of America, without giving effect to any choice of law rule that would cause the application of the laws of any jurisdiction other than the internal laws of the State of New York to the rights and duties of the Parties.

11.4 Force Majeure. No Party shall be held responsible for any delay or failure in performance hereunder caused by strikes, embargoes, unexpected government requirements, civil or military authorities, acts of God, earthquake, or by the public enemy or other causes reasonably beyond such Party's control and without such Party's fault or negligence; provided that the affected Party notifies the unaffected Party as soon as reasonably possible and resumes performance hereunder as soon as reasonably possible following cessation of such force majeure event; and provided further that no such delay or failure in performance shall continue for more than three (3) months. In the event that a delay or failure in performance by a Party under this Section 11.4 continues longer than three (3) months, the other Party may terminate this Agreement in accordance with the terms and conditions of Section 10.4.

11.5 Independent Contractors.

11.5.1 Nothing in this Agreement shall constitute or be deemed to or is intended to constitute Arch as an agent of Codexis. It is hereby expressly agreed and declared that Arch shall not at any time:

a. enter into a contract in the name of or purporting to be made on behalf of Codexis unless to the extent as may be authorized under any agreement entered into between the Parties;

b. by any act, pledge the credit of Codexis or impose or attempt to impose any contractual obligations on Codexis; and

c. either in its own office, factories or depots or on invoices, bill heads or letter papers or any other place or by any other means, oral or written, make any statement to the effect or representation calculated or liable to induce others to believe that it is the agent of Codexis.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

11.5.2 Arch shall not, except with the prior written approval of Codexis, sub-contract or delegate to any other person, firm or company the whole or any part of the manufacture or packing of the Product under this Agreement or assign any of its rights, duties or obligations thereunder. Arch shall continue to be liable to Codexis in respect of its obligations under this Agreement not withstanding such sub-contract or delegation.

11.5.3 Nothing contained herein shall be deemed to constitute a partnership between the Parties.

11.6 Assignment. This Agreement is binding upon and inures to the benefit of the Parties, and to their permitted successors and assigns. The Parties agree that their rights and obligations under this Agreement may not be transferred or assigned to a Third Party without the prior written consent of the other Parties hereto. Notwithstanding the foregoing, Codexis shall have the right to transfer or assign its rights and obligations under this Agreement, without consent, to a successor to all or substantially all of its business or assets relating to this Agreement whether by operation of law, sale, merger, or otherwise in a manner such that Codexis will remain liable and responsible for the performance and observance of all its duties and obligations hereunder. Any assignment not in conformance with this Section 11.6 shall be null, void, and of no legal effect.

11.7 Notices. Any notice, report, communication, or consent required or permitted by this Agreement shall be in writing and shall be sent (a) by prepaid registered or certified mail, return receipt requested, (b) by overnight express delivery service by a nationally recognized courier, or (c) via confirmed facsimile or telecopy, followed within five (5) days by a copy mailed in the preceding manner, addressed to the other Party at the address shown below or at such other address as such Party gives notice hereunder. Such notice will be deemed to have been given when delivered or, if delivery is not accomplished by some fault of the addressee, when tendered.

If to Arch:

Arch Pharmalabs Limited
H wing, 4th Floor
Tex Centre
Off Saki Vihar Road
Chandivali, Mumbai- 400072
India
Attn: [*]
Facsimile: [*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

If to Codexis: Codexis, Inc.
200 Penobscot Drive
Redwood City, California 94063
USA
Attn: [*]
Facsimile: [*]

11.8 Severability. If any provision of any provision of this Agreement shall be found by a court to be void, invalid, or unenforceable, the same shall be reformed to comply with Applicable Law or stricken if not so conformable, so as not to affect the validity or enforceability of this Agreement; provided that no such reformation or striking shall be effective if the result materially changes the economic benefit of this Agreement to any Party. In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be void, invalid, or unenforceable, and reformation or striking of such provision would materially change the economic benefit of this Agreement to any Party, the Parties shall modify such provision in accordance with Section 11.9 to obtain a legal, valid, and enforceable provision and provide an economic benefit to the Parties that most nearly effects the Parties' intent on entering into this Agreement.

11.9 Modifications; Waivers. This Agreement may not be altered, amended, supplemented, or modified in any way except by a writing signed by each Party. The failure of a Party to enforce any rights or provisions of the Agreement shall not be construed to be a waiver of such rights or provisions, or a waiver by such Party to thereafter enforce such rights or provision or any other rights or provisions hereunder.

11.10 Entire Agreement. The Parties acknowledge that this Agreement, including the exhibit attached hereto sets forth the entire agreement and understanding of the Parties as to the subject matter hereof, and supersedes all prior and contemporaneous discussions, agreements, and writings with respect hereto with respect to the subject matter hereof. No trade customs, courses of dealing or courses of performance by the Parties shall be relevant to modify, supplement, or explain any term(s) used in this Agreement.

11.11 No Third Party Beneficiaries. This Agreement is neither expressly nor impliedly made for the benefit of any party other than those executing it.

11.12 Interpretation.

(a) Captions and Headings. The captions and headings of clauses contained in this Agreement preceding the text of the articles, sections, subsections, and paragraphs hereof are inserted solely for convenience and ease of reference only and shall not constitute any part of this Agreement, or have any effect on its interpretation or construction.

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(b) Singular and Plural. All references in this Agreement to the singular shall include the plural where applicable, and all references to gender shall include both genders and the neuter.

(c) Articles, Sections, and Subsections. Unless otherwise specified, references in this Agreement to any article shall include all sections, subsections, and paragraphs in such article; references in this Agreement to any section shall include all subsections and paragraphs in such section; and references in this Agreement to any subsection shall include all paragraphs in such subsection.

(d) Days. All references to days in this Agreement shall mean calendar days, unless otherwise specified.

(e) Ambiguities. The Parties jointly drafted this Agreement. Ambiguities and uncertainties in this Agreement, if any, shall not be interpreted against any Party, irrespective of which Party may be deemed to have caused the ambiguity or uncertainty to exist.

11.13 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

[Signature Page Follows]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, the Parties have executed this Agreement by their respective duly authorized representatives as of the Effective Date.

CODEXIS, INC.
("Codexis")

By: /s/ Robert S. Breuil
Name: Robert S. Breuil
Title: CFO

ARCH PHARMALABS LIMITED
("Arch")

By: /s/ Ajit Kamath
Name: Ajit Kamath
Title: CMD

EXHIBIT 10.15

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

MASTER SERVICES AGREEMENT

This Master Services Agreement, dated August 1, 2006 (the "Agreement"), effective as of August 1, 2006 (the "Effective Date"), is made and entered into by and between Codexis, Inc., a Delaware corporation, having a place of business at 200 Penobscot Drive, Redwood City, California 94063, USA, ("Codexis") and Arch Pharmalabs Limited, a corporation organized and existing under the laws of India, having a place of business at H wing, 4th Floor, Tex Centre, Chandivali, Mumbai, 400072, India, ("Arch").

WHEREAS, Arch provides services relating to chemical processes and manufacturing methods; and

WHEREAS, Codexis is engaged in pharmaceutical business and desires to utilize the services of Arch to develop chemical processes and manufacturing methods solely for use by Codexis.

NOW THEREFORE, in consideration of the foregoing and the covenants and promises contained in this Agreement, the parties agree as follows:

1. Services: During the term of this Agreement, Arch shall conduct chemical process and manufacturing method development services (the "Services") for Codexis utilizing at least an average of [*] Arch full time equivalent employees ("FTE(s)") per year in accordance with direction from Codexis and protocol(s) agreed to by the parties in writing, each of which shall specify the particular services to be conducted and the goal of such activities, the number and type of FTE(s) devoted to such protocol, the time frame for conducting such services, and other relevant matters (each a "Services Protocol"). Each Services Protocol shall reference and incorporate the terms of, and shall be attached as an exhibit to, this Agreement. In the event that any provision of a Services Protocol contradicts this Agreement, this Agreement shall govern. All FTEs who perform Services under this Agreement shall have appropriate professional and technical training and expertise to conduct the Services. In the event that Codexis requests that Arch remove a specific FTE assigned by Arch to perform its obligations under a Services Protocol, Arch shall use its best efforts to replace such FTE with an alternative FTE approved by Codexis. The scope of chemical process and manufacturing method development included within each Services Protocol shall be defined in such Services Protocol and may be amended in writing by the parties from time to time during the term of this Agreement. Arch shall consult with Codexis regarding all methods, reagents, protocols and the like, and Codexis shall have final approval authority over all aspects of the Services and Services Protocols. Arch shall not conduct activities relating to any compound within a Services Protocol on its own behalf or any third party during the term of this Agreement or for a period of three (3) years thereafter. Arch will periodically, but not less than once per week, consult with Codexis and keep Codexis fully informed of the progress of the Services.

2. Delivery: Arch shall deliver to Codexis deliverables as set forth in each Services Protocol, which may include, for example, detailed descriptions of experimental

methods, detailed process protocols, synthesized compounds, analytical methods for testing compounds, periodic status reports in addition to the Final Report described in Section 5, and/or other analytical procedure data agreed to by the parties in the Services Protocol (the "Results"). For the purpose of clarification, "Results" shall include any compound prepared under a Services Protocol. The parties shall confer prior to any such delivery of the Results. Title to all Results shall pass to Codexis free and clear of any security interest, lien, or other encumbrance.

3. Payments: As consideration for Arch's performance of the Services during the term of this Agreement, Codexis shall pay to Arch the following payments: [*]. Such payments shall include all costs and expenses of Arch, including, for example, labor, facilities, analysis, packaging, waste disposal, reports and delivery of the Results to Codexis. Such payments shall also be inclusive of all taxes, duties or levies of whatsoever in nature, including, for example, excise duty, sales tax, VAT, service tax, if any, levied in connection with or arising out of performance of Services or any other obligation of Arch under this Agreement. Codexis shall have no obligation to reimburse Arch for any costs, tax, duties or levies and expenses of Arch in excess of such payment. Arch shall also be responsible for all compliance requirements under the applicable laws in respect of its obligations under this Agreement, and any fines or penalties levied on account of any non-compliance shall be solely borne by Arch. If, in the reasonable opinion of Codexis, Arch has failed to perform or complete its performance under a Services Protocol or this Agreement, upon a 15-day written notice to Arch by Codexis, Codexis shall have the right to delay or withhold payment until such performance is complete and accepted by Codexis.

4. Materials and Equipment: Arch shall be responsible for the procurement, proper quality and documentation of the quality of all materials, equipment, and facilities used to conduct the Services under this Agreement.

5. Records: Arch shall prepare and maintain detailed laboratory notebook records of the preparation of the Results. Arch shall deliver to Codexis, not later than thirty (30) days following the completion of each Services Protocol, a final report (the "Final Report") including all information related to such Services Protocol. Arch shall prepare and deliver complete detailed analytical information requested by Codexis in writing for the purpose of preparing patent applications. Codexis shall be free to disclose and use such information for any purpose and shall exclusively own all such information. Codexis may audit and copy such records, analytical data, and laboratory notebook records during Arch's normal business hours.

6. Best Efforts: Arch covenants to use best efforts, using no less than commonly accepted professional standards of workmanship, to accomplish the goals and objectives of the Services conducted under the terms of this Agreement. Arch covenants to not utilize, without Codexis' prior written consent, any process, device, intermediate, reagent, or composition of matter in the performance of this Agreement that is not expressly set forth in the Services Protocol.

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7. Ownership and Licenses: Codexis shall own all intellectual property rights relating to the Results and, except as required to conduct the Services, Arch shall have no right or license in such intellectual property rights. Arch shall retain ownership of intellectual property rights in analytical, manufacturing technologies employed and controlled by Arch (and not by Codexis) to perform its obligations under this Agreement; provided, however, that Arch hereby grants to Codexis an irrevocable, perpetual, fully paid-up, royalty-free, worldwide, non-exclusive license, with the right to sublicense, under such intellectual property rights to make, use, sell, offer to sell, import, or export the Results. Codexis may disclose such intellectual property rights in any patent applications filed by Codexis.

All information (a) received from Codexis pursuant to this Agreement or (b) obtained as a result of Arch's performance under this Agreement as defined in each Services Protocol (collectively, the "Information") shall be the sole property of Codexis. Arch agrees to disclose promptly to Codexis, and Codexis shall own, all inventions, discoveries, designs, innovations, improvements, and all other intellectual property rights made or perfected by Arch and/or Codexis in the performance of, or arising out of, the Services and/or the use by Arch of any Information for which Arch has an obligation of confidentiality or nonuse under Section 8 (the "Discoveries"). Codexis shall have the sole right to file, prosecute, and maintain patent applications and patents in respect of the Information, Discoveries, and/or Results. Arch hereby undertakes and agrees to execute and have its employees execute such assignments and other papers which, in the reasonable opinion of Codexis, are necessary at any time to permit the filing and prosecution of applications for patents covering claiming Information, Discoveries, and/or the Results. Arch hereby further agrees that, at Codexis' request and expense, Arch will assist Codexis in the preparation, filing, and prosecution of such patent applications and patents. To the extent that Arch is or becomes aware that any of the Information, Discoveries, and/or Results are disclosed publicly, for example in an existing patent/patent application, it shall inform Codexis.

8. Confidentiality: Arch shall maintain as confidential all Information, Discoveries, and/or the Results, and shall limit access to Information, Discoveries, and/or Results to only those persons who, under Arch's direct control, will be engaged in employing Information for the purposes of fulfilling Arch's obligations under this Agreement and are under obligations of non-use and nondisclosure no less protective than those set forth in this Agreement. At no time shall Information be employed for any purpose other than as described in the previous sentence or disclosed or provided to any third party without the prior written consent of Codexis. The foregoing obligations of confidentiality and nonuse shall continue for [*] years after the termination of the Services corresponding to the Information, Discoveries, and/or the Results, or [*] years after the date of disclosure by Codexis if no Services Protocol corresponding to the Information is agreed to by the parties. The foregoing obligations of confidentiality and nonuse shall not apply to Information (a) that was known to Arch prior to this Agreement as evidenced by its written records, except Information that was known to Arch as a result of prior confidential disclosures to Arch by Codexis or work performed by Arch for Codexis; (b) that is or becomes generally available to the public by use, publication or the

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

like, through no fault of Arch; or (c) that is disclosed to Arch by a third party who has the legal right to disclose Information. Except as otherwise agreed to herein, if Arch is requested or required by law to disclose any Information, Discoveries, and/or Results to an authorized government agency or to any other party, Arch shall immediately notify Codexis in writing of all details of the request or requirement and give Codexis sufficient opportunity to contest such request or requirement and/or obtain an appropriate protective order prior to Arch making any such disclosure. Notwithstanding (a), (b), or (c) above, Information shall not be deemed to be within any of the exceptions merely because (i) it is specific but is embraced by more general information coming within one of the exceptions, (ii) it is a combination of features for which the individual features come within one of the exceptions, or (iii) it is Information related to Information which comes within one of the exceptions.

9. Term and Termination:

9.1 This Agreement shall begin on the Effective Date and expire [*] after the Effective Date unless terminated earlier pursuant to this Section 9.

9.2 Upon [*] notice from Codexis, Codexis shall have the right at any time to terminate this Agreement and/or the Services, in whole or in part, prior to completion. Such termination by Codexis shall not relieve Codexis of its obligations under this Agreement to pay Arch under Section 3 on a pro rata basis for all work completed by Arch for Codexis prior to such termination date; provided, however, such obligation to pay shall not exceed the price set forth in Section 3.

9.3 Either party may terminate this Agreement at any time if the other party fails to perform any material obligation, covenant, condition, or limitation herein, provided such other party shall not have remedied its failure within [*] days after receipt of written notice from the terminating party of such failure.

9.4 Sections 2, 4–8, 9.4, and 10–23 shall survive expiration or termination of this Agreement.

10. Indemnification:

10.1 Codexis Indemnity: Codexis shall indemnify and hold harmless Arch, its directors, officers, and employees, from and against any and all liability, damage, loss, cost (including reasonable attorneys' fees), and expense resulting from claims of any kind and character by any third party (including, without limitation, employees or agents of Codexis) with respect to the Results supplied to Codexis pursuant to this Agreement. Notwithstanding the foregoing, Arch shall not be entitled to indemnification under this Section 10.1 against any claim to the extent resulting from Arch's negligence or willful misconduct or directly arising out of Arch's performance of its obligations hereunder.

10.2 Arch Indemnity: Arch shall indemnify and hold harmless Codexis, its directors, officers, and employees, from and against any and all liability, damage, loss,

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cost (including reasonable attorneys' fees), and expense resulting from claims of any kind and character by any third party (including, without limitation, employees or agents of Arch) arising out of or in connection with Arch's performance under this Agreement, including, without limitation, liability, damage, loss, cost, and expense arising out of or in connection with the disposal of waste chemicals and solvents, and the failure to use materials, equipment, and facilities of appropriate quality in conduct of the Services. Notwithstanding the foregoing, Codexis shall not be entitled to indemnification under this Section 10.2 against any claim to the extent resulting from Codexis' negligence or willful misconduct in the course of Codexis' performance of its obligations hereunder.

11. Limitation of Liability: EXCEPT WITH RESPECT TO UNAUTHORIZED EXPLOITATION OF CODEXIS' INTELLECTUAL PROPERTY RIGHTS OR BREACH OF THE CONFIDENTIALITY OBLIGATIONS UNDER THIS AGREEMENT, IN NO EVENT WILL ANY PARTY OR ANY OF ITS RESPECTIVE AFFILIATES BE LIABLE TO THE ANY OTHER PARTY OR ANY OF ITS AFFILIATES FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL, EXEMPLARY, OR PUNITIVE DAMAGES, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE.

12. Assignment: The parties recognize that the rights and obligations provided by Arch under this Agreement are unique and personal to Arch, and thus Arch shall not assign this Agreement or any interest under this Agreement under any circumstances without Codexis' consent, and any assignment by Arch without Codexis' consent shall be null and void. Codexis, however, may assign this Agreement or any interest under this Agreement without Arch's consent.

13. Waiver: No provision of this Agreement shall be waived by any act, omission or knowledge of a party or its agents or employees except by an instrument in writing expressly waiving such provision and signed by a duly authorized officer of the waiving party. A waiver by any party of any of the terms and conditions of this Agreement in any instance will not be deemed or construed to be a waiver of such term or condition for the future, or of any subsequent breach of this Agreement. All rights, remedies, undertakings, obligations, and agreements contained in this Agreement will be cumulative and none of them will be in limitation of any other remedy, right, undertaking, obligation, or agreement of either party.

14. Severability: Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity without invalidating the remainder of this Agreement.

15. Notices and Deliveries: Any notice, request, delivery, approval, or consent required or permitted to be given under this Agreement will be in writing and will be deemed to have been sufficiently given if delivered in person, transmitted by telecopier (receipt verified) or by express courier service (signature required) or ten (10)

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days after it was sent by registered letter, return receipt requested (or its equivalent), provided that no postal strike or other disruption is then in effect or comes into effect within two (2) days after such mailing, to the party to which it is directed at its address or facsimile number shown below or such other address or facsimile number as such party will have last given by notice to the other party.

If to Codexis, addressed to:

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
United States of America
Attn.: [*]
Facsimile: [*]

If to Arch, addressed to:

Arch Pharmalabs Limited
H wing, 4th Floor
Tex Centre
Off Saki Vihar Road
Chandivali, Mumbai- 400072
India
Attn.: [*]
Facsimile: [*]

16. Independent Contractors: The relationship between Codexis and Arch created by this Agreement is one of independent contractors and neither party shall have the power or authority to bind or obligate the other except as expressly set forth in this Agreement. Arch shall use its own discretion and shall have complete and authoritative control over its employees and the details of performing its obligations under this Agreement. Any provisions in this Agreement which may appear to give Codexis the right to direct or exercise a measure of control over Arch as to the details of performing its obligations under this Agreement shall be deemed to mean that Arch shall follow the desires of Codexis. However, such provisions will not entitle Codexis to utilize Arch's facilities or office space at its discretion or control.

17. No Third Party Beneficiaries: This Agreement is neither expressly nor impliedly made for the benefit of any party other than those executing it.

18. Force Majeure: Neither party shall be liable for its failure to perform hereunder as a result of any event of force majeure beyond the party's reasonable control including, but not limited to, acts of God, fire, flood, wars, sabotage, civil strife or demonstrations, accidents, strikes, lockouts or other labor disputes, shortages, government actions, or regulations, inability to obtain supplies, raw materials or transportation or preparation failure (other than due to operator error). If either party's

performance is prevented in whole or part by any such event, such party shall be excused any of its obligations hereunder during the period of delay of performance resulting from such event.

19. Entire Agreement; Amendments: This Agreement constitutes and contains the entire understanding and agreement of the parties respecting the subject matter of this Agreement and cancels and supersedes any and all prior and contemporaneous negotiations, correspondence, understandings, and agreements between the parties, whether oral or written, regarding such subject matter. No modification of this Agreement shall be effective unless made in writing and signed by a duly authorized representative of each party.

20. Governing Law; Jurisdiction: This Agreement shall be governed by and interpreted in accordance with the laws of the State of New York excluding conflict or choice of laws principles that would result in the application of the laws of any jurisdiction other than the State of New York.

21. Names: Both parties agree that they will not use the name of the other party or any of its personnel for promotional literature or advertising without the prior written approval of the other party.

22. Compliance with Laws: Notwithstanding anything to the contrary contained herein, all rights and obligations of the parties are subject to prior compliance with, and each party shall comply with, all U.S. and foreign export and import laws, regulations, and orders, and such other United States and foreign laws, regulations, and orders as may be applicable, including obtaining all necessary approvals required by the applicable agencies of the governments of the United States and foreign jurisdictions.

23. Interpretation: The descriptive headings of this Agreement are for convenience only and shall be of no force or effect in construing or interpreting any of the provisions of this Agreement. All references in this Agreement to the singular shall include the plural where applicable, and all references to gender shall include both genders and the neuter. Unless otherwise specified, references in this Agreement to any section shall include all subsections in such section. All references to days in this Agreement shall mean calendar days, unless otherwise specified.

24. Counterparts: This Agreement and the Services Protocol(s) may be executed simultaneously in any number of counterparts, any one of which need not contain the signature of more than one party but all such counterparts taken together will constitute one and the same agreement.

[*Signature Page Follows*]

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective duly authorized officers as of the Effective Date, each copy of which will for all purposes be deemed to be an original.

CODEXIS, INC.
("Codexis")

By: /s/ Robert S. Breuil
Name: Robert S. Breuil
Title: CFO

ARCH PHARMALABS LIMITED
("Arch")

By: /s/ Ajit Kamath
Name: Ajit Kamath
Title: CMD

Exhibits

Service Protocols

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit 10.16

LEASE

BETWEEN

METROPOLITAN LIFE INSURANCE COMPANY (LANDLORD)

AND

CODEXIS, INC. (TENANT)

SEAPORT CENTRE

Redwood City, California

TABLE OF CONTENTS

LEASE

ARTICLE ONE
BASIC LEASE PROVISIONS

1.01 BASIC LEASE PROVISIONS

In the event of any conflict between these Basic Lease Provisions and any other Lease provision, such other Lease provision shall control.

(1) BUILDINGS AND ADDRESSES:

220 Penobscot Drive (17,627 sq. ft.)
Redwood City, California 94063

Building Number 4, located in Phase 1 of Seaport Centre

and

501 Chesapeake Drive (11,158 sq. ft.)
Redwood City, California 94063

Building Number 3, located in Phase 1 of Seaport Centre

and

200 Penobscot Drive (10,597 sq. ft.)
Redwood City, California 94063

Building Number 4, located in Phase 1 of Seaport Centre

(2) LANDLORD AND ADDRESS:

Metropolitan Life Insurance Company,
a New York corporation

Notices to Landlord shall be addressed:

Metropolitan Life Insurance Company
c/o Seaport Centre Manager
701 Chesapeake Drive
Redwood City, CA 94063

with copies to the following:

Metropolitan Life Insurance Company
400 South El Camino Real, Suite 800
San Mateo, CA 94402
Attention: Assistant Vice President

(3) TENANT; CURRENT ADDRESS & TAX ID:

(a) Name: Codex's, Inc.
(b) State of incorporation: Delaware
(c) Tax Identification Number: _____

Tenant shall notify Landlord of any change in the foregoing.

Notices to Tenant shall be addressed:

Codexis, Inc.
200 Penobscot Drive
Redwood City, California 94063
Attention: Tassos Gianakakos

(4) DATE OF LEASE: as of October __, 2003

(5) LEASE TERM: seven (7) years

(6) COMMENCEMENT DATE: February 1, 2004

(7) EXPIRATION DATE: January 31, 2011

(8) MONTHLY BASE RENT (initial monthly installment due upon Tenant's execution):

Period from/to	Monthly	SF of Rentable Area
2/1/04 - 1/31/05	$50,374	28,785
2/1/05 - 5/31/05	$51,813	28,785
6/1/05 - 1/31/06	$68,662	39,382
2/1/06 - 1/31/07	$70,631	39,382
2/1/07 - 1/31/08	$72,600	39,382
2/1/08 - 1/31/09	$74,569	39,382
2/1/09 - 1/31/10	$76,538	39,382
2/1/10 - 1/31/11	$78,507	39,382

(9) RENT ADJUSTMENT DEPOSIT (initial monthly rate, until further notice): $15,083.75 (initial monthly installment due upon Tenant's execution)

(10) TENANT'S RENTABLE AREA OF THE PREMISES: 28,785 square feet 2/1/04 through 5/31/05 and 39,382 square feet 6/1/05 through 1/31/11

(11) TENANTS RENTABLE AREA OF THE BUILDING: 17,627 square feet for Building 4 and 11,158 square feet for Building 3 (2/1/04 through 5/31/05); and 28,224 square feet for Building 4 and 11,158 square feet for Building 3 (6/1/05 through 1/31/11)

(12) TOTAL RENTABLE AREA OF PHASE I: 301,824 square feet

(13) TOTAL RENTABLE AREA OF THE PROJECT: 537,444 square feet

(14) TOTAL RENTABLE AREA OF BUILDING 3: 37,856 square feet

(15) TOTAL RENTABLE AREA OF BUILDING 4: 28,224 square feet

(16) SECURITY DEPOSIT: four hundred fifty thousand and no/100 dollars ($450,000.00) due upon Tenant's execution

(17) SUITE NUMBER 8/OR ADDRESS OF PREMISES: 220 Penobscot Drive, 501 Chesapeake Drive and 200 Penobscot Drive

(18) TENANTS SHARE

Tenant's Building 3 Share:	29.48% 2/1/04 to 1/31/11
Tenant's Building 4 Share:	62.45% 2/1/04 to 5/31/05
Tenant's Building 4 Share:	100.00% 6/1/05 to 1/31/11
Tenant's Phase 1 Share:	9.54% 2/1/04 to 5/31/05
Tenant's Phase 1 Share:	13.05% 6/1/05 to 1/31/11
Tenant's Project Share:	5.3%2/1/04 to 5/31/05
Tenants Project Share:	7.33% 6/1/05 to 1/31/11

(19) TENANT'S USE OF PREMISES: General office use, research and development, chemical and biochemical laboratory facilities, and warehousing.

(20) PARKING SPACES: 95 spaces 2/1/04 to 5/31/05 and 130 spaces 6/1/05 to 1/31/11

(21) BROKERS:

Landlord's Broker:	Comish & Carey Commercial
Tenants Broker:	CB Richard Ellis CRESA

1.02 ENUMERATION OF EXHIBITS

The Exhibits set forth below and attached to this Lease are incorporated in this Lease by this reference:

EXHIBIT A Plan of Premises

EXHIBIT B Workletter Agreement (intentionally omitted)

EXHIBIT C Site Plan of Project

EXHIBIT D Permitted Hazardous Material

EXHIBIT E Maxygen Improvements

EXHIBIT F Approved Providers

EXHIBIT G Tenant's Improvements

EXHIBIT H Form of Landlord's Consent to Lease of Personal Property

1.03 DEFINITIONS

For purposes hereof, the following terms shall have the following meanings:

ADJUSTMENT YEAR: The applicable calendar year or any portion thereof after the Commencement Date of this Lease for which a Rent Adjustment computation is being made.

AFFILIATE: Any Person (as defined below) which is currently owned or controlled by, owns or controls, or is under common ownership or control with Tenant. For purposes of this definition, the word "control," as used above means, with respect to a Person that is a corporation, the right to exercise, directly or indirectly, more than sixty percent (60%) of the voting rights attributable to the shares of the controlled corporation and, with respect to a Person that is not a corporation, the possession, directly or indirectly, of the power at all times to direct or cause the direction of the management and policies of the controlled Person. The word Person means an individual, partnership, trust, corporation, firm or other entity.

BUILDING: Each building in which the Premises is located, as specified in Section 1.01(1).

BUILDING OPERATING EXPENSES: Those Operating Expenses described in Section 4.01.

COMMENCEMENT DATE: The date specified in Section 1.01(6) as the Commencement Date, unless changed by operation of Article Two.

COMMON AREAS: All areas of the Project made available by Landlord from time to time for the general common use or benefit of the tenants of the Building or Project, and their employees and invitees, or the public, as such areas currently exist and as they may be changed from time to time.

DECORATION: Tenant Alterations which do not require a building permit and which do not affect the facade or roof of the Building, or involve any of the structural elements of the Building, or involve any of the Building's systems, including its electrical, mechanical, plumbing, security, heating, ventilating, air- conditioning, communication, and fire and life safety systems.

DEFAULT RATE: Two (2) percentage points above the rate then most recently announced by Bank of America N.T.& SA. at its San Francisco main office as its corporate base lending rate, from time to time announced, but in no event higher than the maximum rate permitted by Law.

DELIVERY DATE: The date for Landlord's delivery to Tenant of possession of the Premises, if different from the Commencement Date.

ENVIRONMENTAL LAWS: All Laws governing the use, storage, disposal or generation of any Hazardous Material or pertaining to environmental conditions on, under or about the Premises or any part of the Project, including the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended (42 U.S.C. Section 9601 et sm.), and the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. Section 6901 et).

EXPIRATION DATE: The date specified in Section 1.01(7) unless changed by operation of Article Two.

FORCE MAJEURE: Any accident, casualty, act of God, war or civil commotion, strike or labor troubles, or any cause whatsoever beyond the reasonable control of Landlord, including water shortages, energy shortages or governmental preemption in connection with an act of God, a national emergency, or by reason of Law, or by reason of the conditions of supply and demand which have been or are affected by act of God, war or other emergency.

HAZARDOUS MATERIAL: Such substances, material and wastes which are or become regulated under any Environmental Law; or which are classified as hazardous or toxic or medical waste or biohazardous waste under any Environmental Law, and explosives, firearms and ammunition, flammable material, radioactive material, asbestos, polychlorinated biphenyls and petroleum and its byproducts.

INDEMNITEES: Collectively, Landlord, any Mortgagee or ground lessor of the Property, the property manager and the leasing manager for the Property and their respective directors, officers, agents and employees.

LAND: The parcel(s) of real estate on which the Building and Project are located. LANDLORD WORK: (intentionally omitted)

LAWS OR LAW: All laws, ordinances, rules, regulations, other requirements, orders, rulings or decisions adopted or made by any governmental body, agency, department or judicial authority having jurisdiction over the Property, the Premises or Tenant’s activities at the Premises and any covenants, conditions or restrictions of record which affect the Property.

LEASE: This instrument and all exhibits attached hereto, as may be amended from time to time.

LEASE YEAR: The twelve month period beginning on the first day of the first month following the Commencement Date (unless the Commencement Date is the first day of a calendar month in which case beginning on the Commencement Date), and each subsequent twelve month, or shorter, period until the Expiration Date.

MONTHLY BASE RENT: The monthly rent specified in Section 1.01(8).

MORTGAGEE: Any holder of a mortgage, deed of trust or other security instrument encumbering the Property.

NATIONAL HOLIDAYS: New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day and other holidays recognized by the Landlord and the janitorial and other unions servicing the Building in accordance with their contracts.

OPERATING EXPENSES: All Taxes, costs, expenses and disbursements of every kind and nature which Landlord shall pay or become obligated to pay in connection with the ownership, management, operation, maintenance, replacement and repair of the Property (including the amortized portion of any capital expenditure or improvement, together with interest thereon, expenses of changing utility service providers, and any dues, assessments and other expenses pursuant to any covenants, conditions and restrictions, or any reciprocal easements, or any owner's association now or hereafter affecting the Project). Operating Expenses shall be allocated among the categories of Project Operating Expenses, Building Operating Expenses or Phase Operating Expenses as provided in Article Four. If any Operating Expense, though paid in one year, relates to more than one calendar year, at the option of Landlord such expense may be proportionately allocated among such related calendar years (it being understood that those specific items of repairs and replacements, which under Generally Accepted Accounting Principles should be classified as capital expenditures, except that if such repair or replacement is of such a nature that it should be considered under Generally Accepted Accounting Principles a deferred expense and spread over a period of not more than ten (10) years, Operating Expenses for a year shall include the proportionate share of such deferred expense appropriately allocated to such year). Operating Expenses shall include the following, by way of illustration only and not limitation: (1) all Taxes; (2) all insurance premiums and other costs (including deductibles), including the cost of rental insurance; (3) all license, permit and inspection fees; (4) all costs of utilities, fuels and related services, including water, sewer, light, telephone, power and steam connection, service and related charges; (5) all costs to repair, maintain and operate heating, ventilating and air conditioning systems, including preventive maintenance; (6) all janitorial, landscaping and security services; (7) all wages, salaries, payroll taxes, fringe benefits and other labor costs of employees who devote substantially all of his or her time to the Building or Project, including the cost of workers' compensation and disability insurance; (8) all costs of operation, maintenance and repair of all parking facilities and other common areas; (9) all supplies, materials, equipment and tools; (10) dues, assessments and other expenses pursuant to any covenants, conditions and restrictions, or any reciprocal easements, or any owner's association now or hereafter affecting the Project (11) modifications to the Building or the Project occasioned by Laws now or hereafter in effect (12) the total charges of any independent contractors employed in the care, operation, maintenance, repair, leasing and cleaning of the Project, including landscaping, roof maintenance, and repair, maintenance and monitoring of life-safety systems, plumbing systems, electrical wiring and Project signage; (13) the cost of accounting services necessary to compute the rents and charges payable by tenants at the Project (14) exterior window and exterior wall cleaning and painting; (15) managerial and administrative expenses; (16) all costs in connection with the exercise facility at the Project (17) all costs and expenses related to Landlord's retention of consultants in connection with the routine review, inspection, testing, monitoring, analysis and control of Hazardous Material, and retention of consultants in connection with the clean-up of Hazardous Material (to the extent not recoverable from a particular tenant of the Project), and all costs and expenses related to the implementation of recommendations made by such consultants concerning the use, generation, storage, manufacture, production, storage, release, discharge, disposal or clean-up of Hazardous Material on, under or about the Premises or the Project (to the extent not recoverable from a particular tenant of the Project), but only to the extent applicable to Tenant and its use of the Premises; (18) all capital improvements made for the purpose of reducing or controlling other Operating Expenses, and all other capital expenditures, but only as amortized over such reasonable period

as Landlord shall determine, together with interest thereon; (19) all property management costs and fees, including all costs in connection with the Project property management office; and (20) all fees or other charges incurred in conjunction with voluntary or involuntary membership in any energy conservation, air quality, environmental, traffic management or similar organizations. Notwithstanding the foregoing, Operating Expenses shall not include: (a) costs of alterations of space to be occupied by new or existing tenants of the Project; (b) depreciation charges; (c) interest and principal payments on loans (except for loans for capital expenditures or improvements which Landlord is allowed to include in Operating Expenses as provided above); (d) ground rental payments; (e) real estate brokerage and leasing commissions; (f) advertising and marketing expenses; (g) costs of Landlord reimbursed by insurance proceeds; (h) expenses incurred in negotiating leases of other tenants in the Project or enforcing lease obligations of other tenants in the Project; (i) Landlord's or Landlord's property manager's corporate general overhead or corporate general administrative expenses; (j) costs of correcting defects in or inadequacy of the initial design or construction of the Building or Property; (k) costs of a capital nature, including, without limitation, capital improvements, capital repairs, capital equipment and capital tools, all as determined in accordance with generally acceptable accounting principles; (I) any late fees, fines, penalties and interest on past due amounts incurred by Landlord; (m) expenses directly resulting from the gross negligence or willful misconduct of Landlord, its agents or employees; and (n) any cost (such as repairs, improvements, electricity, special cleaning or overtime services) to the extent such costs are expressly reimbursed to Landlord by tenants (as opposed to partial reimbursement in the nature of rent escalation provisions) or are separately charged to and payable by tenants.

"Operating Expenses" shall be reduced by all cash discounts, trade discounts or quantity discounts received by Landlord or Landlord's managing agent in the purchase of any goods, utilities or services in connection with the operation of the Property.

PHASE: Phase means any individual Phase of the Project, as more particularly described in the definition of Project.

PHASE OPERATING EXPENSES: Those Operating Expenses described in Section 4.01.

PREMISES: The space located in the Buildings at the Suite Numbers listed in Section 1.01(15) and depicted on Exhibit A attached hereto. The Premises shall consist of 501 Chesapeake Drive ("Space A"), 220 Penobscot Drive ("Space B") and 200 Penobscot Drive ("Space C").

PROJECT or PROPERTY: As of the date hereof, the Project is known as Seaport Centre and consists of those buildings (including the Building) whose general location is shown on the Site Plan of the Project attached as Exhibit C located in Redwood City, California, associated vehicular and parking areas, landscaping and improvements, together with the Land, any associated interests in real property, and the personal property, fixtures, machinery, equipment, systems and apparatus located in or used in conjunction with any of the foregoing. The Project may also be referred to as the Property. As of the date hereof, the Project is divided into Phase I and Phase II, which are generally designated on Exhibit C each of which may individually be referred to as a Phase. Landlord reserves the right from time to time to add or remove buildings, areas and improvements to or from a Phase or the Project, or to add or remove a Phase to or from the Project. In the event of any such addition or removal which affects the Total Rentable Area of the Project or a Phase, Landlord shall make a corresponding recalculation and adjustment of any affected Tenant's Rentable Area and Tenant's Share.

PROJECT OPERATING EXPENSES: Those Operating Expenses described in Section 4.01.

REAL PROPERTY: The Property excluding any personal property.

RENT: Collectively, Monthly Base Rent, Rent Adjustments and Rent Adjustment Deposits, and all other charges, payments, late fees or other amounts required to be paid by Tenant under this Lease.

RENT ADJUSTMENT: Any amounts owed by Tenant for payment of Operating Expenses. The Rent Adjustments shall be determined and paid as provided in Article Four.

RENT ADJUSTMENT DEPOSIT: An amount equal to Landlord's estimate of the Rent Adjustment attributable to each month of the applicable Adjustment Year. On or before the Commencement Date and the beginning of each subsequent Adjustment Year or with Landlord's Statement (defined in Article Four), Landlord may estimate and notify Tenant in writing of its estimate of Operating Expenses, including Project Operating Expenses, Building Operating Expenses and Phase Operating Expenses, and Tenant's Share of each, for the applicable Adjustment Year. The Rent Adjustment Deposit applicable for the calendar year in which the Commencement Date occurs shall be the amount, if any, specified in Section 1.01(9). Nothing contained herein shall be construed to limit the right of Landlord from time to time during any calendar year to revise its estimates of Operating Expenses and to notify Tenant in writing thereof and of revision by prospective adjustments in Tenant's Rent Adjustment Deposit payable over the remainder of such year. The last estimate by Landlord shall remain in effect as the applicable Rent Adjustment Deposit unless and until Landlord notifies Tenant in writing of a change.

SECURITY DEPOSIT: The funds specified in Section 1.01(16), if any, deposited by Tenant with Landlord as security for Tenant's performance of its obligations under this Lease.

TAXES: All federal, state and local governmental taxes, assessments (including assessment bonds) and charges of every kind or nature, whether general, special, ordinary or extraordinary, which Landlord shall pay or become obligated to pay because of or in connection with the ownership, leasing, management, control or operation of the Property or any of its components (including any personal property used in connection therewith), which may also include any rental or similar taxes levied in lieu of or in addition to general real and/or personal property taxes. For purposes hereof, Taxes for any year shall be Taxes which are assessed for any period of such year, whether or not such Taxes are billed and payable in a subsequent calendar year. There shall be included in Taxes for any year the amount of all fees, costs and expenses (including reasonable attorneys fees) paid by Landlord during such year in seeking or obtaining any refund or reduction of Taxes, but not to exceed any tax savings resulting from such contest. Taxes for any year shall be reduced by the net amount of any tax refund received by Landlord attributable to such year. If a special assessment payable in installments is levied against any part of the Property, Taxes for any year shall include only the installment of such assessment and any interest payable or paid during such year. Taxes shall not include any federal or state inheritance,

general income, franchise, gift or estate taxes, except that if a change occurs in the method of taxation resulting in whole or in part in the substitution of any such taxes, or any other assessment, for any Taxes as above defined, such substituted taxes or assessments shall be included in the Taxes. In addition, Landlord shall be solely responsible for penalties or other charges for late payment of taxes.

TENANT ADDITIONS: Collectively, Tenant Work and Tenant Alterations, but not including Tenant's Personal Property.

TENANT ALTERATIONS: Any alterations, improvements, additions, installations or construction in or to the Premises or any Real Property systems serving the Premises done or caused to be done by Tenant after the date hereof, whether prior to or after the Commencement Date.

TENANT DELAY: (intentionally omitted)

TENANT WORK: All work installed or furnished to the Premises by Tenant in connection with Tenant's initial occupancy.

TENANTS BUILDING SHARE: The share as specified in Section 1.01(18) and Section 4.01.

TENANTS PERSONAL PROPERTY: All movable personal property of Tenant and Tenants trade fixtures (including without limitation, any autoclaves, hoods, animal facility, fermentors, casework, cold rooms, generators, equipment furniture, furnishings, telephone equipment and cabling for any of the foregoing), the costs of which were not paid for by any portion of Landlord's Contribution.

TENANTS PHASE: Phase I.

TENANTS PHASE SHARE: The share as specified in Section 1.01(18) and Section 4.01.

TENANTS PROJECT SHARE: The share as specified in Section 1.01(18) and Section 4.01.

TENANTS RENTABLE AREA OF THE BUILDING: The amount of square footage set forth in Section 1.01(11).

TENANT'S RENTABLE AREA OF THE PREMISES: The amount of square footage set forth in Section 1.01(10).

TENANT'S SHARE: Shall mean collectively, Tenant's respective shares of the respective categories of Operating Expenses, as provided in Section 1.01(18) and Section 4.01.

TERM: The term of this Lease commencing on the Commencement Date and expiring on the Expiration Date.

TERMINATION DATE: The Expiration Date or such earlier date as this Lease terminates or Tenant's right to possession of the Premises terminates.

TOTAL RENTABLE AREA OF BUILDING 3: The amount of square footage set forth in Section 1.01(14).

TOTAL RENTABLE AREA OF BUILDING 4: The amount of square footage set forth in Section 1.01(15).

TOTAL RENTABLE AREA OF PHASE I: The amount of square footage set forth in Section 1.01(12)

TOTAL RENTABLE AREA OF THE PROJECT: The amount of square footage set forth in Section 1.01(13), which represents the sum of the rentable area of all space intended for occupancy In the Project.

WORKLETTER: (intentionally omitted)

ARTICLE TWO
PREMISES, TERM, FAILURE TO GIVE POSSESSION, COMMON AREAS AND PARKING

2.01 LEASE OF PREMISES

Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the Premises for the Term and upon the terms, covenants and conditions provided in this Lease.

2.02 TERM

The Commencement Date shall be February 1, 2004 and Landlord shall deliver possession of (a) Space A on December 10, 2003 (the "First Delivery Date"); (b) Space B on February 1, 2004 (the "Second Delivery Date"); and (c) Space C on February 25, 2005 (the "Third Delivery Date") for the purposes of performing the Tenant Work.

2.03 FAILURE TO GIVE POSSESSION

Tenant acknowledges that it currently has possession of Space A pursuant to its affiliation with the current subtenant of said Space A, however, Tenant's right to do any Tenant Work (as hereinafter defined) in Space A prior to the First Delivery Date is contingent upon Landlord obtaining the prior written consent of Cygnus, Inc., the current tenant of Space A. If the Landlord shall be unable to give direct possession of Space A on the First Delivery Date or Space B on the Second Delivery Date by reason of the following: (i) the holding over or retention of possession of any tenant, tenants or occupants, or (ii) for any other reason, then Landlord shall not be subject to any liability for the failure to give possession on said date. Under such circumstances the Commencement Date shall be delayed by a number of days equal to the days of delay in Landlord's delivery of possession to Tenant. No such failure to give possession on the First Delivery Date or the Second Delivery Date shall affect the validity of this Lease or the obligations of the Tenant hereunder.

If the Landlord shall be unable to give possession of Space C on the Third Delivery Date by reason of the following: (i) the holding over or retention of possession of any tenant, tenants or occupants, or (ii) for any other reason, then Landlord shall not be subject to any liability for the

failure to give possession on said date. Under such circumstances the increase in Monthly Base Rent scheduled for June 1, 2005 pursuant to the provisions of Section 1.01(8) of this Lease with respect only to the increased square footage (and not the rate for the then current square footage) shall be delayed by a number of days equal to the days of delay in Landlord's delivery of possession to Tenant. No such failure to give possession on the Third Delivery Date shall affect the validity of this Lease or the obligations of the Tenant hereunder.

2.04 AREA OF PREMISES

Landlord and Tenant agree that for all purposes of this Lease Tenant's Rentable Area of the Premises, Tenant's Rentable Area of the Building, the Total Rentable Area of Phase I, the Total Rentable Area of the Project, the Total Rentable Area of Building 3 and the Total Rentable Area of Building 4 as set forth in Article One are controlling, and are not subject to revision after the date of this Lease.

2.05 CONDITION OF PREMISES

(a) Tenant acknowledges and agrees that (i) Tenant has been afforded ample opportunity to inspect the Premises, the Building and the Project, and has investigated their condition to the extent Tenant desires to do so; (ii) Tenant hereby agrees that this Lease is of the Premises in its "AS IS" condition; (iii) no representation regarding the condition of the Premises or the Building or the Project has been made by or on behalf of Landlord; (iv) Landlord has no obligation to remodel or to make any repairs, alterations or improvements to the Premises, Building or the Project in connection with Tenant's initial occupancy or provide Tenant any allowance for any work by Tenant, except for the Landlord's Contribution as provided below-, (v) the Premises shall be delivered in an AS IS condition, including the improvements in place as of the Maxygen Termination Date (as hereinafter defined), a list of such improvements is attached hereto as Exhibit E and the property of Landlord; and (vi) there is no Workletter for this Lease.

(b) Landlord's Contribution means

(i) an amount up to a maximum of Four Hundred Thousand and No/100 Dollars ($400,000.00) (the "First Contribution") to reimburse Tenant for the actual costs of design, plan review, obtaining at approvals and permits, and construction of Tenant Work in Space A and Space B in order to refurbish Space A and Space B so that (x) approximately 60')/0 of the space is laboratory space, (y) 40% of the space feet is office space and (z) demising walls acceptable to Landlord (in its sole discretion) are constructed between Space B and Space C in the event that a third party, unrelated to Tenant leases or subleases Space C prior to the Third Delivery Date, and shall be payable as provided below. Tenant shall use a portion of the Contribution (no less than One Hundred Thousand and No/100 Dollars ($100,000.00)] for Work done in Space A and portion of the Contribution (no less than One Hundred Thousand and No/100 Dollars ($100,000.00)3 for Work done in Space B; and

(ii) an amount up to a maximum of Eighty Thousand and No/100 Dollars ($80,000.00) (the "Second Contribution") to reimburse Tenant for the actual costs of design, plan review, obtaining all approvals and permits, and construction of Tenant Work in Space C as is necessary to refurbish Space C.

In no event shall Landlord's Contribution be used to reimburse any costs of designing, procuring or installing in the Premises Tenant's Personal Property, and the cost of such Tenant's Personal Property shall be paid by Tenant. Landlord's Contribution shall be payable by Landlord to Tenant no more often than monthly for costs based upon the percentage of work completed prior to the date of the request for payment and any balance so payable shall be paid within 30 days after Landlord's receipt of Tenant's request for payment In each such request, Tenant shall submit to Landlord copies of all invoices and Tenant shall certify that it has paid such invoices, that such request represents costs reimbursable to Tenant for work performed prior to the date of the request, that there are no known mechanic's or materialmen's liens outstanding at the date of a request, that there is no known basis for the filing of any mechanic's or materialmen's liens relating to the work, and that waivers from all subcontractors, mechanics and materialmen have been obtained in such form as to constitute an effective waiver of lien under the laws of the State of California. Tenant shall provide Landlord copies of such waivers. Notwithstanding the foregoing, Tenant shall not request an advance of a portion of Landlord's Contribution in an amount which is less than $50,000 unless such advance is the final advance to be made hereunder, or Tenant has not requested an advance in the past 60 days. Tenant shall keep full and correct accounts and shall exercise such control as may be necessary or appropriate for the proper financial management of the construction of Tenant Work separately identified as to each of Space A, Space B and Space C or, if the work is done under separate contracts or in smaller separate identifiable segments or phases, then upon completion of and with respect to each separate contract or phase). The final payment of Landlord's Contribution shall be paid to Tenant within 30 days after the later of final completion of the Tenant Work and Landlord's receipt of (i) a certificate of occupancy (if applicable), (ii) final as-built plans and specifications, (iii) full, final, unconditional lien releases, and (iv) reasonable substantiation of costs incurred by Tenant with respect to the Tenant Work. Tenant must prior to expiration of nine months after the Commencement Date submit written request with the items required above for disbursement or reimbursement for any reimbursable costs out of the Landlord's Contribution, and to the extent of any funds for which request has not been made prior to that date or if and to the extent that the reimbursable costs of the Tenant Work are less than the amount of Landlord's Contribution, then Landlord shall retain the unapplied or unused balance of the Landlord's Contribution and shall have no obligation or liability to Tenant with respect to such excess. If the costs of completing the Tenant Work exceeds the First Contribution or the Second Contribution, Tenant shall pay all such costs. After completion of Tenant Work, Tenant shall provide Landlord with a reasonably detailed breakdown of the allocation of the Landlord's Contribution. Until the expiration of eighteen (18) months after Tenant delivers to Landlord the final request for payment of Landlord's Contribution, Landlord, through its Building manager, employees and/or independent accounting firm, shall be afforded reasonable access at the Premises from time to time during normal business hours after reasonable advance written or oral notice, to Tenant's records,

books, correspondence, instructions, drawings, receipts, invoices, purchase orders, agreements (including with contractors, subcontractors and suppliers), vouchers and other information relating to Tenant Work and the use of Landlord's Contribution for the purpose of reviewing, auditing and/or copying such material. Such copying and inspection shall be at Landlord's sole cost.

(a) Tenants cost of the Tenant Work shall include a fee of two percent (2%) of Landlord's Contribution which shall be retained by Landlord as compensation for supervising the Tenant Work ("Landlord's Construction Management Fee").

(b) Tenant shall be responsible for the suitability for the Tenants needs and business of the design and function of all Tenant Work and for its construction in compliance with all Law as applicable and as interpreted at the time of construction of the Tenant Work, including all building codes and the ADA (as defined in the Lease). Tenant, through its architects and/or space planners (-Tenants Architect"), shall prepare all architectural plans and specifications, and engineering plans and specifications, for the real property improvements to be constructed by Tenant in the Premises in sufficient detail to be submitted for approval by Landlord to the extent required pursuant to Article Nine of the Lease and to be submitted by Tenant for governmental approvals and building pen-nits and to serve as the detailed construction drawings and specifications for the contractor, and shall include, among other things, all partitions, doors, heating, ventilating and air conditioning installation and distribution, ceiling systems, light fixtures, plumbing installations, electrical installations and outlets, telephone installations and outlets, any other installations required by Tenant, fire and life-safety systems, wall finishes and floor coverings, whether to be newly installed or requiring changes from the as-is condition of the Premises as of the date of execution of the Lease. Tenant shall be responsible for the oversight, supervision and construction of all Tenant Work in compliance with this Lease, including compliance with all Law as applicable and as interpreted at the time of construction, including all building codes and the ADA.

(c) Tenant hereby acknowledges that all improvements installed in the Premises by Tenant under this Section 2.05 shall, without compensation or credit to Tenant, become part of the Premises and the property of Landlord at the time of their installation and shall remain in the Premises, unless pursuant to an agreement between the parties hereto, Tenant may remove them or is required to remove them at Landlord's request

2.06 COMMON AREAS & PARKING

(a) Right to Use Common Areas. Tenant shall have the non-exclusive right, in common with others, to the use of any common entrances, ramps, drives and similar access and service ways and other Common Areas in the Project. The rights of Tenant hereunder in and to the Common Areas shall at all times be subject to the rights of Landlord and other tenants and owners in the Project who use the same in common with Tenant, and it shall be the duty of Tenant to keep all the Common Areas free and clear of any obstructions created or permitted by Tenant or resulting from Tenant's operations. Tenant shall not use the Common Areas or common facilities of the Building or the Project, including the Building's electrical room, parking lot or trash enclosures, for storage purposes. Nothing herein shall affect the right of Landlord at any time to remove any persons not authorized to use the Common Areas or common facilities from such areas or facilities or to prevent their use by unauthorized persons.

Tenant shall in addition have the nonexclusive right, in common with Landlord and any tenant or other user of all or any portion of the remainder of Building 3 (the "Adjacent Space") to use the area designated on Exhibit A-1 as the common areas (Building Common Areas"). In addition to Tenant's obligations as set forth in this Lease, Tenant shall repair and maintain the Building Common Areas and keep the Building Common Areas clean at all times, the cost thereof to be shared between Tenant and any other tenant in Building 3 ("Adjacent Tenant"), based on relative square footage leased from Landlord under the applicable leases. Landlord agrees to provide in any lease with an Adjacent Tenant, that such Adjacent Tenant shall reimburse Tenant for the Adjacent Tenants share of such repair, maintenance and cleaning costs incurred by Tenant for the Building Common Areas pursuant to this paragraph. Tenant shall be solely responsible for collecting any amounts owed for such costs directly from the Adjacent Tenants.

(b) Changes in Common Areas. Landlord reserves the right, at any time and from time to time to (i) make alterations in or additions to the Common Areas or common facilities of the Project, including constructing new buildings or changing the location, size, shape or number of the driveways, entrances, parking spaces, parking areas, loading and unloading areas, landscape areas and walkways, (ii) designate property to be included in or eliminate property from the Common Areas or common facilities of the Project, (iii) close temporarily any of the Common Areas or common facilities of the Project for maintenance purposes, and (4) use the Common Areas and common facilities of the Project while engaged in making alterations in or additions and repairs to the Project provided, however, that reasonable access to the Premises and parking at or near the Project remains available and that any closure of Common Areas shall be for the minimum amount of time necessary.

(c) Parking. During the Term, Tenant shall have the right to use the number of Parking Spaces specified in Section 1.01(18) for parking on an unassigned basis on that portion of the Project designated by Landlord from time to time for parking. Tenant acknowledges and agrees that the parking spaces in the Project's parking facility may include a mixture of spaces for compact vehicles as well as full-size passenger automobiles, and that Tenant shall not use parking spaces for vehicles larger than the striped size of the parking spaces. Tenant shall not park any vehicles at the Project overnight. Tenant shall comply with any and all parking rules and regulations if and as from time to time established by Landlord and delivered to Tenant. Tenant shall not allow any vehicles using Tenants parking privileges to be parked, loaded or unloaded except in accordance with this Section, including in the areas and in the manner designated by Landlord for such activities. If any vehicle is using the parking or loading areas contrary to any provision of this Section, Landlord shall have the right, in addition to all other rights and remedies of Landlord under this Lease, to remove or tow away the vehicle without prior notice to Tenant, and the cost thereof shall be paid to Landlord within ten (10) days after notice from Landlord to Tenant.

ARTICLE THREE
RENT

Tenant agrees to pay to Landlord at the first office specified in Section 1.01(2), or to such other persons, or at such other places designated by Landlord, without any prior demand therefor in immediately available funds and without any deduction or offset whatsoever, Rent, including Monthly Base Rent and Rent Adjustments in accordance with Article Four, during the Term. Monthly Base Rent shall be paid monthly in advance on the first day of each month of the Term, except that the first installment of Monthly Base Rent shall be paid by Tenant to Landlord concurrently with execution of this Lease. Monthly Base Rent shall be prorated for partial months within the Term. Unpaid Rent shall bear interest at the Default Rate from the date due until paid. Tenant's covenant to pay Rent shall be independent of every other covenant in this Lease.

ARTICLE FOUR
OPERATING EXPENSES, RENT ADJUSTMENTS AND PAYMENTS

4.01 TENANTS SHARE OF OPERATING EXPENSES

Tenant shall pay Tenant's Share of Operating Expenses in the respective shares of the respective categories of Operating Expenses as set forth below.

(a) Tenant's Project Share of Project Operating Expenses, which is the percentage obtained by dividing the rentable square footage of the Premises for the building(s) in which the Premises is located by the rentable square footage of the Project and as of the date hereof equals the percentage set forth in Section 1.01(16);

(b) Tenant's Building Share of Building Operating Expenses, which is the percentage obtained by dividing the rentable square footage of the Premises respectively for each building in which the Premises is located by the total rentable square footage of such building and as of the date hereof equals the percentage set forth in Section 1.01(16);

(c) Tenant's Phase Share of Phase Operating Expenses, which is the percentage obtained by dividing the aggregate rentable square footage of the Premises located in Tenant's Phase by the total rentable square footage of Tenant's Phase and as of the date hereof equals the percentage set forth in Section 1.01(16);

(d) Project Operating Expenses shall mean all Operating Expenses that are not included as Phase Operating Expenses (defined below) and that are not either Building Operating Expenses or operating expenses directly and separately identifiable to the operation, maintenance or repair of any other building located in the Project, but Project Operating Expenses includes operating expenses allocable to any areas of the Building or any other building during such time as such areas are made available by Landlord for the general common use or benefit of all tenants of the Project, and their employees and invitees, or the public, as such areas currently exist and as they may be changed from time to time;

(e) Building Operating Expenses shall mean Operating Expenses that are directly and separately identifiable to each building in which the Premises or part thereof is located;

(f) Phase Operating Expenses shall mean Operating Expenses that Landlord may allocate to a Phase as directly and separately identifiable to all buildings located in the Phase (including but not limited to the Building) and may include Project Operating Expenses that are separately identifiable to a Phase;

(g) Landlord shall have the right to reasonably allocate a particular item or portion of Operating Expenses as any one of Project Operating Expenses, Building Operating Expenses or Phase Operating Expenses; however, in no event shall any portion of Building Operating Expenses, Project Operating Expenses or Phase Operating Expenses be assessed or counted against Tenant more than once; and

(h) Notwithstanding anything to the contrary contained in this Section 4.01, as to each specific category of Operating Expense which one or more tenants of the Building either pays directly to third parties or specifically reimburses to Landlord (for example, separately contracted janitorial services or property taxes directly reimbursed to Landlord), then, on a category by category basis, the amount of Operating Expenses for the affected period shall be adjusted as follows: (1) all such tenant payments with respect to such category of expense and all of Landlord's costs reimbursed thereby shall be excluded from Operating Expenses and Tenant's Building Share, Tenant's Phase Share or Tenant's Project Share, as the case may be, for such category of Operating Expense shall be adjusted by excluding the square footage of all such tenants, and (2) if Tenant pays or directly reimburses Landlord for such category of Operating Expense, such category of Operating Expense shall be excluded from the determination of Operating Expenses for the purposes of this Lease.

4.02 RENT ADJUSTMENTS

Tenant shall pay to Landlord Rent Adjustments with respect to each Adjustment Year as follows:

(a) The Rent Adjustment Deposit representing Tenant's Share of Landlord's estimate of Operating Expenses, as described in Section 4.01, for the applicable Adjustment Year (or portion thereof) monthly during the Term with the payment of Monthly Base Rent, except the first installment which shall be paid by Tenant to Landlord concurrently with execution of this Lease; and

(b) Any Rent Adjustments due in excess of the Rent Adjustment Deposits in accordance with Section 4.02.

4.03 STATEMENT OF LANDLORD

Within one hundred twenty (120) days after the end of each calendar year or as soon thereafter as reasonably possible, Landlord will furnish Tenant a statement ("Landlord's Statement") showing the following: •

(a) Operating Expenses for the last Adjustment Year showing in reasonable detail the actual Operating Expenses categorized among Project Operating Expenses, Building Operating Expenses and Phase Operating Expenses for such period and Tenant's Share of each as described in Section 4.01. above;

(b) The amount of Rent Adjustments due Landlord for the last Adjustment Year, less credit for Rent Adjustment Deposits paid, if any; and

(c) Any change in the Rent Adjustment Deposit due monthly in the current Adjustment Year, including the amount or revised amount due for months preceding any such change pursuant to Landlord's Statement

Tenant shall pay to Landlord within ten (10) days after receipt of such statement any amounts for Rent Adjustments then due in accordance with Landlord's Statement. Any amounts due from Landlord to Tenant pursuant to this Section shall be credited to the Rent Adjustment Deposit next coming due, or refunded to Tenant if the Term has already expired provided Tenant is not in default hereunder. No interest or penalties shall accrue on any amounts which Landlord is obligated to credit or refund to Tenant by reason of this Section 4.02. Landlord's failure to deliver Landlord's Statement or to compute the amount of the Rent Adjustments shall not constitute a waiver by Landlord of its right to deliver such items nor constitute a waiver or release of Tenant's obligations to pay such amounts. The Rent Adjustment Deposit shall be credited against Rent Adjustments due for the applicable Adjustment Year. During the last complete calendar year or during any partial calendar year in which the Lease terminates, Landlord may include in the Rent Adjustment Deposit its estimate of Rent Adjustments which may not be finally determined until after the termination of this Lease. Tenant's obligation to pay Rent Adjustments survives the expiration or termination of the Lease. Notwithstanding the foregoing, in no event shall the sum of Monthly Base Rent and the Rent Adjustments be less than the Monthly Base Rent payable.

4.04 BOOKS AND RECORDS

Landlord shall maintain books and records showing Operating Expenses and Taxes in accordance with sound accounting and management practices, consistently applied. The Tenant or its representative (which representative shall be a certified public accountant licensed to do business in the state in which the Property is located and whose primary business is certified public accounting) shall have the right, for a period of thirty (30) days following the date upon which Landlord's Statement is delivered to Tenant, to examine the Landlord's books and records with respect to the items in the foregoing statement of Operating Expenses and Taxes during normal business hours, upon written notice, delivered at least three (3) business days in advance. If Tenant does not object in writing to Landlord's Statement within sixty (60) days of Tenants receipt thereof, specifying the nature of the item in dispute and the reasons therefor, then Landlord's Statement shall be considered final and accepted by Tenant. Any amount due to the Landlord as shown on Landlord's Statement, whether or not disputed by Tenant as provided herein shall be paid by Tenant when due as provided above, without prejudice to any such written exception.

In the event such audit discloses (i) errors made during the prior calendar year which, when totaled, established that the sum overcharged to and paid by Tenant exceeds five percent (5%) of the actual (as distinguished from estimated) amount of Tenant's Share of Operating Expenses and Taxes, Tenant's costs of the audit shall be paid by Landlord, or (ii) no errors or an error which equals or is less than five percent (5%), Tenant's costs of the audit shall be paid by Tenant. If the audit determines that any sums are due and owing Tenant, such sums shall be credited to the next payment of Rent unless the Lease has been terminated, in such event Landlord shall promptly pay Tenant such amount.

Tenant acknowledges and agrees that it is a condition of Tenant's right to conduct an audit pursuant to the foregoing, that Tenant and/or its representative, prior to commencement of such audit, execute a confidentiality agreement whereby Tenant and/or its representative agree to keep confidential and not disclose to any other party (other than Tenant's employees involved in such audit, and other professionals directly involved in the audit or results thereof) the results of any such audit or any action taken by Landlord in response thereto, except if required to disclose such information as required by applicable law or court order.

4.05 TENANT OR LEASE SPECIFIC TAXES

In addition to Monthly Base Rent, Rent Adjustments, Rent Adjustment Deposits and other charges to be paid by Tenant, Tenant shall pay to Landlord, upon demand, any and all taxes payable by Landlord (other than federal or state inheritance, general income, gift or estate taxes) whether or not now customary or within the contemplation of the parties hereto; (a) upon, allocable to, or measured by the Rent payable hereunder, including any gross receipts tax or excise tax levied by any governmental or taxing body with respect to the receipt of such rent or (b) upon or with respect to the possession, leasing, operation, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises or any portion thereof; or (c) upon the measured value of Tenants personal property or trade fixtures located in the Premises or in any storeroom or any other place in the Premises or the Property, or the areas used in connection with the operation of the Property, it being the intention of Landlord and Tenant that, to the extent possible, Tenant shall cause such taxes on personal property or trade fixtures to be billed to and paid directly by Tenant; (d) resulting from Tenant Work or Tenant Alterations to the Premises, whether title thereto is in Landlord or Tenant; or (e) upon this transaction. Taxes paid by Tenant pursuant to this Section 4.05 shall not be included in any computation of Taxes as part of Operating Expenses.

ARTICLE FIVE
SECURITY DEPOSIT

5.01 CASH DEPOSIT

(a) Tenant shall pay Landlord, concurrently with execution of this Lease, in immediately available funds the amount of the Security Deposit specified in Section 1.01(14) as security ("Security") for the full and faithful performance by Tenant of each and every term, provision, covenant, and condition of this Lease. If Tenant fails timely to perform any of the terms, provisions, covenants and conditions of this Lease or any other document executed by Tenant in connection with this Lease, including, but not limited to, the payment of any Rent or

the repair of damage to the Premises caused by Tenant (excluding normal wear and tear) then Landlord may use, apply, or retain the whole or any part of the Security for the payment of any such Rent not paid when due, for the cost of repairing such damage, for the cost of cleaning the Premises, for the payment of any other sum which Landlord may expend or may be required to expend by reason of Tenant's failure to perform, and otherwise for compensation of Landlord for any other loss or damage to Landlord occasioned by Tenants failure to perform, including, but not limited to, any loss of future Rent and any damage or deficiency in the releting of the Premises (whether such loss, damages or deficiency accrue before or after summary proceedings or other reentry by Landlord) and the amount of the unpaid past Rent, future Rent loss, and all other losses, costs and damages, that Landlord would be entitled to recover if Landlord were to pursue recovery under Section 11.02(b) or (c) of this Lease. If Landlord so uses, applies or retains all or part of the Security, Tenant shall within five (5) business days after demand pay or deliver to Landlord in immediately available funds the sum necessary to replace the amount used, applied or retained, except as specified in (c) below. If Tenant shall fully and faithfully comply with all of Tenants terms, provisions, covenants and conditions of this Lease, the Security (except any amount retained for application by Landlord as provided herein) shall be returned or paid over to Tenant no later than forty-five (45) days after the latest of (i) the Termination Date; (ii) the removal of Tenant from the Premises; (iii) the surrender of the Premises by Tenant to Landlord in accordance with this Lease; or (iv) the date Rent Adjustments owed pursuant to this Lease have been computed by Landlord and paid by Tenant. Provided, however, in no event shall any such return be construed as an admission by Landlord that Tenant has performed all of its obligations hereunder.

(b) The Security shall not be deemed an advance rent deposit or an advance payment of any kind, or a measure of Landlord's damages with respect to Tenants failure to perform, nor shall any action or inaction of Landlord with respect to it be a waiver of, or bar or defense to, enforcement of any right or remedy of Landlord. Landlord shall not be required to keep the Security separate from its general funds and shall not have any fiduciary or other duties concerning the Security except as set forth in this Section. Tenant shall not be entitled to any interest on the Security. In the event of any sale, lease or transfer of Landlord's interest in the Building, Landlord shall have the right to transfer the Security, or balance thereof, to the vendee, transferee or lessee and any such transfer shall release Landlord from all liability for the return of the Security. Tenant thereafter shall look solely to such vendee, transferee or lessee for the return or payment of the Security. Tenant shall not assign or encumber or attempt to assign or encumber the Security or any interest in it and Landlord shall not be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance, and regardless of one or more assignments of this Lease, Landlord may return the Security to the original Tenant without liability to any assignee. Tenant hereby waives any and all rights of Tenant under the provisions of Section 1950.7 of the California Civil Code or other Law, now or hereafter enacted, regarding security deposits.

(c) Notwithstanding anything to the contrary contained in the foregoing, the following provisions shall apply to the Security Deposit Within thirty (30) days following the last day of the twenty fourth (24th) month of the Term, Landlord shall return to Tenant the sum of $45,000 of the Security Deposit ("First Return"), provided that at the time of such First Return, Tenant shall not be in Default under the Lease. The First Return shall be paid to Tenant by cash or check. Within thirty (30) days following the last day of the thirty sixth (3e) month of

the Term, Landlord shall return to Tenant the sum of $45,000 of the Security Deposit ("Second Return"), provided that at the time of such Second Return, Tenant shall not be in Default under the Lease. The Second Return shall be paid to Tenant by cash or check. Within thirty (30) days following the last day of the forty eighth (4e) month of the Term, Landlord shall return to Tenant the sum of $45,000 of the Security Deposit ("Third Return"), provided that at the time of such Third Return, Tenant shall not be in Default under the Lease. The Third Return shall be paid to Tenant by cash or check. Within thirty (30) days following the last day of the sixtieth (60th) month of the Term, Landlord shall return to Tenant the sum of $45,000 of the Security Deposit ("Fourth Return"), provided that at the time of such Fourth Return, Tenant shall not be in Default under the Lease. The Fourth Return shall be paid to Tenant by cash or check. Within thirty (30) days following the last day of the seventy second (72m) month of the Term, Landlord shall return to Tenant the sum of $45,000 of the Security Deposit ("Fifth Return"), provided that at the time of such Fifth Return, Tenant shall not be in Default under the Lease. The Fifth Return shall be paid to Tenant by cash or check.

5.02 LETTER OF CREDIT

Notwithstanding anything to the contrary contained herein, Tenant shall have the option to deliver to Landlord a Letter of Credit (as set forth below) in lieu of the Security Deposit set forth in Section 5.01 above. If Tenant elects to post a Letter of Credit in lieu of the Security Deposit, then the following shall apply:

(a) No later than February 1, 2004, Tenant shall deliver to Landlord the Letter of Credit described below as security for Tenant's performance of all of Tenant's covenants and obligations under this Lease; provided, however, that neither the Letter of Credit nor any Letter of Credit Proceeds (as defined below) shall be deemed an advance rent deposit or an advance payment of any other kind, or a measure of Landlord's damages upon Tenant's default. The Letter of Credit shall be maintained in effect from the date thereof through January 31, 2011 (the "LOC Expiration Date"), and provided that on the LOC Expiration Date, Tenant shall not be in Default, Landlord shall return to Tenant the Letter of Credit and any Letter of Credit Proceeds then held by Landlord (other than those held for application by Landlord on account of a Default as provided below). Landlord shall not be required to segregate the Letter of Credit Proceeds from its other funds and no interest shall accrue or be payable to Tenant with respect thereto. Landlord may (but shall not be required to) draw upon the Letter of Credit and use the proceeds therefrom (the "Letter of Credit Proceeds") or any portion thereof to cure any Default under this Lease, it being understood that any use of the Letter of Credit Proceeds shall not constitute a bar or defense to any of Landlord's remedies set forth in this Lease. In such event and upon written notice from Landlord to Tenant specifying the amount of the Letter of Credit Proceeds so utilized by Landlord and the particular purpose for which such amount was applied, Tenant shall immediately deliver to Landlord an amendment Letter of Credit or a replacement Letter of Credit in an amount equal to the difference between the amount of the required Letter of Credit and the amount so expended. Tenant's failure to deliver such amendment to the Letter of Credit or replacement Letter of Credit to Landlord within five (5) business days of Landlord's notice shall constitute a Default hereunder. If Tenant is not in Default on the LOC Expiration Date, within forty-five (45) days after such date, Landlord shall return to Tenant the Letter of Credit or the balance of the Letter of Credit Proceeds then held by Landlord; provided, however, that in no event shall any such return be construed as an admission

by Landlord that Tenant has performed all of its obligations hereunder. No purchaser at any judicial or private foreclosure sale of the Real Property or any portion thereof, shall be responsible to Tenant for such Letter of Credit or any Letter of Credit Proceeds unless such holder or purchaser shall have actually received the same.

(b) As used herein, Letter of Credit shall mean an unconditional, irrevocable letter of credit (hereinafter referred to as the 'Letter of Credit") issued by the San Francisco Bay Area office of a major national bank satisfactory to Landlord (the "Bank"), naming Landlord as beneficiary, in the initial amount of Four Hundred Fifty Thousand and No/100 Dollars ($450,000.00). The Letter of Credit shall be for not less than a one-year term and shall provide that (i) Landlord may make partial and multiple draws upon the Letter of Credit up to the full amount thereof, as determined by Landlord, (ii) the Bank will pay to Landlord the amount of such draw upon receipt by the Bank of a sight draft signed by Landlord, together with a written certification from Landlord that Tenant is in Default, (iii) Landlord is therefore entitled to draw such amount; and (iv) in the event of Landlord's assignment or other transfer of its interest in this Lease, the Letter of Credit shall be freely transferable by Landlord, without charge and without recourse, to the assignee or transferee of such interest and the Bank shall confirm the same to Landlord and such assignee or transferee. In the event that the Bank shall fail to notify Landlord that the Letter of Credit will be renewed for at least one (1) year beyond the then applicable expiration date, and Tenant shall not have delivered to Landlord, at least thirty (30) days prior to the relevant annual expiration date, a replacement Letter of Credit in the amount required hereunder and otherwise meeting the requirements set forth above, then Landlord shall be entitled to draw on the Letter of Credit as provided above, and shall hold the proceeds of such draw as Letter of Credit Proceeds pursuant to Section 5.02(a) above.

(c) Notwithstanding anything to contrary contained herein, if Tenant is not in Default under the Lease on February 1, 2006, the replacement Letter of Credit may be issued in the amount of Four Hundred Five Thousand and No/100 Dollars ($405,000.00). If Tenant is not in Default under the Lease on February 1, 2007, the replacement Letter of Credit may be issued in the amount of Three Hundred Sixty Thousand and No/100 Dollars ($360,000.00). If Tenant is not in Default under the Lease on February 1, 2008, the replacement Letter of Credit may be issued in the amount of Three Hundred Fifteen Thousand and No/100 Dollars ($315,000.00). If Tenant is not in Default under the Lease on February 1, 2009, the replacement Letter of Credit may be issued in the amount of Two Hundred Seventy Thousand and No/100 Dollars ($270,000.00). If Tenant is not in Default under the Lease on February 1, 2010, the replacement Letter of Credit may be issued in the amount of Two Hundred Twenty Five Thousand and No/100 Dollars ($225,000.00).

(d) The cost of the Letter of Credit shall be paid by Tenant.

If Tenant shall fully and faithfully comply with all the terms, provisions, covenants, and conditions of this Lease, the Letter of Credit, or any balance thereof, shall be returned to Tenant after the following:

(a) the expiration or earlier termination of the Term of this Lease;

(b) the removal of Tenant and its property from the Premises;

(c) the surrender of the Premises by Tenant to Landlord in accordance with this Lease; and

(d) the payment by Tenant of any outstanding Rent, including, without limitation, all Rent Adjustments due pursuant to the Lease as computed by Landlord.

If Tenant fails timely to perform any obligation under this Article Five, such breach shall constitute a Default by Tenant under this Lease without any right to or requirement of any further notice or cure period under any other Article of this Lease, except such notice and cure period expressly provided under this Article Five.

ARTICLE SIX
UTILITIES & SERVICES

6.01 LANDLORD'S GENERAL SERVICES

Landlord shall provide maintenance and services as provided in Article Eight.

6.02 TENANT TO OBTAIN & PAY DIRECTLY

(a) Tenant shall be responsible for and shall pay promptly all charges for gas, electricity, sewer, heat, light, power, telephone, refuse pickup (to be performed on a regularly scheduled basis so that accumulated refuse does not exceed the capacity of Tenant's refuse bins), janitorial service and all other utilities, materials and services furnished directly to or used by Tenant in, on or about the Premises, together with all taxes thereon. Tenant shall contract directly with the providing companies for such utilities and services.

(b) Notwithstanding any provision of the Lease to the contrary, without, in each instance, the prior written consent of Landlord, as more particularly provided in Article Nine, Tenant shall not make any alterations or additions to the electric or gas equipment or systems or other Building systems. Tenant's use of electric current shall at no time exceed the capacity of the wiring, feeders and risers providing electric current to the Premises or the Building. The consent of Landlord to the installation of electric equipment shall not relieve Tenant from the obligation to limit usage of electricity to no more than such capacity.

6.03 TELEPHONE SERVICES

All telegraph, telephone, and communication connections which Tenant may desire to construct or install outside the Premises shall be subject to Landlord's prior written approval, in Landlord's sole discretion, and the location of all wires and the work in connection therewith shall be performed by contractors reasonably approved by Landlord and shall be subject to the direction of Landlord, except that such approval is not required as to Tenant's cabling from the Premises in a route designated by Landlord to any telephone cabinet or panel provided for Tenant's connection to the telephone cable serving the Building, so long as Tenant's equipment does not require connections different than or additional to those to the telephone cabinet or panel provided. As to any such connections or work outside the Premises requiring Landlord's approval, Landlord reserves the right to designate and control the entity or entities providing telephone or other communication cable installation, removal, repair and maintenance outside

the Premises and to restrict and control access to telephone cabinets or panels. In the event Landlord designates a particular vendor or vendors to provide such cable installation, removal, repair and maintenance for the Building, Tenant agrees to abide by and participate in such program. Tenant shall be responsible for and shall pay all costs incurred in connection with the installation of telephone cables and communication wiring in the Premises, including any hook-up, access and maintenance fees related to the installation of such wires and cables in the Premises and the commencement of service therein, and the maintenance thereafter of such wire and cables; and there shall be included *in* Operating Expenses for the Building all installation, removal, hook-up or maintenance costs incurred by Landlord in connection with telephone cables and communication wiring serving the Building which are not allocable to any individual users of such service but are allocable to the Building generally. If Tenant fails to maintain all telephone cables and communication wiring in the Premises and such failure affects or interferes with the operation or maintenance of any other telephone cables or communication wiring serving the Building, Landlord or any vendor hired by Landlord may enter into and upon the Premises forthwith and perform such repairs, restorations or alterations as Landlord deems necessary in order to eliminate any such interference (and Landlord may recover from Tenant all of Landlord's costs in connection therewith). No later than the Termination Date, Tenant agrees to remove all telephone cables and communication wiring installed by Tenant for and during Tenant's occupancy, which Landlord shall request Tenant to remove. Tenant agrees that neither Landlord nor any of its agents or employees shall be liable to Tenant, or any of Tenant's employees, agents, customers or invitees or anyone claiming through, by or under Tenant, for any damages, injuries, losses, expenses, claims or causes of action because of any interruption, diminution, delay or discontinuance at any time for any reason in the furnishing of any telephone or other communication service to the Premises and the Building, except in connection with Landlord's gross negligence or willful misconduct.

6.04 FAILURE OR INTERRUPTION OF UTILITY OR SERVICE

To the extent that any equipment or machinery furnished or maintained by Landlord outside the Premises is used in the delivery of utilities directly obtained by Tenant pursuant to Section 6.02 and breaks down or ceases to function properly, Landlord shall use reasonable diligence to repair same promptly. In the event of any failure, stoppage or interruption of, or change in, any utilities or services supplied by Landlord which are not directly obtained by Tenant, Landlord shall use reasonable diligence to have service promptly resumed. In either event covered by the preceding two sentences, if the cause of any such failure, stoppage or interruption of, or change in, utilities or services is within, the control of a public utility, other public or quasi- public entity, or utility provider outside Landlord's control, notification to such utility or entity of such failure, stoppage or interruption and request to remedy the same shall constitute "reasonable diligence by Landlord to have service promptly resumed. Notwithstanding any other provision of this Section to the contrary, in the event of any failure, stoppage or interruption of, or change in, any utility or other service famished to the Premises or the Project resulting from any cause, including changes in service provider or Landlord's compliance with any voluntary or similar governmental or business guidelines now or hereafter published or any requirements now or hereafter established by any governmental agency, board or bureau having jurisdiction over the operation of the Property: (a) Landlord shall not be liable for, and Tenant shall not be entitled to, any abatement or reduction of Rent; (b) no such failure, stoppage, or interruption of any such utility or service shall constitute an eviction of Tenant or relieve Tenant

of the obligation to perform any covenant or agreement of this Lease to be performed by Tenant; (c) Landlord shall not be in breach of this Lease nor be liable to Tenant for damages or otherwise.

Notwithstanding the above, except for the interruption of the foregoing services arising by reason of fire or casualty loss provided for in Article 14, any interruption of such services which is within Landlord's reasonable control and which 'materially interferes' with Tenant's use of any part of the Premises for a period of ten (10) consecutive business days after notice by Tenant to Landlord of such interruption of service shall entitle Tenant to abate the Monthly Base Rent and Rent Adjustment under this Lease for that portion of the Premises which are untenantable for the period commencing on the eleventh (11th) business day of interruption of such services and terminating on the day of restoration of the services. For purposes of this Section 6.04, material interference with Tenant's use of the Premises shall occur when Tenant shall be prevented from using the Premises for general office purposes, research and development, chemical and biochemical laboratory facilities, and warehousing as a consequence of Landlord's inability to provide the services specified in Section 6.01. In no event shall Landlord be liable for any damages, consequential or otherwise.

6.05 CHOICE OF SERVICE PROVIDER

Tenant acknowledges that Landlord may, at Landlord's sole option, to the extent permitted by applicable law, elect to change, from time to time, the company or companies which provide services (including electrical service, gas service, water, telephone and technical services) to the Property, the Premises and/or its occupants. Notwithstanding anything to the contrary set forth in this Lease, Tenant acknowledges that Landlord has not and does not make any representations or warranties concerning the identity or identities of the company or companies which provide services to the Property and the Premises or its occupants and Tenant acknowledges that the choice of service providers and matters concerning the engagement and termination thereof shall be solely that of Landlord. The foregoing provision Is not intended to modify, amend, change or otherwise derogate any provision of this Lease concerning the nature or type of service to be provided or any specific information concerning the amount thereof to be provided. Tenant agrees to cooperate with Landlord and each of its service providers in connection with any change in service or provider and Landlord agrees that any such change shall be at no cost to Tenant and that Landlord and any such service provider shall work together to minimize any impact of such change on Tenants operations.

6.06 SIGNAGE

Tenant shall not install any signage within the Project, the Building or the Premises without obtaining the prior written approval of Landlord, and Tenant shall be responsible for procurement, installation, maintenance and removal of any such signage installed by Tenant, and all costs in connection therewith. Any such signage shall comply with Landlord's current Project signage criteria and all Laws.

ARTICLE SEVEN
POSSESSION, USE AND CONDITION OF PREMISES

7.01 POSSESSION AND USE OF PREMISES

(a) Tenant shall occupy and use the Premises only for the uses specified in Section 1.01(19) to conduct Tenant's business. Tenant shall not occupy or use the Premises (or permit the use or occupancy of the Premises) for any purpose or in any manner which: (1) is unlawful or in violation of any Law or Environmental Law; (2) may be dangerous to- persons or property or which may increase the cost of, or invalidate, any policy of insurance carried on the Building or covering its operations; (3) is contrary to or prohibited by the terms and conditions of this Lease or the rules and regulations as provided in Article Eighteen; (4) contrary to or prohibited by the articles, bylaws or rules of any owner's association affecting the Project (5) is improper, immoral, or objectionable; (6) would obstruct or interfere with the rights of other tenants or occupants of the Building or the Project, or injure or annoy them, or would tend to create or continue a nuisance; or (7) would constitute any waste in or upon the Premises or Project.

(b) Landlord and Tenant acknowledge that the Americans With Disabilities Act of 1990 (42 U.S.C. §12101 et seq.) and regulations and guidelines promulgated thereunder, as all of the same may be amended and supplemented from time to time (collectively referred to herein as the "ADA") establish requirements for business operations, accessibility and barrier removal, and that such requirements may or may not apply to the Premises, the Building and the Project depending on, among other things: (1) whether Tenants business is deemed a "public accommodation" or "commercial facility", (2) whether such requirements are "readily achievable", and (3) whether a given alteration affects a "primary function area' or triggers "path of travel" requirements. The parties hereby agree that: (a) Landlord shall be responsible for ADA Title III compliance in the Common Areas, except as provided below, (b) Tenant shall be responsible for ADA Title III compliance in the Premises, including any leasehold improvements or other work to be performed in the Premises under or in connection with this Lease, (c) Landlord may perform, or require that Tenant perform, and Tenant shall be responsible for the cost of, ADA Title III "path of travel" requirements directly triggered by Tenant Additions in the Premises, and (d) Landlord may perform, or require Tenant to perform, and Tenant shall be responsible for the cost of, ADA Title III compliance in the Common Areas necessitated by the Building being deemed to be a "public accommodation" instead of a "commercial facility" as a result of Tenant's use of the Premises. Tenant shall be solely responsible for requirements under Title I of the ADA relating to Tenants employees.

(c) Landlord and Tenant agree to cooperate and use commercially reasonable efforts to participate in traffic management programs generally applicable to businesses located in or about the area and Tenant shall encourage and support van and car pooling by, and staggered and flexible working hours for, its office workers and service employees to the extent reasonably permitted by the requirements of Tenant's business. Neither this Section or any other provision of this Lease is intended to or shall create any rights or benefits in any other person, firm, company, governmental entity or the public.

(d) Tenant agrees to cooperate with Landlord and to use reasonable efforts to comply with any and all guidelines or controls concerning energy management imposed upon Landlord by federal or state governmental organizations or by any energy conservation association to which Landlord is a party or which is applicable to the Building.

7.02 HAZARDOUS MATERIAL

(a) Tenant shall not use, generate, manufacture, produce, store, handle, release, discharge, or dispose of, on, under or about the Premises or any part of the Project, or transport to or from the Premises or any part of the Project, any Hazardous Material, or allow its employees, agents,' contractors, licensees, invitees or any other person or entity ("Tenant Parties") to do so except to the extent expressly provided below. Provided that the Premises are used only for the uses specified in Section 1.01(15) above, Tenant shall be permitted to use and store in, and transport to and from, the Premises Hazardous Material identified on Exhibit D hereto and by this reference incorporated herein ("Permitted Hazardous Material") so long as: (i) each item of the Permitted Hazardous Material is used or stored in, or transported to and from, the Premises only to the extent necessary for Tenant's operation of its business at the Premises; (ii) at no time shall any Permitted Hazardous Material be in use or storage at the Premises in excess of the quantity specified therefor in Exhibit D (iii) Tenant shall not install any underground tanks of any type; and (iv) the conditions and provisions set forth in this Section 7.02 are complied with. Tenant shall comply with and shall cause all Tenant Parties to comply with all Environmental Laws and other Laws pertaining to Tenant's occupancy and use of the Premises and concerning the proper use, generation, manufacture, production, storage, handling, release, discharge, removal and disposal of any Hazardous Material introduced to the Premises, the Building or the Property by Tenant or any of the Tenant Parties. Without limiting the generality of the foregoing:

(1) Tenant shall provide Landlord promptly with copies of: (x) all permits, licenses and other governmental and regulatory approvals with respect to the use, generation, manufacture, production, storage, handling, release, discharge, removal and disposal by Tenant or Any of the Tenant Parties of Hazardous Material at the Project; and (y) each hazardous material management plan or similar document ("Plan(s)") with respect to use, generation, manufacture, production, storage, handling, release, discharge, removal or disposal of Hazardous Material by Tenant or any of the Tenant Parties necessary to comply with Environmental Laws or other Laws prepared by or on behalf of Tenant or any of the Tenant Parties (whether or not required to be submitted to a governmental agency).

(2) If Tenant is notified of any investigation or, violation of any Environmental Laws or other Laws arising from any activity of Tenant or any of the Tenant Parties at the Property, or if Tenant knows, or has reasonable cause to believe, that a Hazardous Material has come to be located in, on, under or about the Premises or the Project, other than as previously consented to by Landlord, Tenant shall immediately give written notice of such fact to Landlord, and provide Landlord with a copy of all reports, notices, claims or other documentation which it has concerning the presence of such Hazardous

Material. In such event or in the event Landlord reasonably believes that there exists a violation of this Lease or Environmental Law or other Laws by Tenant or any of the Tenant Parties, Landlord may conduct, at Tenant's expense, such tests and studies as Landlord deems desirable relating to compliance by Tenant or any of the Tenant Parties with this Lease, Environmental Laws, other Laws, or relating to the alleged presence of Hazardous Material introduced to the Premises, the Building or the Property by Tenant or any of the Tenant Parties.

(3) Neither Tenant nor any of the Tenant Parties shall cause or permit any Hazardous Material to be released, discharged or disposed of in, on, under, or about the Premises or the Project (including through the plumbing or sanitary sewer system) and shall promptly, at Tenant's expense, take all investigatory and/or remedial action reasonably recommended, whether or not formally ordered or required, for the cleanup of any contamination of, and for the maintenance, security and/or monitoring of the Premises, the Project or neighboring properties, that was caused or materially contributed to by Tenant, or pertaining to or involving any Hazardous Material brought onto the Premises or the Project by Tenant or any of the Tenant Parties.

(4) Tenant shall, no later than the Termination Date, surrender the Premises to Landlord free of Hazardous Material and with all remedial and/or closure plans completed (and deliver evidence thereof to Landlord).

(b) To the extent permitted by law, Tenant hereby indemnifies and agrees to protect, defend and hold the Indemnitees harmless against all actions, claims, demands, liability, costs and expenses, inducting attorneys' fees and expenses for the defense thereof, arising from the use, generation, manufacture, production, storage, handling, release, threatened release, discharge, disposal, transportation to or from, or presence of any Hazardous Material on, under or about the Premises or any part of the Project caused by Tenant or by any of the Tenant Parties, whether before, during or after the Term. Tenant's obligations under this Section 7.02 shall survive the expiration or earlier termination of this Lease. In case of any action or proceeding brought against the Indemnitees by reason of any such claim, upon notice from Landlord, Tenant covenants to defend such action or proceeding by counsel chosen by Landlord, in Landlord's sole discretion. Landlord reserves the right to settle, compromise or dispose of any and all actions, claims and demands related to the foregoing indemnity.

(c) The right to use and store the Permitted Hazardous Material in the Premises is personal to Codexis Inc. and may not be assigned or otherwise transferred by Codexis Inc. without the prior written consent of Landlord, which consent may be withheld in Landlord's sole discretion. Notwithstanding the. foregoing, Landlord hereby agrees that Tenant may use the services of Maxygen, Inc., a Delaware corporation for the foregoing services, but no other company is currently approved. Landlord hereby agrees that Tenant, with the prior written consent of Landlord, may use another outside provider to transport to and from the Premises the Permitted Hazardous Material. Landlord hereby approves of the outside providers set forth on Exhibit F Any consent by Landlord pursuant to Article Ten to an assignment, transfer, subletting, mortgage, pledge, hypothecation or encumbrance of this Lease, and any interest therein or right or privilege appurtenant thereto, shall not constitute consent by Landlord to the use or storage at,

or transportation to, the Premises of any Hazardous Material (including a Permitted Hazardous Material) by any such assignee, sublessee or transferee unless Landlord expressly agrees otherwise in writing. Any consent by Landlord to the use or storage at, or transportation to or from the Premises, of any Hazardous Material (including a Permitted Hazardous Material) by an assignee, sublessee or transferee of Tenant shall not constitute a waiver of Landlord's right to refuse such consent as to any subsequent assignee or transferee.

(d) Tenant acknowledges that the sewer piping at the Project is made of ABS plastic. Accordingly, without Landlord's prior written consent, which may be given or withheld in Landlord's sole discretion, only ordinary domestic sewage is permitted to be put into the drains at the Premises. UNDER NO CIRCUMSTANCES SHALL Tenant EVER DEPOSIT ANY ESTERS OR KETONES (USUALLY FOUND IN SOLVENTS TO CLEAN UP PETROLEUM PRODUCTS) IN THE DRAINS AT THE PREMISES. If Tenant desires to put any substances other than ordinary domestic sewage into the drains, it shall first submit to Landlord a complete description of each such substance, including its chemical composition, and a sample of such substance suitable for laboratory testing. Landlord shall promptly determine whether or not the substance can be deposited into the drains and its determination shall be absolutely binding on Tenant. Upon demand, Tenant shall reimburse Landlord for expenses incurred by Landlord in making such determination. If any substances not so approved hereunder are deposited in the drains in Tenant's Premises, Tenant shall be liable to Landlord for all damages resulting therefrom, including but not limited to all costs and expenses incurred by Landlord in repairing or replacing the piping so damaged.

(e) Upon any violation of any of the foregoing covenants, in addition to all remedies available to a landlord against the defaulting tenant, including but not limited to those set forth in Article Eleven of this Lease, Tenant expressly agrees that upon any such violation Landlord may, at its option (i) immediately terminate this Lease by giving written notice to Tenant of such termination, or (ii) continue this Lease in effect until compliance by Tenant with its clean-up and removal covenant (notwithstanding the expiration of the Term). No action by Landlord hereunder shall impair the obligations of Tenant pursuant to this Section 7.02.

7.03 LANDLORD ACCESS TO PREMISES; APPROVALS

(a) Tenant shall permit Landlord to erect, use and maintain pipes, ducts, wiring and conduits in and through the Premises, so long as Tenant's use, layout or design of the Premises is not materially affected or altered. Landlord or Landlord's agents shall have the right to enter upon the Premises in the event of an emergency, or to inspect the Premises, to perform janitorial and other services (if any), to conduct safety and other testing in the Premises and to make such repairs, alterations, improvements or additions to the Premises or the Building or other parts of the Property as Landlord may reasonably deem necessary or desirable (including all alterations, improvements and additions in connection with a change in service provider or providers). Janitorial and cleaning services (if any) shall be performed after normal business hours. Any entry or work by Landlord may be during normal business hours and Landlord shall use reasonable efforts to ensure that any entry or work shall not materially interfere with Tenant's occupancy or quiet enjoyment of the Premises.

(b) If Tenant shall not be personally present to permit an entry into the Premises when for any reason an entry therein shall be necessary or permissible, Landlord (or Landlord's agents), after attempting to notify Tenant (unless Landlord believes an emergency situation exists), may enter the Premises without rendering Landlord or its agents liable therefor, and without relieving Tenant of any obligations under this Lease.

(c) Landlord may enter the Premises for the purpose of conducting such inspections, tests and studies as Landlord may deem desirable or necessary to confirm Tenant's compliance with all Laws and Environmental Laws or for other purposes necessary in Landlord's reasonable judgment to ensure the sound condition of the Property and the systems serving the Property so long as Landlord (I) does not materially, adversely affect Tenant's use and occupancy of the Premises, (ii) does not cause damage to Tenant's equipment and leasehold improvements and (iii) complies with the provisions of this Section 7.03. Landlord's rights under this Section 7.03 (c) are for Landlord's own protection only, and Landlord has not, and shall not be deemed to have assumed, any responsibility to Tenant or any other party as a result of the exercise or non-exercise of such rights, for compliance with Laws or Environmental Laws or for the accuracy or sufficiency of any item or the quality or suitability of any item for its intended use.

(d) Landlord may do any of the foregoing, or undertake any of the inspection or work described in the preceding paragraphs without such action constituting an actual or constructive eviction of Tenant, in whole or in part, or giving rise to an abatement of Rent by reason of loss or interruption of business of the Tenant, or otherwise.

(e) The review, approval or consent of Landlord with respect to any item required or permitted under this Lease is for Landlord's own protection only, and Landlord has not, and shall not be deemed to have assumed, any responsibility to Tenant or any other party, as a result of the exercise or non-exercise of such rights, for compliance with Laws or Environmental Laws or for the accuracy or sufficiency of any item or the quality or suitability of any item for its intended use.

7.04 QUIET ENJOYMENT

Landlord covenants, in lieu of any implied covenant of quiet possession or quiet enjoyment, that so long as Tenant is in compliance with the covenants and conditions set forth in this Lease, Tenant shall have the right to quiet enjoyment of the Premises without hindrance or interference from Landlord or those claiming through Landlord, and subject to the covenants and conditions set forth in the Lease and to the rights of any Mortgagee or ground lessor.

ARTICLE EIGHT
MAINTENANCE

8.01 LANDLORD'S MAINTENANCE

Subject to Article Fourteen and Section 8.02, Landlord shall maintain the structural portions of the Building, the roof, exterior walls and exterior doors, foundation, and underslab standard sewer system of the Building in good, clean and safe condition, and shall use reasonable efforts, through Landlord's program of regularly scheduled preventive maintenance, to keep the

Buildings standard heating, ventilation and air conditioning ("HVAC") equipment in reasonably good order and condition. Notwithstanding the foregoing, Landlord shall have no responsibility to repair the Building's standard heating, ventilation and air conditioning equipment, and all such repairs shall be performed by Tenant pursuant to the terms of Section 8.02. Landlord shall also (a) maintain the landscaping, parking facilities and other Common Areas of the Project in a first-class manner consistent with other projects in the vicinity of the Premises, and (b) wash the outside of exterior windows at intervals determined by Landlord. Except as provided in Article Fourteen and Article Fifteen, there shall be no abatement of rent, no allowance to Tenant for diminution of rental value and no liability of Landlord by reason of inconvenience, annoyance or any injury to or interference with Tenant's business arising from the making of or the failure to make any repairs, alterations or improvements in or to any portion of the Project or in or to any fixtures, appurtenances or equipment therein. Tenant waives the right to make repairs at Landlord's expense under any law, statute or ordinance now or hereafter in effect

8.02 TENANTS MAINTENANCE

Subject to the provisions of Article Fourteen, Tenant shall, at Tenant's sole cost and expense, make all repairs to the Premises and fixtures therein which Landlord is not required to make pursuant to Section 8.01, including repairs to the interior walls, ceilings and windows of the Premises, the interior doors, Tenant's signage, and the electrical, fife-safety, plumbing and heating, ventilation and air conditioning systems located within or serving the Premises and shall maintain the Premises, the fixtures and utilities systems therein, and the area immediately surrounding the Premises (including all garbage enclosures), in a good, clean and safe condition. Tenant shall deliver to Landlord a copy of any maintenance contract entered into by Tenant with respect to the Premises. Tenant shall also, at Tenant's expense, keep any non-standard heating, ventilating and air conditioning equipment and other non-standard equipment in the Building in good condition and repair, using contractors approved in advance, in writing, by Landlord. Notwithstanding Section 8.01 above, but subject to the waivers set forth in Section 16.04, Tenant will pay for any repairs to the Building or the Project which are caused by any negligence or carelessness, or by any willful and wrongful act, of Tenant or its assignees, subtenants or employees, or of the respective agents of any of the foregoing persons, or of any other persons permitted in the Building or elsewhere in the Project by Tenant or any of them. Tenant will maintain the Premises, and will leave the Premises upon termination of this Lease, in a safe, clean, neat and sanitary condition, ordinary wear and tear excepted.

ARTICLE NINE
ALTERATIONS AND IMPROVEMENTS

9.01 TENANT ALTERATIONS

(a) The following provisions shall apply to the completion of any Tenant Alterations:

(1) Tenant shall not, except as provided herein, without the prior written consent of Landlord, which consent shall not be unreasonably withheld or delayed, make or cause to be made any Tenant Alterations in or to the Premises or any Property systems serving the Premises. Landlord shall

approve or disapprove of, and notify the Tenant of the reasons for such disapproval, any materials submitted by Tenant with respect obtaining Landlord's consent as set forth above, within ten (10) days after receipt of the same from the Tenant. Prior to making any Tenant Alterations, Tenant shall also give Landlord ten (10) days prior written notice (or such earlier notice as would be necessary pursuant to applicable Law) to permit Landlord sufficient time to post appropriate notices of non-responsibility. Subject to all other requirements of this Article Nine, Tenant may undertake Decoration work without Landlord's prior written consent. Tenant shall furnish Landlord with the names and addresses of all contractors and subcontractors and copies of all contracts. All Tenant Alterations (other than Decorations) shall be completed at such time and in such manner as Landlord may from time to time designate, and only by contractors or mechanics approved by Landlord, which approval shall not be unreasonably withheld or delayed, provided, however, that Landlord may, in its sole discretion, specify the engineers and contractors to perform all work relating to the Building's systems (including the mechanical, heating, plumbing, security, ventilating, air-conditioning, electrical, communication and the fire and life safety systems in the Building). The contractors, mechanics and engineers who may be used are further limited to those whose work will not cause or threaten to cause disharmony or interference with Landlord or other tenants in the Building and their respective agents and contractors performing work in or about the Building. Landlord may further condition its consent upon Tenant furnishing to Landlord and Landlord approving prior to the commencement of any work or delivery of materials to the Premises related to the Tenant Alterations such of the following as specified by Landlord: architectural plans and specifications, opinions from Landlord's engineers stating that the Tenant Alterations will not in any way adversely affect the Building's systems, necessary permits and licenses, certificates of insurance, and such other documents in such form reasonably requested by Landlord. Landlord may, in the exercise of reasonable judgment, request that Tenant provide Landlord with appropriate evidence of Tenants ability to complete and pay for the completion of the Tenant Alterations such as a performance bond or letter of credit. Upon completion of the Tenant Alterations, Tenant shall deliver to Landlord an as-built mylar and digitized (if available) set of plans and specifications for the Tenant Alterations.

(2) Tenant shall pay the cost of all Tenant Alterations and the cost of decorating the Premises and any work to the Property occasioned thereby. In connection with completion of any Tenant Alterations, other than Decoration, Tenant shall pay Landlord a construction fee at Landlord's then standard rate. Upon completion of Tenant Alterations, Tenant shall furnish Landlord with contractors' affidavits and full and final waivers of lien and receipted bills covering all labor and materials expended and used in connection therewith and such other documentation reasonably requested by Landlord or Mortgagee.

(3) Tenant agrees to complete all Tenant Alterations (i) in accordance with all Laws, Environmental Laws, all requirements of applicable insurance companies and in accordance with Landlord's standard construction rules and regulations, and (ii) in a good and workmanlike manner with the use of good grades of materials. Tenant shall notify Landlord immediately if Tenant receives any notice of violation of any Law in connection with completion of any Tenant Alterations and shall immediately take such steps as are necessary to remedy such violation. In no event shall such supervision or right to supervise by Landlord nor shall any approvals given by Landlord under this Lease constitute any warranty by Landlord to Tenant of the adequacy of the design, workmanship or quality of such work or materials for Tenants intended use or of compliance with the requirements of Section 9.01(a)(3)(i) and (ii) above or impose any liability upon Landlord in connection with the performance of such work.

(b) All of the items listed on Exhibit G attached hereto and made a part hereof ("Tenants Improvements") and all of Tenant's Personal Property shall be the sole and exclusive property of Tenant during the Term of this Lease and Tenant shall be permitted to encumber Tenants Personal Property and Tenant's Improvements during the Term of this Lease; provided, however, that Tenant shall hold Landlord harmless from any and all claims of third parties with respect to Landlord's handling of such Tenants Personal Property pursuant to the terms of Section 12.02 of this Lease unless Tenant obtains, at Tenants sole option, Landlord's consent to any such encumbrances, such consent to be similar in form to the form of Landlord's Consent to Lease of Personal Property attached hereto as Exhibit H and made a part hereof. Tenant shall be entitled to remove Tenants Personal Property upon the expiration or earlier termination of this Lease as provided in Article 12 hereof, but Landlord and Tenant agree that Tenant's Improvements shall remain in the Premises after the termination or earlier expiration of this Lease.

(c) All Tenant Additions to the Premises whether installed by Landlord or Tenant, shall, without compensation or credit to Tenant, become part of the Premises and the property of Landlord at the time of their installation and shall remain in the Premises, unless pursuant to Article Twelve, Tenant may remove them or is required to remove them at Landlord's request.

9.02 LIENS

Tenant shall not permit any lien or claim for lien of any mechanic, laborer or supplier or any other lien to be filed against the Building, the Land, the Premises, or any other part of the Property arising out of work performed, or alleged to have been performed by, or at the direction of, or on behalf of Tenant. If any such lien or claim for lien is filed, Tenant shall within ten (10) days of receiving notice of such lien or claim (a) have such lien or claim for lien released of record or (b) deliver to Landlord a bond in form, content, amount, and issued by surety, satisfactory to Landlord, indemnifying, protecting, defending and holding harmless the Indemnitees against all costs and liabilities resulting from such lien or claim for lien and the foreclosure or attempted foreclosure thereof. If Tenant fails to take any of the above actions, Landlord, in addition to its rights and remedies under Article Eleven, without investigating the

validity of such lien or claim for lien, may pay or discharge the same and Tenant shall, as payment of additional Rent hereunder, reimburse Landlord upon demand for the amount so paid by Landlord, including Landlord's reasonable expenses and attorneys' fees.

ARTICLE TEN
ASSIGNMENT AND SUBLETTING

10.01 ASSIGNMENT AND SUBLETTING

(a) Without the prior written consent of Landlord, which may be withheld in Landlord's sole discretion, Tenant may not sublease, assign, mortgage, pledge, hypothecate or otherwise transfer or permit the transfer of this Lease or the encumbering of Tenant's interest therein in whole or in part, by operation of Law or otherwise or permit the use or occupancy of the Premises, or any part thereof, by anyone other than Tenant, provided, however, if Landlord chooses not to recapture the space proposed to, be subleased or assigned as provided in Section 10.02, Landlord shall not unreasonably withhold its consent to a subletting or assignment under this Section 10.01. Tenant agrees that the provisions governing sublease and assignment set forth in this Article Ten shall be deemed to be reasonable. If Tenant desires to enter into any sublease of the Premises or assignment of this Lease, Tenant shall deliver written notice thereof to Landlord ("Tenant's Notice"), together with the identity of the proposed subtenant or assignee and the proposed principal terms thereof and financial and other information sufficient for Landlord to make an informed judgment with respect to such proposed subtenant or assignee at least thirty (30) days prior to the commencement date of the term of the proposed sublease or assignment. If Tenant proposes to sublease less than all of Tenant's Rentable Area of the Premises, the space proposed to be sublet and the space retained by Tenant must each be a marketable unit as reasonably determined by Landlord *and* otherwise in compliance with all Laws. Landlord shall notify Tenant in writing of its approval or disapproval of the proposed sublease or assignment or its decision to exercise its rights under Section 10.02 within thirty (30) days after receipt of Tenant's Notice (and all required information). In no event may Tenant sublease any portion of the Premises or assign the Lease to any other tenant of the Project Tenant shall submit for Landlord's approval (which approval shall not be unreasonably withheld) any advertising which Tenant or its agents intend to use with respect to the space proposed to be sublet.

(b) With respect to Landlord's consent to an assignment or sublease, Landlord may take into consideration any factors which Landlord may deem relevant, and the reasons for which Landlord's denial shall be deemed to be reasonable shall include, without limitation, the following:

(i) the business reputation or creditworthiness of any proposed subtenant or assignee is not acceptable to Landlord; or

(ii) in Landlord's reasonable judgment the proposed assignee or subtenant would diminish the value or reputation of the Building or Landlord; or

(iii) any proposed assignees or subtenant's use of the Premises would violate Section 7.01 of the Lease or would violate the provisions of any other eases of tenants in the Project;

(iv) the proposed assignee or subtenant is either a government agency, a school or similar operation, or a medical related practice; or

(v) the proposed subtenant or assignee is a bona fide prospective tenant of Landlord in the Project as demonstrated by a written proposal dated within ninety (90) days prior to the date of Tenants request or

(vi) the proposed subtenant or assignee would materially increase the estimated pedestrian and vehicular traffic to and from the Premises and the Building.

In no event shall Landlord be obligated to consider a consent to any proposed assignment of the Lease which would assign less than the entire Premises. In the event Landlord wrongfully withholds its consent to any proposed sublease of the Premises or assignment of the Lease, Tenants sole and exclusive remedy therefor shall be to seek specific performance of Landlord's obligations to consent to such sublease or assignment.

(c) Any sublease or assignment shall be expressly subject to the terms and conditions of this Lease. Any subtenant or assignee shall execute such documents as Landlord may reasonably require to evidence such subtenant or assignee's assumption of the obligations and liabilities of Tenant under this Lease. Tenant shall deliver to Landlord a copy of all agreements executed by Tenant and the proposed subtenant and assignee with respect to the Premises. Landlord's approval of a sublease, assignment, hypothecation, transfer or third party use or occupancy shall not constitute a waiver of Tenants obligation to obtain Landlord's consent to further assignments or subleases, hypothecations, transfers or third party use or occupancy.

(d) Notwithstanding anything to the contrary contained in this Article Ten, Tenant shall have the right, without the prior written consent of Landlord, to sublease the Premises to an Affiliate, or to assign this Lease to an Affiliate, but (i) no later than fifteen (15) days prior to the effective date of the assignment or sublease, the assignee or sublessee shall execute documents satisfactory to Landlord to evidence such subtenant or assignee's assumption of the obligations and liabilities of Tenant under this Lease, except in the case of any assignment which occurs by operation of law (and without a written assignment) as a consequence of merger, consolidation or non-bankruptcy reorganization; (ii) within ten (10) days after the effective date of such assignment or sublease, give notice to Landlord which notice shall include the full name and address of the assignee or subtenant, and a copy of all agreements executed between Tenant and the assignee or subtenant with respect to the Premises; and (iii) within fifteen (15) days after Landlord's request, such documents or information which Landlord reasonably requests for the purpose of substantiating whether or not the assignment or sublease is to an Affiliate.

For the purposed of this Lease, “Affiliate” shall mean any corporation or other business entity which (i) is currently owned or controlled by, owns or controls, or is under common ownership or control with Tenant, or (ii) is Tenants successor through merger, reorganization or consolidation, or (in) acquires substantially all of the assets of Tenant

10.02 RECAPTURE

Landlord shall have the option to exclude from the Premises covered by this Lease (“recapture”), the space proposed to be sublet or subject to the assignment, effective as of the proposed commencement date of such sublease or assignment. If Landlord elects to recapture, Tenant shall surrender possession of the space proposed to be subleased or subject to the assignment to Landlord on the effective date of recapture of such space from the Premises, such date being the Termination Date for such space. Effective as of the date of recapture of any portion of the Premises pursuant to this section, the Monthly Base Rent, Tenants Rentable Area of the Premises and Tenants Share shall be adjusted accordingly.

10.03 EXCESS RENT

Tenant shall pay Landlord on the first day of each month during the term of the sublease or assignment, fifty percent (50%) of the amount by which the sum of all rent and other consideration (direct or indirect) due from the subtenant or assignee for such month exceeds: (i) that portion of the Monthly Base Rent and Rent Adjustments due under this Lease for said month which is allocable to the space sublet or assigned; and (ii) the following costs and expenses for the subletting or assignment of such space: (1) brokerage commissions and attorneys’ fees and expenses, (2) the actual costs paid in making any improvements or substitutions in the Premises required by any sublease or assignment; and (3) “free rent” periods, costs of any inducements or concessions given to subtenant or assignee, moving costs, and other amounts in respect of such subtenant’s or assignee’s other leases or occupancy arrangements. All such costs and expenses shall be amortized over the term of the sublease or assignment pursuant to sound accounting principles.

10.04 TENANT LIABILITY

In the event of any sublease or assignment, whether or not with Landlord’s consent Tenant shall not be released or discharged from any liability, whether past, present or future, under this Lease, including any liability arising from the exercise of any renewal or expansion option, to the extent such exercise is expressly permitted by Landlord. Tenant’s liability shall remain primary, and in the event of default by any subtenant, assignee or successor of Tenant in performance or observance of any of the covenants or conditions of this Lease, Landlord may proceed directly against Tenant without the necessity of exhausting remedies against said subtenant, assignee or successor. After any assignment, Landlord may consent to subsequent assignments or subletting of this Lease, or amendments or modifications of this Lease with assignees of Tenant, without notifying Tenant, or any successor of Tenant, and without obtaining its or their consent thereto, and such action shall not relieve Tenant or any successor of Tenant of liability under this Lease. If Landlord grants consent to such sublease or assignment, Tenant shall pay all reasonable attorneys’ fees and expenses incurred by Landlord with respect to such assignment or sublease. In addition, if Tenant has any options to extend the term of this Lease or

to add other space to the Premises, such options shall not be available to any subtenant or assignee, directly or indirectly without Landlord's express written consent, which may be withheld in Landlord's sole discretion.

10.05 ASSUMPTION AND ATTORNMENT

If Tenant shall assign this Lease as permitted herein, the assignee shall expressly assume all of the obligations of Tenant hereunder in a written instrument satisfactory to Landlord and furnished to Landlord not later than fifteen (15) days prior to the effective date of the assignment. If Tenant shall sublease the Premises as permitted herein, Tenant shall, at Landlord's option, within fifteen (15) days following any request by Landlord, obtain and furnish to Landlord the written agreement of such subtenant to the effect that the subtenant will attorn to Landlord and will pay all subrent directly to Landlord.

ARTICLE ELEVEN
DEFAULT AND REMEDIES

11.01 EVENTS OF DEFAULT

The occurrence or existence of any one or more of the following shall constitute a "Default" by Tenant under this Lease:

(i) Tenant fails to pay any installment or other payment of Rent including Rent Adjustment Deposits or Rent Adjustments within three (3) days after the date when due;

(ii) Tenant fails to observe or perform any of the other covenants, conditions or provisions of this Lease or the Workletter and fails to cure such default within thirty (30) days after written notice thereof to Tenant, unless the default involves a hazardous condition, which shall be cured forthwith or unless the failure to perform is a Default for which this Lease specifies there is no cure or grace period;

(iii) the interest of Tenant in this Lease is levied upon under execution or other legal process;

(iv) a petition is filed by or against Tenant to declare Tenant bankrupt or seeking a plan of reorganization or arrangement under any Chapter of the Bankruptcy Act, or any amendment, replacement or substitution therefor, or to delay payment of, reduce or modify Tenant's debts, which in the case of an involuntary action is not discharged within thirty (30) days;

(v) Tenant is declared insolvent by Law or any assignment of Tenant's property is made for the benefit of creditors;

(vi) a receiver is appointed for Tenant or Tenant's property, which appointment is not discharged within thirty (30) days;

(vii) any action taken by or against Tenant to reorganize or modify Tenant's capital structure in a materially adverse way which in the case of an involuntary action is not discharged within thirty (30) days;

(viii) upon the dissolution of Tenant; or

(ix) upon the third occurrence within any Lease Year that Tenant fails to pay Rent when due or has breached a particular covenant of this Lease (whether or not such failure or breach is thereafter cured within any stated cure or grace period or statutory period).

11.02 LANDLORD'S REMEDIES

(a) A Default shall constitute a breach of the Lease for which Landlord shall have the rights and remedies set forth in this Section 11.02 and all other rights and remedies set forth in this Lease or now or hereafter allowed by Law, whether legal or equitable, and all rights and remedies of Landlord shall be cumulative and none shall exclude any other right or remedy.

(b) With respect to a Default, at any time Landlord may terminate Tenant's right to possession by written notice to Tenant stating such election. Any written notice required pursuant to Section 11.01 shag constitute notice of unlawful detainer pursuant to California Code of Civil Procedure Section 1161 if at Landlord's sole discretion, it states Landlord's election that Tenant's right to possession is terminated after expiration of any period required by Law or any longer period required by Section 11.01. Upon the expiration of the period stated in Landlord's written notice of termination (and unless such notice provides an option to cure within such period and Tenant cures the Default within such period), Tenant's right to possession shall terminate and this Lease shall terminate, and Tenant shall remain liable as hereinafter provided. Upon such termination in writing of Tenant's right to possession, Landlord shall have the right, subject to applicable Law, to re-enter the Premises and dispossess Tenant and the legal representatives of Tenant and all other occupants of the Premises by unlawful detainer or other summary proceedings, or otherwise as permitted by Law, regain possession of the Premises and remove their property (including their trade fixtures, personal property and those Tenant Additions which Tenant is required or permitted to remove under Article Twelve), but Landlord shall not be obligated to effect such removal, and such property may, at Landlord's option, be stored elsewhere, sold or otherwise dealt with as permitted by Law, at the risk of, expense of and for the account of Tenant, and the proceeds of any sale shall be applied pursuant to Law. Landlord shall in no event be responsible for the value, preservation or safekeeping of any such property. Tenant hereby waives all claims for damages that may be caused by Landlord's removing or storing Tenant's personal property pursuant to this Section or Section 12.01, and Tenant hereby indemnifies, and agrees to defend, protect and hold harmless, the Indemnitees from any and all loss, claims, demands, actions, expenses, liability and cost (including attorneys' fees and expenses) arising out of or in any way related to such removal or storage. Upon such written termination of Tenant's right to possession and this Lease, Landlord shall have the right to recover damages for Tenants Default as provided below:

(1) the worth at the time of award of the unpaid Rent which had been earned at the time of termination;

(2) the worth at the time of award of the amount by which the unpaid Rent which would have been earned after termination until the time of award exceeds the amount of such Rent loss that Tenant proves could reasonably have been avoided;

(3) the worth at the time of award of the amount by which the unpaid Rent for the balance of the term of this Lease after the time of award exceeds the amount of such Rent loss that Tenant proves could be reasonably avoided; and

(4) any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom. The word *rent' as used in this Section 11.02 shall have the same meaning as the defined term Rent in this Lease. The *worth at the time of award* of the amount referred to in clauses (1) and (2) above is computed by allowing interest at the Default Rate. The worth at the time of award of the amount referred to in clause (3) above is computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%). For the purpose of determining unpaid Rent under clause (3) above, the monthly Rent reserved in this Lease shall be deemed to be the sum of the Monthly Base Rent, and monthly Storage Space Rent, if any, *and* the amounts last payable by Tenant as Rent Adjustments for the calendar year in which Landlord terminated this Lease as provided hereinabove.

(c) Even if Tenant is in Default and/or has abandoned the Premises, this Lease shall continue in effect for so long as Landlord does not terminate Tenant's right to possession by written notice as provided in Section 11.02(b) above, and Landlord may enforce all its rights and remedies under this Lease, including the right to recover Rent as it becomes due under this Lease. In such event, Landlord shall have all of the rights and remedies of a landlord under California Civil Code Section 1951.4 (lessor may continue Lease in effect after Tenant's Default and abandonment and recover Rent as it becomes due, if Tenant has the right to sublet or assign, subject only to reasonable limitations), or any successor statute. During such time as Tenant is in Default, if Landlord has not terminated this Lease by written notice and if Tenant requests Landlord's consent to an assignment of this Lease or a sublease of the Premises, subject to Landlord's option to recapture pursuant to Section 10.02, Landlord shall not unreasonably withhold its consent to such assignment or sublease. Tenant acknowledges and agrees that the provisions of Article Ten shall be deemed to constitute reasonable limitations of Tenant's right to assign or sublet. Tenant acknowledges and agrees that in the absence of written notice pursuant to Section 11.02(b) above terminating Tenant's right to possession, no other act of Landlord shall constitute a termination of Tenant's right to possession or an acceptance of Tenant's surrender of the Premises, including acts of maintenance or preservation or efforts to relet the Premises or the appointment of a receiver upon initiative of Landlord to protect Landlord's interest under this Lease or the withholding of consent to a subletting or assignment, or terminating a subletting or assignment, if in accordance with other provisions of this Lease.

(d) In the event that Landlord seeks an injunction with respect to a breach or threatened breach by Tenant of any of the covenants, conditions or provisions of this Lease, Tenant agrees to pay the premium for any bond required in connection with such injunction.

(e) Tenant hereby waives any and all rights to relief from forfeiture, redemption or reinstatement granted by Law (including California Civil Code of Procedure Sections 1174 and 1179) in the event of Tenant being evicted or dispossessed for any cause or in the event of Landlord obtaining possession of the Premises by reason of Tenant's Default or otherwise;

(f) When this Lease requires giving or service of a notice, that notice shall replace rather than supplement any equivalent or similar statutory notice, including any equivalent or similar notices required by California Code of Civil Procedure Section 1161 or any similar or successor statute. When a statute requires service of a notice in a particular manner, service of that notice (or a similar notice required by this Lease) in the manner required by Article Twenty-four shall replace and satisfy the statutory service —of—notice procedures, including those required by Code of Civil Procedure section 1162 or any similar or successor statute.

(g) The voluntary or other surrender or termination of this Lease, or a mutual termination or cancellation thereof, shall not work a merger and shall terminate all or any existing assignments, subleases, subtenancies or occupancies permitted by Tenant, except if and as otherwise specified in writing by Landlord.

(h) No delay or omission in the exercise of any right or remedy of Landlord upon any default by Tenant, and no exercise by Landlord of its rights pursuant to Section 26.15 to perform any duty which Tenant fails timely to perform, shall impair any right or remedy or be construed as a waiver. No provision of this Lease shall be deemed waived by Landlord unless such waiver is in a writing signed by Landlord. The waiver by Landlord of any breach of any provision of this Lease shall not be deemed a waiver of any subsequent breach of the same or any other provision of this Lease.

11.03 ATTORNEY'S FEES

In the event any party brings any suit or other proceeding with respect to the subject matter or enforcement of this Lease, the prevailing party (as determined by a final, non-appealable judgment by the court, agency or other authority before which such suit or proceeding is commenced) shall, in addition to such other relief as may be awarded, be entitled to recover attorneys' fees, expenses and costs of investigation as actually incurred, including court costs, expert witness fees, costs and expenses of investigation, and all attorneys' fees, costs and expenses in any such suit or proceeding (including in any action or participation in or in connection with any case or proceeding under the Bankruptcy Code, 11 United States Code Sections 101 el

or any successor statutes, in establishing or enforcing the right to indemnification, in appellate proceedings, or in connection with the enforcement or collection of any judgment obtained in any such suit or proceeding).

11.04 BANKRUPTCY

The following provisions shall apply in the event of the bankruptcy or insolvency of Tenant:

(a) In connection with any proceeding under Chapter 7 of the Bankruptcy Code where the trustee of Tenant elects to assume this Lease for the purposes of assigning it, such election or assignment, may only be made upon compliance with the provisions of (b) and (c) below, which conditions Landlord and Tenant acknowledge to be commercially reasonable. In the event the trustee elects to reject this Lease then Landlord shall immediately be entitled to possession of the Premises without further obligation to Tenant or the trustee.

(b) Any election to assume this Lease under Chapter 11 or 13 of the Bankruptcy Code by Tenant as debtor-in-possession or by Tenant's trustee (the "Electing Party") must provide for.

The Electing Party to cure or provide to Landlord adequate assurance that it will cure all monetary defaults under this Lease within fifteen (15) days from the date of assumption and it will cure all nonmonetary defaults under this Lease within thirty (30) days from the date of assumption. Landlord and Tenant acknowledge such condition to be commercially reasonable.

(c) If the Electing Party has assumed this Lease or elects to assign Tenant's interest under this Lease to any other person, such interest may be assigned only if the intended assignee has provided adequate assurance of future performance (as herein defined), of all of the obligations imposed on Tenant under this Lease.

For the purposes hereof, "adequate assurance of future performance" means that Landlord has ascertained that each of the following conditions has been satisfied:

(i) The assignee has submitted a current financial statement, certified by its chief financial officer, which shows a net worth and working capital in amounts sufficient to assure the future performance by the assignee of Tenant's obligations under this Lease; and

(ii) Landlord has obtained consents or waivers from any third parties which may be required under a lease, mortgage, financing arrangement, or other agreement by which Landlord is bound, to enable Landlord to permit such assignment

(d) Landlord's acceptance of rent or any other payment from any trustee, receiver, assignee, person, or other entity will not be deemed to have waived, or waive, the

requirement of Landlord's consent, Landlord's right to terminate this Lease for any transfer of Tenant's interest under this Lease without such consent, or Landlord's claim for any amount of Rent due from Tenant.

11.05 LANDLORD'S DEFAULT

Landlord shall be in default hereunder in the event Landlord has not begun and pursued with reasonable diligence the cure of any failure of Landlord to meet its obligations hereunder within thirty (30) days after the receipt by Landlord of written notice from Tenant of the alleged failure to perform. In no event shall Tenant have the right to terminate or rescind this Lease as a result of Landlord's default as to any covenant or agreement contained in this Lease. Tenant hereby waives such remedies of termination and rescission and hereby agrees that Tenant's remedies for default hereunder and for breach of any promise or inducement shall be limited to a suit for damages and/or injunction. In addition, Tenant hereby covenants that, prior to the exercise of any such remedies, it will give Mortgagee notice and a reasonable time to cure any default by Landlord as set forth in Section 23.02.

ARTICLE TWELVE
SURRENDER OF PREMISES

12.01 IN GENERAL

Upon the Termination Date, Tenant shall surrender and vacate the Premises immediately and deliver possession thereof to Landlord in a clean, good and tenantable condition, ordinary wear and tear, and damage caused by Landlord excepted. Tenant shall deliver to Landlord all keys to the Premises. Tenant shall remove from the Premises all of Tenant's Personal Property, including, subject to Section 6.04, cabling for any of the foregoing; however, Tenant shall not be entitled to remove any of Tenant's Improvements. Additionally, Tenant shall be entitled to remove all such Tenant Additions which at the time of their installation Landlord and Tenant agreed may be removed by Tenant Tenant shall also remove such other Tenant Additions as required by Landlord, including any Tenant Additions containing Hazardous Material. In addition, Tenant shall, if requested by Landlord prior to the Termination Date, remove the 125 KVA ONAN emergency generator and the 2 door Hazardous Material Container listed forth on Exhibit E attached hereto. Tenant immediately shall repair all damage resulting from removal of any of Tenant's property, furnishings or Tenant Additions, shall close all floor, ceiling and roof openings and shall restore the Premises to a tenantable condition as reasonably determined by Landlord. If any of the Tenant Additions which were installed by Tenant involved the lowering of ceilings, raising of floors or the installation of specialized wall or floor coverings or lights, then Tenant shall also be obligated to return such surfaces to their condition prior to the commencement of this Lease. In the event possession of the Premises is not delivered to Landlord when required hereunder, or if Tenant shall fail to remove those items described above, Landlord may (but shall not be obligated to), at Tenant's expense, remove any of such property and store, sell or otherwise deal with such property as provided in Section 11.02(b), including the waiver and indemnity obligations provided in that Section, and undertake, at Tenant's expense, such restoration work as Landlord deems necessary or advisable.

12.02 LANDLORDS RIGHTS

All property which may be removed from the Premises by Landlord shall be conclusively presumed to have been abandoned by Tenant and Landlord may deal with such property as provided in Section 11.02(b), including the waiver and indemnity obligations provided in that Section. Tenant shall also reimburse Landlord for all costs and expenses incurred by Landlord in removing any of Tenants Personal Property not removed by Tenant pursuant to the provisions of Sections 11.02(b) or 12.01 and/or the Tenant Additions and in restoring the Premises to the condition required by this Lease at the Termination Date.

ARTICLE THIRTEEN
HOLDING OVER

Tenant shall pay Landlord the greater of (i) 150% of the monthly Rent payable for the month immediately preceding the holding over (including increases for Rent Adjustments which Landlord may reasonably estimate) or, (ii) 150% of the fair market rental value of the Premises as reasonably determined by Landlord for each month or portion thereof that Tenant retains possession of the Premises, or any portion thereof, after the Termination Date (without reduction for any partial month that Tenant retains possession). Tenant shall also pay all damages sustained by Landlord by reason of such retention of possession. The provisions of this Article shall not constitute a waiver by Landlord of any re-entry rights of Landlord and Tenant's continued occupancy of the Premises shall be as a tenancy in sufferance.

ARTICLE FOURTEEN
DAMAGE BY FIRE OR OTHER CASUALTY

14.01 SUBSTANTIAL UNTENANTABILITY

(a) If any fire or other casualty (whether insured or uninsured) renders all or a substantial portion of the Premises or the Building untenantable, Landlord shall, with reasonable promptness after the occurrence of such damage, estimate the length of time that will be required to substantially complete the repair and restoration and shall by notice advise Tenant of such estimate ("Landlord's Notice"). If Landlord estimates that the amount of time required to substantially complete such repair and restoration will exceed one hundred eighty (180) days from the date such damage occurred, then Landlord, if Landlord is concurrently terminating the leases of all other tenants in the Building that the Premises are located, or Tenant, if all or a substantial portion of the Premises is rendered untenantable, shall have the right to terminate this Lease as of the date of such damage upon giving written notice to the other at any time within thirty (30) days after delivery of Landlord's Notice, provided that if Landlord so chooses, Landlords Notice may also constitute such notice of termination. In addition, if such damage is to the Premises and occurs during the last twelve (12) months of the Term, either Tenant or Landlord shall have the right to terminate this Lease as of the date of such casualty by giving written notice thereof to the other within thirty (30) days after the date of such casualty.

(b) In the event that the Building is damaged or destroyed to the extent of more than twenty-five percent (25%) of its replacement cost or to any extent if no insurance proceeds or insufficient insurance proceeds are receivable by Landlord, or if the buildings at the

Project shall be damaged to the extent of fifty percent (50%) or more of the replacement value or to any extent if no insurance proceeds or insufficient insurance proceeds are receivable by Landlord, and regardless of whether or not the Premises be damaged, Landlord may elect by written notice to Tenant given within thirty (30) days after the occurrence of the casualty to terminate this Lease in lieu of so restoring the Premises, in which event this Lease shall terminate as of the date specified in Landlord's notice, which date shall be no later than sixty (60) days following the date of Landlord's notice.

(c) Unless this Lease is terminated as provided in the preceding Subsections 14.01 (a) and (b), Landlord shall proceed with reasonable promptness to repair and restore the Premises to its condition as existed prior to such casualty, subject to reasonable delays for insurance adjustments and Force Majeure delays, and also subject to zoning Laws and building codes then in effect. Landlord shall have no Debility to Tenant, and Tenant shall not be entitled to terminate this Lease if such repairs and restoration are not in fact completed within the time period estimated by Landlord so long as Landlord shall proceed with reasonable diligence to complete such repairs and restoration.

(d) Tenant acknowledges that Landlord shall be entitled to the full proceeds of any insurance coverage, whether carried by Landlord or Tenant, for damages to the Premises, except for those proceeds of Tenant's insurance of its own personal property, trade fixtures and equipment which would be removable by Tenant at the Termination Date. All such insurance proceeds relating to damage to the Premises shall be payable to Landlord whether or not the Premises are to be repaired and restored, provided, however, if this Lease is not terminated and the parties proceed to repair and restore Tenant Additions at Tenant's cost, to the extent Landlord received proceeds of Tenant's insurance covering Tenant Additions, such proceeds shall be applied to reimburse Tenant for its cost of repairing and restoring Tenant Additions.

(e) Notwithstanding anything in this Article Fourteen to the contrary: (i) Landlord shall have no duty pursuant to this Section to repair or restore any portion of any Tenant Additions or to expend for any repair or restoration of the Premises or Building amounts in excess of insurance proceeds paid to Landlord and available for repair or restoration; and (ii) Tenant shall not have the right to terminate this Lease pursuant to this Section if any damage or destruction was caused by the act or neglect of Tenant, its agent or employees. Whether or not the Lease is terminated pursuant to this Article Fourteen, in no event shall Tenant be entitled to receive from Landlord any compensation or damages for loss of the use of the whole or any part of the Premises or for any inconvenience or annoyance occasioned by any such damage, destruction, rebuilding or restoration of the Premises or the Building or access thereto.

(f) Any repair or restoration of the Premises performed by Tenant shall be in accordance with the provisions of Article Nine hereof.

14.02 INSUBSTANTIAL UNTENANTABILITY

Unless this Lease is terminated as provided in the preceding Subsections 14.01 (a) and (b), then Landlord shall proceed to repair and restore the Building or the Premises other than Tenant Additions, with reasonable promptness, unless such damage is to the Premises and occurs

during the last six (6) months of the Term, in which event either Tenant or Landlord shall have the right to terminate this Lease as of the date of such casualty by giving written notice thereof to the other within thirty (30) days after the date of such casualty. Notwithstanding the foregoing, Landlord's obligation to repair shall be limited in accordance with the provisions of Section 14.01 above.

14.03 RENT ABATEMENT

Except for the negligence or willful act of Tenant or its agents, employees, contractors or invitees, if all or any part of the Premises are rendered untenantable by fire or other casualty and this Lease is not terminated, Monthly Base Rent and Rent Adjustments shall abate for that part of the Premises which is untenantable on a per diem basis from the date of the casualty until thirty (30) days after Landlord has Substantially Completed the repair and restoration work in the Premises which it is required to perform, provided, that as a result of such casualty, Tenant does not occupy the portion of the Premises which is untenantable during such period.

14.04 WAIVER OF STATUTORY REMEDIES

The provisions of this Lease, including this Article Fourteen, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, the Premises or the Property or any part of either, and any Law, including Sections 1932(2), 1933(4), 1941 and 1942 of the California Civil Code, with respect to any rights or obligations concerning damage or destruction shall have no application to this Lease or to any damage to or destruction of all or any part of the Premises or the Property or any part of either, and are hereby waived.

ARTICLE FIFTEEN
EMINENT DOMAIN

15.01 TAKING OF WHOLE OR SUBSTANTIAL PART

In the event the whole or any substantial part of the Building or of the Premises is taken or condemned by any competent authority for any public use or purpose (including a deed given in lieu of condemnation) and is thereby rendered untenantable, this Lease shall terminate as of the date title vests in such authority or any earlier date on which possession is required to be surrendered to such authority, and Monthly Base Rent and Rent Adjustments shall be apportioned as of the Termination Date. Further, if at least twenty-five percent (25%) of the rentable area of the Project is taken or condemned by any competent authority for any public use or purpose (including a deed given in lieu of condemnation), and regardless of whether or not the Premises be so taken or condemned, Landlord may elect by written notice to Tenant to terminate this Lease as of the date tile vests in such authority or any earlier date on which possession is required to be surrendered to such authority, and Monthly Base Rent and Rent Adjustments shall be apportioned as of the Termination Date. Landlord may, without any obligation to Tenant, agree to sell or convey to the taking authority the Premises, the Building, Tenant's Phase, the Project or any portion thereof sought by the taking authority, free from this Lease and the right of Tenant hereunder, without first requiring that any action or proceeding be instituted or, if instituted, pursued to a judgment. Notwithstanding anything to the contrary herein set forth, in

the event the taking of the Building or Premises is temporary (for less than the remaining term of the Lease), Landlord may elect either (i) to terminate this Lease or (ii) permit Tenant to receive the entire award attributable to the Premises in which case Tenant shall continue to pay Rent and this Lease shall not terminate.

15.02 TAKING OF PART

In the event a part of the Building or the Premises is taken or condemned by any competent authority (or a deed is delivered in lieu of condemnation) and this Lease is not terminated, the Lease shall be amended to reduce or increase, as the case may be, the Monthly Base Rent and Tenant's Share to reflect Tenant's Rentable Area of the Premises or Building, as the case may be, remaining after any such taking or condemnation. Landlord, upon receipt and to the extent of the award in condemnation (or proceeds of sale) shall make necessary repairs and restorations to the Premises (exclusive of Tenant Additions) and to the Building to the extent necessary to constitute the portion of the Building not so taken or condemned as a complete architectural and economically efficient unit Notwithstanding the foregoing, if as a result of any taking, or a governmental order that the grade of any street or alley adjacent to the Building is to be changed and such taking or change of grade makes it necessary or desirable to substantially remodel or restore the Building or prevents the economical operation of the Building, Landlord shall have the right to terminate this Lease upon ninety (90) days prior written notice to Tenant.

15.03 COMPENSATION

Landlord shall be entitled to receive the entire award (or sale proceeds) from any such taking, condemnation or sale without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award; provided, however, Tenant shall have the right separately to pursue against the condemning authority a separate award in respect of the loss, if any, to Tenant Additions paid for by Tenant without any credit or allowance from Landlord, for fixtures or personal property of Tenant, or for relocation or business interruption expenses, so long as there is no diminution of Landlord's award as a result

ARTICLE SIXTEEN
INSURANCE

16.01 TENANTS INSURANCE

Tenant, at Tenant's expense, agrees to maintain in force, with a company or companies acceptable to Landlord, during the Term: (a) Commercial General Liability Insurance on a primary basis and without any right of contribution from any insurance carried by Landlord covering the Premises on an occurrence basis against all claims for personal injury, bodily injury, death and property damage, including contractual liability covering the indemnification provisions in this Lease. Such insurance shall be for such limits that are reasonably required by Landlord from time to time but not less than a combined single limit of Five Million and No/100 Dollars ($5,000,000.00); (b) Workers' Compensation and Employers' Liability Insurance to the extent required by and in accordance with the Laws of the State of California; (c) "All Risks" property insurance in an amount adequate to cover the full replacement cost of all Tenant Additions to the Premises, equipment, installations, fixtures and contents of the Premises in the

event of loss; (d) In the event a motor vehicle is to be used by Tenant in connection with its business operation from the Premises, Comprehensive Automobile Liability Insurance coverage with limits of not less than Three Million and No/100 Dollars ($3,000,000.00) combined single limit coverage against bodily injury liability and property damage liability arising out of the use by or on behalf of Tenant, its agents and employees in connection with this Lease, of any owned, non-owned or hired motor vehicles; and (e) such other insurance or coverages as Landlord reasonably requires.

16.02 FORM OF POLICIES

Each policy referred to in 16.01 shall satisfy the following requirements. Each policy shall (i) name Landlord and the Indemnitees as additional insureds (except Workers' Compensation and Employers' Liability Insurance), (ii) be issued by one or more responsible insurance companies licensed to do business in the State of California reasonably satisfactory to Landlord, (iii) where applicable, provide for deductible amounts satisfactory to Landlord and not permit co-insurance, (iv) shall provide that such insurance may not be canceled or amended without thirty (30) days' prior written notice to the Landlord, and (v) each poky of "All- Risks' property insurance shall provide that the policy shall not be invalidated should the insured waive in writing prior to a loss, any or all rights of recovery against any other party for losses covered by such policies. Tenant shall deliver to Landlord, certificates of insurance and at Landlord's request, copies of all policies and renewals thereof to be maintained by Tenant hereunder, not less than ten (10) days prior to the Commencement Date and not less than ten (10) days prior to the expiration date of each policy.

16.03 LANDLORD'S INSURANCE

Landlord agrees to purchase and keep in full force and effect during the Term hereof, including any extensions or renewals thereof, insurance under policies issued by insurers of recognized responsibility, qualified to do business in the State of California on the Building in amounts not less than the greater of eighty (80%) percent of the then full replacement cost (without depreciation) of the Building (above foundations and excluding Tenant Additions to the Premises) or an amount sufficient to prevent Landlord from becoming a co-insurer under the terms of the applicable policies, against fire and such other risks as may be included in standard forms of all risk coverage insurance reasonably available from time to time. Landlord agrees to maintain in force during the Term, Commercial General Liability Insurance covering the Building on an occurrence basis against all claims for personal injury, bodily injury, death and property damage. Such insurance shall be for a combined single limit of Five Million and No/100 Dollars ($5,000,000.00). Neither Landlord's obligation to carry such insurance nor the carrying of such insurance shall be deemed to be an indemnity by Landlord with respect to any claim, liability, loss, cost or expense due, in whole or in part, to Tenant's negligent acts or omissions or willful misconduct. Without obligation to do so, Landlord may, in its sole discretion from time to time, carry insurance in amounts greater and/or for coverage additional to the coverage and amounts set forth above.

16.04 WAIVER OF SUBROGATION

(a) Landlord agrees that, if obtainable at no, or minimal, additional cost, and so long as the same is permitted under the laws of the State of California, it will include in its "All Risks" policies appropriate clauses pursuant to which the insurance companies (i) waive all right of subrogation against Tenant with respect to losses payable under such policies and/or (ii) agree that such policies shall not be invalidated should the insured waive in writing prior to a loss any or all right of recovery against any party for losses covered by such policies.

(b) Tenant agrees to include, if obtainable at no, or minimal, additional cost, and so long as the same is permitted under the laws of the State of California, in its "All Risks" insurance policy or policies on Tenant Additions to the Premises, whether or not removable, and on Tenant's furniture, furnishings, fixtures and other property removable by Tenant under the provisions of this Lease appropriate clauses pursuant to which the insurance company or companies (i) waive the right of subrogation against Landlord and/or any tenant of space in the Building with respect to losses payable under such policy or policies and/or (Ii) agree that such policy or policies shall not be invalidated should the insured waive in writing prior to a loss any or all right of recovery against any party for losses covered by such policy or policies. If Tenant is unable to obtain in such policy or policies either of the clauses described in the preceding sentence, Tenant shall, if legally possible and without necessitating a change in insurance carriers, have Landlord named in such policy or policies as an additional insured. If Landlord shall be named as an additional insured in accordance with the foregoing, Landlord agrees to endorse promptly to the order of Tenant, without recourse, any check, draft, or order for the payment of money representing the proceeds of any such policy or representing any other payment growing out of or connected with said policies, and Landlord does hereby irrevocably waive any and all rights in and to such proceeds and payments.

(c) Provided that Landlord's right of full recovery under its policy or policies aforesaid is not adversely affected or prejudiced thereby, Landlord hereby waives any and all right of recovery which it might otherwise have against Tenant, its servants, agents and employees, for loss or damage occurring to the Real Property and the fixtures, appurtenances and equipment therein, except Tenant Additions, to the extent the same is covered by Landlord's insurance, notwithstanding that such loss or damage may result from the negligence or fault of Tenant, its servants, agents or employees. Provided that Tenant's right of full recovery under its aforesaid policy or policies is not adversely affected or prejudiced thereby, Tenant hereby waives any and all right of recovery which it might otherwise have against Landlord, its servants, and employees and against every other tenant in the Real Property who shall have executed a similar waiver as set forth in this Section 16.04 (c) for loss or damage to Tenant Additions, whether or not removable, and to Tenant's furniture, furnishings, fixtures and other property removable by Tenant under the provisions hereof to the extent the same is covered or coverable by Tenant's insurance required under this Lease, notwithstanding that such loss or damage may result from the negligence or fault of Landlord, its servants, agents or employees, or such other tenant and the servants, agents or employees thereof.

(d) Landlord and Tenant hereby agree to advise the other promptly if the clauses to be included in their respective insurance policies pursuant to subparagraphs (a) and (b) above cannot be obtained on the terms hereinbefore provided and thereafter to furnish the other

with a certificate of insurance or copy of such policies showing the naming of the other as an additional insured, as aforesaid. Landlord and Tenant hereby also agree to notify the other promptly of any cancellation or change of the terms of any such policy which would affect such clauses or naming. All such policies which name both Landlord and Tenant as additional insureds shall, to the extent obtainable, contain agreements by the insurers to the effect that no act or omission of any additional insured will invalidate the policy as to the other additional insureds.

16.05 NOTICE OF CASUALTY

Tenant shall give Landlord notice in case of a fire or accident in the Premises promptly after Tenant is aware of such event.

ARTICLE SEVENTEEN
WAIVER OF CLAIMS AND INDEMNITY

17.01 WAIVER OF CLAIMS

To the extent permitted by Law, Tenant releases the Indemnitees from, and waives all claims for, damage to person or property sustained by the Tenant or any occupant of the Premises or the Property resulting directly or indirectly from any existing or future condition, defect, matter or thing in and about the Premises or the Property or any part of either or any equipment or appurtenance therein, or resulting from any accident in or about the Premises or the Property, or resulting directly or indirectly from any act or neglect of any tenant or occupant of the Property or of any other person, including Landlord's agents and servants, except to the extent caused by the gross negligence or willful and wrongful act of any of the Indemnitees. To the extent permitted by Law, Tenant hereby waives any consequential damages, compensation or claims for inconvenience or loss of business, rents, or profits as a result of such injury or damage, whether or not caused by the willful and wrongful act of any of the Indemnitees. If any such damage, whether to the Premises or the Property or any part of either, or whether to Landlord or to other tenants in the Property, results from any act or neglect of Tenant, its employees, servants, agents, contractors, invitees or customers, Tenant shall be liable therefor and Landlord may, at Landlord's option, repair such damage and Tenant shall, upon demand by Landlord, as payment of additional Rent hereunder, reimburse Landlord within ten (10) days of demand for the total cost of such repairs, in excess of amounts, if any, paid to Landlord under insurance covering such damages. Tenant shall not be liable for any such damage caused by its acts or neglect if Landlord or a tenant has recovered the full amount of the damage from proceeds of insurance policies and the insurance company has waived its right of subrogation against Tenant

17.02 INDEMNITY BY TENANT

To the extent permitted by Law, Tenant hereby indemnifies, and agrees to protect, defend and hold the Indemnitees harmless, against any and all actions, claims, demands, liability, costs and expenses, including attorneys' fees and expenses for the defense thereof, arising from Tenant's occupancy of the Premises, from the undertaking of any Tenant Additions or repairs to the Premises, from the conduct of Tenant's business on the Premises, or from any breach or

default on the part of Tenant in the performance of any covenant or agreement on the part of Tenant to be performed pursuant to the terms of this Lease, or from any willful act or negligence of Tenant, its agents, contractors, servants, employees, customers or invitees, in or about the Premises or the Property or any part of either. In case of any action or proceeding brought against the Indemnitees by reason of any such claim, upon notice from Landlord, Tenant covenants to defend such action or proceeding by counsel chosen by Landlord, in Landlord's sole discretion. Landlord reserves the right to settle, compromise or dispose of any and all actions, claims and demands related to the foregoing indemnity. The foregoing indemnity shall not operate to relieve Indemnitees of liability to the extent such liability is caused by the gross negligence or willful and wrongful act of Indemnitees. Further, the foregoing indemnity is subject to and shall not diminish any waivers in effect in accordance with Section 16.04 by Landlord or its insurers to the extent of amounts, if any, paid to Landlord under its "All-Risks" property insurance.

Any indemnification, exculpation or waiver provisions under this Article Seventeen shall not be deemed to exculpate or indemnify Landlord against its own negligence or that of its agents, or servants or employees.

ARTICLE EIGHTEEN
RULES AND REGULATIONS

18.01 RULES

Tenant agrees for itself and for its subtenants, employees, agents, and invitees to comply with all rules and regulations for use of the Premises, the Building, the Phase and the Project imposed by Landlord, as the same may be revised from time to time, so long as a copy of such rules and regulations are delivered to Tenant, including the following: (a) Tenant shall comply with all of the requirements of Landlord's emergency response plan, as the same may be amended from time to time; and (b) Tenant shall not place any furniture, furnishings, fixtures or equipment in the Premises in a manner so as to obstruct the windows of the Premises to cause the Building, in Landlord's good faith determination, to appear unsightly from the exterior. Such rules and regulations are and shall be imposed for the cleanliness, good appearance, proper maintenance, good order and reasonable use of the Premises, the Building, the Phase and the Project and as may be necessary for the enjoyment of the Building and the Project by all tenants and their clients, customers, and employees.

18.02 ENFORCEMENT

Nothing in this Lease shall be construed to impose upon the Landlord any duty or obligation to enforce the rules and regulations as set forth above or as hereafter adopted, or the terms, covenants or conditions of any other lease as against any other tenant, and the Landlord shall not be liable to the Tenant for violation of the same by any other tenant, its servants, employees, agents, visitors or licensees. Landlord shall use reasonable efforts to enforce the rules and regulations of the Building in a uniform and non-discriminatory manner.

ARTICLE NINETEEN
LANDLORD'S RESERVED RIGHTS

Landlord shall have the following rights exercisable without notice to Tenant and without liability to Tenant for damage or injury to persons, property or business and without being deemed an eviction or disturbance of Tenant's use or possession of the Premises or giving rise to any claim for offset or abatement of Rent (1) to change the Building's name or street address upon thirty (30) days' prior written notice to Tenant; (2) to install, affix and maintain all signs on the exterior and/or interior of the Building; (3) to designate and/or approve prior to installation, all types of signs, window shades, blinds, drapes, awnings or other similar items, and all internal lighting that may be visible from the exterior of the Premises; (4) upon reasonable notice to Tenant, to display the Premises to prospective purchasers at reasonable hours at any time during the Term and to prospective tenants at reasonable hours during the last twelve (12) months of the Term; (5) to grant to any party the exclusive right to conduct any business or render any service in or to the Building, provided such exclusive right shall not operate to prohibit Tenant from using the Premises for the purpose permitted hereunder; (6) to change the arrangement and/or location of entrances or passageways, doors and doorways, corridors, elevators, stairs, washrooms or public portions of the Building, and to close entrances, doors, corridors, elevators or other facilities, provided that such action shall not materially and adversely interfere with Tenants access to the Premises or the Building; and (7) to have access for Landlord and other tenants of the Building to any mail chutes and boxes located in or on the Premises as required by any applicable rules of the United States Post Office.

ARTICLE TWENTY
ESTOPPEL CERTIFICATE

20.01 IN GENERAL

Within fifteen (15) days after request therefor by Landlord, Mortgagee or any prospective mortgagee or owner, Tenant agrees as directed in such request to execute an Estoppel Certificate in reasonable form, binding upon Tenant, certifying (i) that this Lease is unmodified and in full force and effect (or if there have been modifications, a description of such modifications and that this Lease as modified is in full force and effect); (ii) the dates to which Rent has been paid; (iii) that Tenant is in the possession of the Premises if that is the case; (iv) to Tenants knowledge, that Landlord is not in default under this Lease, or, if Tenant believes Landlord is in default, the nature thereof in detail; (v) to Tenants knowledge, that Tenant has no offsets or defenses to the performance of its obligations under this Lease (or if Tenant believes there are any offsets or defenses, a full and complete explanation thereof); (vi) that the Premises have been completed in accordance with the terms and provisions hereof, that Tenant has accepted the Premises and the condition thereof and of all improvements thereto and has no claims against Landlord or any other party with respect thereto; (vii) that if an assignment of rents or leases has been served upon the Tenant by a Mortgagee, Tenant will acknowledge receipt thereof and agree to be bound by the provisions thereof, (viii) that Tenant will give to the Mortgagee copies of all notices required or permitted to be given by Tenant to Landlord; and (ix) to any other information reasonably requested.

20.02 ENFORCEMENT

In the event that Tenant fails to deliver an Estoppel Certificate, then such failure shall be a Default for which there shall be no cure or grace period. Tenant shall be deemed to have irrevocably appointed Landlord as Tenant's attorney-in-fact to execute and deliver such Estoppel Certificate.

ARTICLE TWENTY-ONE
ONE INTENTIONALLY OMITTED

ARTICLE TWENTY-TWO
REAL ESTATE BROKERS

Tenant represents that, except for the broker(s) listed in Section 1.01(19), Tenant has not dealt with any real estate broker, sales person, or finder in connection with this Lease, and no such person initiated or participated in the negotiation of this Lease, or showed the Premises to Tenant. Tenant hereby agrees to indemnify, protect, defend and hold Landlord and the Indemnitees, harmless from and against any and all liabilities and claims for commissions and fees arising out of a breach of the foregoing representation. Landlord agrees to pay any commission to which Landlord's Broker listed in Section 1.01(19) is entitled in connection with this Lease pursuant to Landlord's written agreement with such broker. Landlord and Tenant agree that any commission payable to Tenant's Broker shall be paid by Tenant except to the extent Tenant's Broker and Landlord's Broker have entered into a separate agreement between themselves to share the commission paid to Landlord's Broker by Landlord.

ARTICLE TWENTY-THREE
MORTGAGEE PROTECTION

23.01 SUBORDINATION AND ATTORNMENT

This Lease is and shall be expressly subject and subordinate at all times to (i) any ground or underlying lease of the Real Property, now or hereafter existing, and all amendments, extensions, renewals and modifications to any such lease, and (ii) the lien of any mortgage or trust deed now or hereafter encumbering fee title to the Real Property and/or the leasehold estate under any such lease, and all amendments, extensions, renewals, replacements and modifications of such mortgage or trust deed and/or the obligation secured thereby, unless such ground lease or ground lessor, or mortgage, trust deed or Mortgagee, expressly provides or elects that the Lease shall be superior to such lease or mortgage or trust deed. If any such mortgage or trust deed is foreclosed (including any sale of the Real Property pursuant to a power of sale), or if any such lease is terminated, upon request of the Mortgagee or ground lessor, as the case may be, Tenant shall attorn to the purchaser at the foreclosure sale or to the ground lessor under such lease, as the case may be, provided, however, that such purchaser or ground lessor shall not be (i) bound by any payment of Rent for more than one month in advance except payments in the nature of security for the performance by Tenant of its obligations under this Lease; (ii) subject to any offset, defense or damages arising out of a default of any obligations of any preceding Landlord; or (iii) bound by any amendment or modification of this Lease made without the written consent of the Mortgagee or ground lessor, or (iv) liable for any security deposits not actually received in

cash by such purchaser or ground lessor. Notwithstanding the foregoing, or anything contained herein to the contrary, Landlord agrees to use its "best efforts", as that term is hereinbelow defined, to obtain a written agreement from the holder of any future Mortgage or ground lessor under any ground lease not to disturb Tenant's possession of the Premises so long as Tenant is not in Default under this Lease, which agreement would be on such Mortgagee's or such ground lessor's standard (albeit commercially reasonable) form of non-disturbance agreement containing the usual and customary provisions typically contained in a non-disturbance agreement (Its "Standard Form NDA"). It is understood that the "use of best efforts" shall (i) not require or be construed to require Landlord to incur any charges or expenses in an effort to obtain such non-disturbance agreement and (ii) only require Landlord to request the non-disturbance agreement and that if the holder of any such Mortgage or ground lessor, as the case may be, refuses to grant non-disturbance, Landlord's sole obligation hereunder shall be to advise Tenant of the rejection and to furnish Tenant with the name and address of the Mortgagee or ground lessor or the representative or officer with whom Tenant shall, at its option, be free to communicate with to request such non-disturbance agreement further provided, however, that if Tenant uses its "best efforts" to secure a Standard Form NDA and the holder of any such future Mortgage or any such ground lessor is unwilling to enter into its Standard Form NDA with Tenant for a reason other than Tenant's Default under this Lease, this Lease shall not be subject or subordinate to such Mortgage or ground lease. This subordination shall be self-operative and no further certificate or instrument of subordination need be required by any such Mortgagee or ground lessor. In confirmation of such subordination, however, Tenant shall execute promptly any reasonable certificate or instrument that Landlord, Mortgagee or ground lessor may request Tenant hereby constitutes Landlord as Tenant's attorney-in-fact to execute such certificate or instrument for and on behalf of Tenant upon Tenant's failure to do so within fifteen (15) days of a request to do so. Upon request by such successor in interest, Tenant shall execute and deliver reasonable instruments confirming the attornment provided for herein.

23.02 MORTGAGEE PROTECTION

Tenant agrees to give any Mortgagee or ground lessor, concurrently, by registered or certified mail, a copy of any notice of default served upon the Landlord by Tenant, provided that prior to such notice Tenant has received written notice (by way of service on Tenant of a copy of an assignment of rents and leases, or otherwise) of the address of such Mortgagee or ground lessor. Tenant further agrees that if Landlord shall have failed to cure such default within the time provided for in this Lease, then the Mortgagee or ground lessor shall have an additional thirty (30) days after receipt of notice thereof within which to cure such default or if such default cannot be cured within that time, then if the Mortgagee or ground lessor agrees to cure such default, then the Mortgagee or ground lessor shall have such additional time as may be necessary, if, within such thirty (30) days, any Mortgagee or ground lessor has commenced and is diligently pursuing the remedies necessary to cure such default, but in no event shall said thirty (30) day period be extended by more than forty-five (45) days. Such period of time shall be extended by any period within which such Mortgagee or ground lessor is prevented from commencing or pursuing such foreclosure proceedings or other proceedings to acquire possession of the Real Property by reason of Landlord's bankruptcy. Until the time allowed as aforesaid for Mortgagee or ground lessor to cure such defaults has expired without cure, Tenant shall have no right to, and shall not, terminate this Lease on account of default This Lease may not be modified or amended so as to reduce the rent or shorten the term, or so as to adversely

affect in any other respect to any material extent the rights of the Landlord, nor shall this Lease be canceled or surrendered, without the prior written consent, in each instance, of the ground lessor or the Mortgagee.

ARTICLE TWENTY-FOUR
NOTICES

(a) All notices, demands or requests provided for or permitted to be given pursuant to this Lease must be in writing and shall be personally delivered, sent by Federal Express or other reputable overnight courier service, or mailed by first class, registered or certified United States mail, return receipt requested, postage prepaid.

(b) All notices, demands or requests to be sent pursuant to this Lease shall be deemed to have been properly given or served by delivering or sending the same in accordance with this Section, addressed to the parties hereto at their respective addresses listed in Sections 1.01(2) and (3).

(c) Notices, demands or requests sent by mail or overnight courier service as described above shall be effective upon deposit in the mail or with such courier service. However, the time period in which a response to any such notice, demand or request must be given shall commence to run from (i) in the case of delivery by mail, the date of receipt on the return receipt of the notice, demand or request by the addressee thereof, or (ii) in the case of delivery by Federal Express or other overnight courier service, the date of acceptance of delivery by an employee, officer, director or partner of Landlord or Tenant Rejection or other refusal to accept or the inability to deliver because of changed address of which no notice was given, as indicated by advice from Federal Express or other overnight courier service or by mail return receipt, shall be deemed to be receipt of notice, demand or request sent Notices may also be served by personal service upon any officer, director or partner of Landlord or Tenant, and shall be effective upon such service.

(d) By giving to the other party at least ten (10) days written notice thereof, either party shall have the right from time to time during the term of this Lease to change their respective addresses for notices, statements, demands and requests, provided such new address shall be within the United States of America.

ARTICLE TWENTY-FIVE
EXERCISE FACILITY

Tenant agrees to inform all employees of Tenant of the following: (i) the exercise facility is available for the use of the employees of tenants of the Project only and for no other person; (ii) use of the facility is at the risk of Tenant or Tenants employees, and all users must sign a release; (iii) the facility is unsupervised; and (iv) users of the facility must report any needed equipment maintenance or any unsafe conditions to the Landlord immediately. Landlord may discontinue providing such facility at Landlord's sole option at any time without incurring any liability. As a condition to the use of the exercise facility, Tenant and each of Tenant's employees that uses the exercise facility shall first sign a written release in form and substance acceptable to Landlord. Landlord may change the rules and/or hours of the exercise facility at

any time, and Landlord reserves the right to deny access to the exercise facility to anyone due to misuse of the facility or noncompliance with rules and regulations of the facility. To the extent permitted by Law, Tenant hereby indemnifies, and agrees to protect, defend and hold the Indemnitees harmless, against any and all actions, claims, demands, liability, costs and expenses, including attorneys' fees and expenses for the defense thereof, arising from use of the exercise facility in the Project by Tenant, Tenants employees or invitees. In case of any action or proceeding brought against the Indemnitees by reason of any such claim, upon notice from Landlord, Tenant covenants to defend such action or proceeding by counsel chosen by Landlord, in Landlord's sole discretion. Landlord reserves the right to settle, compromise or dispose of any and all actions, claims and demands related to the foregoing indemnity.

ARTICLE TWENTY-SIX
MISCELLANEOUS

26.01 LATE CHARGES

(a) The Monthly Base Rent, Rent Adjustments and Rent Adjustment Deposits shall be due when and as specifically provided above. Except for such payments and late charges described below, which late charge shall be due when provided below (without notice or demand), all other payments required hereunder to Landlord shall be paid within ten (10) days after Landlord's demand therefor. All Rent and charges, except late charges, not paid when due shall bear interest from the date due until the date paid at the Default Rate in effect on the date such payment was due.

(b) In the event Tenant is more than five (5) days late in paying any installment of Rent due under this Lease, Tenant shall pay Landlord a late charge equal to five percent (5%) of the delinquent installment of Rent. The parties agree that (i) such delinquency will cause Landlord to incur costs and expenses not contemplated herein, the exact amount of which will be difficult to calculate, including the cost and expense that will be incurred by Landlord in processing each delinquent payment of rent by Tenant, and (ii) the amount of such late charge represents a reasonable estimate of such costs and expenses and that such late charge shall be paid to Landlord for each delinquent payment in addition to all Rent otherwise due hereunder. The parties further agree that the payment of late charges and the payment of interest provided for in subparagraph (a) above are distinct and separate from one another in that the payment of interest is to compensate Landlord for its inability to use the money improperly withheld by Tenant, while the payment of late charges is to compensate Landlord for its additional administrative expenses in handling and processing delinquent payments.

(c) Payment of interest at the Default Rate and/or of late charges shall not excuse or cure any default by Tenant under this Lease, nor shall the foregoing provisions of this Article or any such payments prevent Landlord from exercising any right or remedy available to Landlord upon Tenants failure to pay Rent when due, including the right to terminate this Lease.

26.02 NO JURY TRIAL; VENUE; JURISDICTION

Each party hereto (which includes any assignee, successor, heir or personal representative of a party) shall not seek a jury trial, hereby waives trial by jury, and hereby further waives any

objection to venue in the County in which the Project is located, and agrees and consents to personal jurisdiction of the courts of the State of California, in any action or proceeding or counterclaim brought by any party hereto against the other on any matter whatsoever arising out of or in any way connected with this Lease, the relationship of Landlord and Tenant, Tenant's use or occupancy of the Premises, or any claim of injury or damage, or the enforcement of any remedy under any statute, emergency or otherwise, whether any of the foregoing is based on this Lease or on tort law. No party will seek to consolidate any such action in which a jury has been waived with any other action in which a jury trial cannot or has not been waived. It is the intention of the parties that these provisions shall be subject to no exceptions. By execution of this Lease the parties agree that this provision may be filed by any party hereto with the clerk or judge before whom any action is instituted, which filing shall constitute the written consent to a waiver of jury trial pursuant to and in accordance with Section 631 of the California Code of Civil Procedure. No party has in any way agreed with or represented to any other party that the provisions of this Section will not be fully enforced in all instances. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

26.03 DEFAULT UNDER OTHER LEASE

It shall be a Default under this Lease if Tenant or any Affiliate holding any other lease with Landlord for premises in the Project defaults under such lease and as a result thereof such lease is terminated or terminable.

26.04 OPTION

This Lease shall not become effective as a lease or otherwise until executed and delivered by both Landlord and Tenant. The submission of the Lease to Tenant does not constitute a reservation of or option for the Premises, but when executed by Tenant and delivered to Landlord, the Lease shall constitute an irrevocable offer by Tenant in effect for fifteen (15) days to lease the Premises on the terms and conditions herein contained.

26.05 TENANT AUTHORITY

Tenant represents and warrants to Landlord that it has full authority and power to enter into and perform its obligations under this Lease, that the person executing this Lease is fully empowered to do so, and that no consent or authorization is necessary from any third party. Landlord may request that Tenant provide Landlord evidence of Tenant's authority.

26.06 ENTIRE AGREEMENT

This Lease and the Exhibits attached hereto contain the entire agreement between Landlord and Tenant concerning the Premises and there are no other agreements, either oral or written, and no other representations or statements, either oral or written, on which Tenant has relied. This Lease shall not be modified except by a writing executed by Landlord and Tenant.

26.07 MODIFICATION OF LEASE FOR BENEFIT OF MORTGAGEE

If Mortgagee of Landlord requires a modification of this Lease which shall not result in any increased cost or expense to Tenant or in any other substantial and adverse change in the rights and obligations of Tenant hereunder, then Tenant agrees that the Lease may be so modified.

26.08 EXCULPATION

Tenant agrees, on its behalf and on behalf of its successors and assigns, that any liability or obligation of Landlord in connection with this Lease shall only be enforced against Landlord's equity interest in the Property up to a maximum of Five Million Dollars ($5,000,000.00) and in no event against any other assets of the Landlord, or Landlord's officers or directors or partners, and that any liability of Landlord with respect to this Lease shall be so limited and Tenant shall not be entitled to any judgment in excess of such amount

26.09 ACCORD AND SATISFACTION

No payment by Tenant or receipt by Landlord of a lesser amount than any installment or payment of Rent due shall be deemed to be other than on account of the amount due, and no endorsement or statement on any check or any letter accompanying any check or payment of Rent shall be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such installment or payment of Rent or pursue any other remedies available to Landlord. No receipt of money by Landlord from Tenant after the termination of this Lease or Tenants right of possession of the Premises shall reinstate, continue or extend the Term. Receipt or acceptance of payment from anyone other than Tenant, including an assignee of Tenant, is not a waiver of any breach of Article Ten, and Landlord may accept such payment on account of the amount due without prejudice to Landlord's right to pursue any remedies available to Landlord.

26.10 LANDLORD'S OBLIGATIONS ON SALE OF BUILDING

In the event of any sale or other transfer of the Building, Landlord shall be entirety freed and relieved of all agreements and obligations of Landlord hereunder accruing or to be performed after the date of such sale or transfer, and any remaining liability of Landlord with respect to this Lease shall be limited to Five Million Dollars ($5,000,000.00) and Tenant shall not be entitled to any judgment in excess of such amount.

26.11 BINDING EFFECT

Subject to the provisions of Article Ten, this Lease shall be binding upon and inure to the benefit of Landlord and Tenant and their respective heirs, legal representatives, successors and permitted assigns.

26.12 CAPTIONS

The Article and Section captions in this Lease are inserted only as a matter of convenience and in no way define, limit, construe, or describe the scope or intent of such Articles and Sections.

26.13 TIME; APPLICABLE LAW; CONSTRUCTION

Time is of the essence of this Lease and each and all of its provisions. This Lease shall be construed in accordance with the Laws of the State of California. If more than one person signs this Lease as Tenant, the obligations hereunder imposed shall be joint and several. If any term, covenant or condition of this Lease or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term, covenant or condition to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby and each item, covenant or condition of this Lease shall be valid and be enforced to the fullest extent permitted by Law. Wherever the term "including" or "includes" is used in this Lease, it shall have the same meaning as if followed by the phrase but not limited to". The language, in all parts of this Lease shall be construed according to its normal and usual meaning and not strictly for or against either Landlord or Tenant.

26.14 ABANDONMENT

In the event Tenant vacates or abandons the Premises but is otherwise in compliance with all the terms, covenants and conditions of this Lease, Landlord shall (i) have the right to enter into the Premises in order to show the space to prospective tenants, (ii) have the right to reduce the services provided to Tenant pursuant to the terms of this Lease to such levels as Landlord reasonably determines to be adequate services for an unoccupied premises and (iii) during the last six (6) months of the Term, have the right to prepare the Premises for occupancy by another tenant upon the end of the Term. Tenant expressly acknowledges that in the absence of written notice pursuant to Section 11.02(b) or pursuant to California Civil Code Section 1951.3 terminating Tenant's right to possession, none of the foregoing acts of Landlord or any other act of Landlord shall constitute a termination of Tenant's right to possession or an acceptance of Tenant's surrender of the Premises, and the Lease shall continue in effect.

26.15 LANDLORD'S RIGHT TO PERFORM TENANTS DUTIES

If Tenant fails timely to perform any of its duties under this Lease, Landlord shall have the right (but not the obligation), to perform such duty on behalf and at the expense of Tenant without prior notice to Tenant, and all sums expended or expenses incurred by Landlord in performing such duty shall be deemed to be additional Rent under this Lease and shall be due and payable upon demand by Landlord.

26.16 SECURITY SYSTEM

Landlord shall not be obligated to provide or maintain any security patrol or security system. Landlord shall not be responsible for the quality of any such patrol or system which may be provided hereunder or for damage or injury to Tenant, its employees, invitees or others due to the failure, action or inaction of such patrol or system.

26.17 NO LIGHT, AIR OR VIEW EASEMENTS

Any diminution or shutting off of light, air or view by any structure which may be erected on lands of or adjacent to the Project shall in no way affect this Lease or impose any liability on Landlord.

26.18 RECORDATION

Neither this Lease, nor any notice nor memorandum regarding the terms hereof, shall be recorded by Tenant Any such unauthorized recording shall be a Default for which there shall be no cure or grace period. Tenant agrees to execute and acknowledge, at the request of Landlord, a memorandum of this Lease, in recordable form.

26.19 SURVIVAL

The waivers of the right of jury trial, the other waivers of claims or rights, the releases and the obligations of Tenant under this Lease to indemnify, protect, defend and hold harmless Landlord and/or Indemnitees shall survive the expiration or termination of this Lease, and so shall all other obligations or agreements which by their terms survive expiration or termination of the Lease.

26.20 MAXYGEN TERMINATION

Notwithstanding anything to the contrary contained in this Lease, this Lease and the obligations of each party hereto are expressly subject to the condition precedent that Landlord shall successfully enter into and obtain a legally binding written termination of the lease of Space B from Maxygen, Inc., satisfactory in all respects In form and substance to Landlord in Landlord's sole discretion providing for surrender to Landlord of Space B. Landlord shall give Tenant written notice of the satisfaction of this condition precedent or of Landlord's written waiver of this condition precedent Landlord may give such notice by tender of delivery to Tenant or its broker of the keys to Space B or by any other means permitted by the Lease. The date such termination agreement is effective pursuant to its terms shall be the "Maxygen Termination Date".

26.21 OPTION TO EXTEND

(a) Landlord hereby grants Tenant a single option to extend the initial Term of the Lease for an additional period of five (5) years (such period may be referred to as the "Option Term"), as to the entire Premises as it may then exist, upon and subject to the terms and conditions of this Section (the "Option To Extend"), and provided that at the time of exercise of such right: (I) Tenant must be in occupancy of the entire Premises; and (ii) there has been no material adverse change in Tenant's financial position from such position as of the date of execution of the Lease, as certified by Tenant's independent certified public accountants, and as supported by Tenant's certified financial statements, copies of which shall be delivered to Landlord with Tenants written notice exercising its right hereunder.

(b) Tenant's election (the "Election Notice") to exercise the Option To Extend must be given to Landlord in writing no earlier than the date which is twelve months (12)

months before the Expiration Date and no later than the date which is nine (9) months before the Expiration Date. If Tenant either fails or elects not to exercise its Option to Extend by not timely giving its Election Notice, then the Option to Extend shall be null and void.

(c) The Option Term shall commence immediately after the expiration of the initial Term of the Lease. Tenant's leasing of the Premises during the Option Term shall be upon and subject to the same terms and conditions contained in the Lease except that (i) the Monthly Base Rent, plus payment of Tenant's Share of Operating Expenses pursuant to the Lease (in addition to all expenses paid directly by Tenant to the utility or service provider, which direct payments shall continue to be Tenant's obligation) shall be amended to equal the "Option Term Rent", defined and determined in the manner set forth in the immediately following Subsection; (ii) the Security Deposit, if any, shall be increased within fifteen (15) days after the Prevailing Market Rent has been determined to equal one hundred percent (100%) of the highest monthly installment of Monthly Base Rent thereunder, but in no event shall the Security Deposit be decreased; (iii) Tenant shall accept the Premises in its "AS-IS" condition without any obligation of Landlord to repaint, remodel, repair, improve or alter the Premises or to provide Tenant any allowance therefor; and (iv) there shall be no further option or right to extend the term of the Lease. If Tenant timely and properly exercises the Option To Extend, references in the Lease to the Term shall be deemed to mean the initial Term as extended by the Option Term unless the context clearly requires otherwise.

(d) The Option Term Rent shall mean the greater of (i) the Monthly Base Rent payable by Tenant under this Lease calculated at the rate applicable for the last full month of the initial Term, plus payment of Tenant's Share of Operating Expenses pursuant to the Lease (in addition to all expenses paid directly by Tenant to the utility or service provider, which direct payments shall continue to be Tenant's obligation) (collectively, "Preceding Rent") or (ii) the "Prevailing Market Rent". As used in this Section Prevailing Market Rent shall mean the rent and all other monetary payments, escalations and triple net payables by Tenant, including consumer price increases, that Landlord could obtain from a third party desiring to lease the Premises for a term equal to the Option Term and commencing when the Option Term is to commence under market leasing conditions, and taking Into account the following: the size, location and floor levels of the Premises; the type and quality of tenant improvements (including Tenant's Improvements); age and location of the Project; quality of construction of the Project; services to be provided by Landlord or by tenant; the rent, all other monetary payments and escalations obtainable for new leases of space comparable to the Premises in the Project and in comparable buildings in the mid- Peninsula area, and other factors that would be relevant to such a third party in determining what such party would be willing to pay therefor, provided, however, that Prevailing Market Rent shall be determined without reduction or adjustment for "Tenant Concessions" (as defined below), if any, being offered to prospective new tenants of comparable space. For purposes of the preceding sentence, the term' "Tenant Concessions" shall include, without limitation, so-called free rent, tenant improvement allowances and work, moving allowances, and lease takeovers. The determination of Prevailing Market Rent based upon the foregoing criteria shall be made by Landlord, in the good faith exercise of Landlord's business judgment. Within thirty (30) days after Tenant's exercise of the Option To Extend, Landlord shall notify Tenant of Landlord's determination of Option Term Rent for the Premises. If Landlord's determination of Prevailing Market Rent is greater than the Preceding Rent, and if Tenant, in Tenant's sole discretion, disagrees with the amount of Prevailing Market Rent

determined by Landlord, Tenant may elect to revoke and rescind the exercise of the option by giving written notice thereof to Landlord within thirty (30) days after notice of Landlord's determination of Prevailing Market Rent.

(e) This Option to Extend is personal to Codex's Inc. and may not be used by, and shall not be transferable or assignable (voluntarily or involuntarily) to any person or entity except for a Tenant Affiliate.

(f) Upon the occurrence of any of the following events, Landlord shall have the option, exercisable at any time prior to commencement of the Option Term, to terminate all of the provisions of this Section with respect to the Option to Extend, with the effect of canceling and voiding any prior or subsequent exercise so this Option to Extend is of no force or effect:

(i) Tenant's failure to timely exercise the Option to Extend in accordance with the provisions of this Section.

(ii) The existence at the time Tenant exercises the Option to Extend or at the commencement of the Option Term of any default on the part of Tenant under the Lease or of any state of facts which with the passage of time or the giving of notice, or both, would constitute such a default.

(iii) Tenants third default under the Lease prior to the commencement of the Option Term, notwithstanding that all such defaults may subsequently be cured.

In the event of Landlord's termination of the Option to Extend pursuant to this Section, Tenant shall reimburse Landlord for all costs and expenses Landlord incurs in connection with Tenants exercise of the Option to Extend including, without limitation, costs and expenses with respect to any brokerage commissions and attorneys' fees, and with respect to the design, construction or making of any tenant improvements, repairs or renovation or with respect to any payment of all or part of any allowance for any of the foregoing.

(g) Without limiting the generality of any provision of the Lease, time shall be of the essence with respect to all of the provisions of this Section.

IN WITNESS WHEREOF, this Lease has been executed as of the date set forth in Section 1.01(4) hereof.

TENANT:
Codexis

a _____

By /s/ Alan Straw
Alan Straw
Print name

Its President & CEO
(Chairman of Board, President or Vice President)

By _____

_____
Print name

Its _____
(Secretary, Assistant Secretary, CFO or Assistant Treasurer)

LANDLORD
Metropolitan Life Insurance Company,

a New York corporation

By /s/ JMR Redman
JMR Redman
Print name

Its Assistant Vice President

By _____

_____
Print name

Its _____

Exhibit 10.17

FIRST AMENDMENT TO LEASE

This First Amendment to Lease ("**Amendment**") is entered into, and dated for reference purposes, as of June 1, 2004 (the "**Execution Date**") by and between METROPOLITAN LIFE INSURANCE COMPANY, a New York corporation, as Landlord ("**Landlord**"), and CODEXIS, INC., a Delaware corporation, as Tenant ("**Tenant**"), with reference to the following facts ("**Recitals**"):

A Landlord and Tenant entered into that certain written Lease, dated as of October 2003 (the "**Existing Lease**"), for certain premises in Seaport Centre, described therein located at 220 Penobscot Drive, 501 Chesapeake Drive and 200 Penobscot Drive, Redwood City, California (the "**Existing Premises**"), all as more particularly described in the Existing Lease.

B. Tenant has requested and Landlord has agreed to enter into this Amendment upon the terms set forth herein.

NOW, THEREFORE, in consideration of the foregoing, and of the mutual covenants set forth herein and of other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

Section 1. Scope of Amendment; Defined Terms. Except as expressly provided in this Amendment, the Existing Lease shall remain in full force and effect. Should any inconsistency arise between this Amendment and the Existing Lease as to the specific matters which are the subject of this Amendment, the terms and conditions of this Amendment shall control. The term "**Existing Lease**" defined above shall refer to the Existing Lease as it existed before giving effect to the modifications set forth in this Amendment and the term "**Lease**" as used herein and in the Existing Lease shall refer to the Existing Lease as modified by this Amendment, except as expressly provided in this Amendment. All capitalized terms used in this Amendment and not defined herein shall have the meanings set forth in the Existing Lease unless the context clearly requires otherwise.

Section 2. Amendment of Section 2.05. The eighth (8^{th}) and ninth (9^{th}) sentences in the paragraph within Section 2.05(b) of the Lease beginning with "In no event shall Landlord's Contribution." shall be amended and restated as follows:

> "Tenant must prior to the expiration of nine months after the Commencement Date submit written request with the items required above for disbursement or reimbursement for any reimbursable costs out of the First Contribution with respect to Space A and Space B, and to the extent of any funds for which request has not been made prior to that date or if and to the extent that the reimbursable costs of the Tenant Work relating to Space A and Space B are less than the amount of the First Contribution, then Landlord shall retain the unapplied or unused balance of the First Contribution and shall have no obligation or liability to Tenant with respect to such excess. Tenant must prior to the expiration of nine months after the Third Delivery Date submit written request with the items required above for disbursement or reimbursement for any reimbursable costs out of the Second Contribution with respect to Space C, and to the extent of any funds for which request has not been made prior to that date or if and to the extent that the reimbursable costs of the Tenant Work relating to Space C are less than the amount of the Second Contribution, then Landlord shall retain the unapplied or unused balance of the Second Contribution and shall have no obligation or liability to Tenant with respect to such excess. If the costs of completing the Tenant Work relating to (i) Space A and Space B, and (ii) Space C, respectively, exceed the First Contribution or the Second Contribution, Tenant shall pay all such costs."

Section 3. Time of Essence. Without limiting the generality of any other provision of the Existing Lease, time is of the essence to each and every term and condition of this Amendment.

Section 4. Effect of Headings. The titles or headings of the various parts or sections hereof are intended solely for convenience and are not intended and shall not be deemed to or in any way be used to modify, explain or place any construction upon any of the provisions of this Amendment.

Section 5. Entire Agreement; Amendment. This Amendment taken together with the Existing Lease, together with all exhibits, schedules, riders and addenda to each, constitutes the full and complete agreement and understanding between the parties hereto and shall supersede all prior communications, representations, understandings or agreements, if any, whether oral or written, concerning the subject matter contained in this Amendment and the Existing Lease, as so amended, and no provision of the Lease as so amended may be modified, amended, waived or discharged, in whole or in part, except by a written instrument executed by all of the parties hereto.

Section 6. Authority. Each party represents and warrants to the other that it has full authority and power to enter into and perform its obligations under this Amendment, that the person executing this Amendment is fully empowered to do so, and that no consent or authorization is necessary from any third party. Landlord may request that Tenant provide Landlord evidence of Tenant's authority.

Section 7. Counterparts. This Amendment may be executed in duplicates or counterparts, or both, and such duplicates or counterparts together shall constitute but one original of the Amendment. Each duplicate and counterpart shall be equally admissible in evidence, and each original shall fully bind each party who has executed it

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first set forth above.

TENANT: **CODEXIS, INC.**
a Delaware corporation

By: /s/ Alan Shaw
Print Name: Alan Shaw
Title: President & CEO
(Chairman of Board, President or Vice President)
Date 1st June 2004

LANDLORD: **METROPOLITAN LIFE INSURANCE COMPANY,**
a New York corporation

By: /s/ John R. Redmon
Print Name: John R. Redmon
Title: Asst. VP
Date 5/12/04

Exhibit 10.18

SECOND AMENDMENT TO LEASE

This Second Amendment to Lease ("Amendment") is entered into, and dated for reference purposes, as of March 9, 2007 (the "Execution Date") by and between METROPOLITAN LIFE INSURANCE COMPANY, a New York corporation ("Metropolitan"), as Landlord ("Landlord"), and Codexis, Inc. a Delaware corporation ("Codexis"), as Tenant ("Tenant"), with reference to the following facts ("Recitals"):

A. Landlord and Tenant are the parties to that certain written lease which is comprised of the following: that certain written Lease, dated as of October, 2003, by and between Landlord and Tenant (the "Original Lease"), as amended by that certain First Amendment to Lease, dated as of June 1, 2004, by and between Landlord and Tenant (collectively the "Existing Lease") for certain premises described therein and commonly known as 501 Chesapeake Drive in Building 3 and all the rentable area of Building 4 (consisting of 200 and 220 Penobscot Drive (collectively, the "Existing Premises"), an aggregate of 39,382 square feet of Rentable Area, all as more particularly described in the Existing Lease.

B. Landlord and Tenant desire to provide for (i) the lease to Tenant of the 640 Galveston Space (defined below) for a term longer than that for the Existing Premises; and (ii) other amendments of the Existing Lease as more particularly set forth below.

NOW, THEREFORE, in consideration of the foregoing, and of the mutual covenants set forth herein and of other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

Section 1. Scope of Amendment; Defined Terms. Except as expressly provided in this Amendment, the Existing Lease shall remain in full force and effect. Should any inconsistency arise between this Amendment and the Existing Lease as to the specific matters which are the subject of this Amendment, the terms and conditions of this Amendment shall control. The term "Lease" as used herein and in the Existing Lease shall refer to the Existing Lease as modified by this Amendment. All capitalized terms used in this Amendment and not defined herein shall have the meanings set forth in the Existing Lease unless the context clearly requires otherwise.

Section 2. Confirmation of Term. Landlord and Tenant acknowledge and agree that notwithstanding any provision of the Existing Lease to the contrary: (a) as contemplated by the Existing Lease, the Expiration Date of the Term of the Lease of the Existing Premises is January 31, 2011; and (b) the initial Term of the Lease of the 640 Galveston Space shall expire later as provided below.

Section 3. Lease of 640 Galveston Space.

(a) Landlord hereby leases to Tenant and Tenant hereby hires from Landlord the 640 Galveston Space (defined below) upon and subject to all of the terms, covenants and conditions of the Existing Lease except as expressly provided herein. The "640 Galveston Space" is part of Building Number 5 located in Phase I of Seaport Centre, has a street address of 640 Galveston Drive, Redwood City, California 94063, and is shown on Exhibit A-1 and Exhibit A-2 to this Amendment. Landlord and Tenant hereby agree that the 640 Galveston Space is conclusively presumed to be 9,400 square feet of Rentable Area (which Rentable Area includes an allocable share of the Common Areas shown on Exhibit A-1 and shared with the adjoining tenant).

(b) Delivery; Construction & Construction Period; Commencement Date; Term; Other Provisions. Notwithstanding any provision of the Existing Lease to the contrary, the following provisions shall govern the 640 Galveston Space:

(1) Delivery; Construction; Construction Period; Commencement Date; Term. Landlord shall allow Tenant to have access to the 640 Galveston Space in the condition specified in the Workletter (Exhibit B to this Amendment) no later than the later of March 1, 2007 or the date this Amendment is executed by both Tenant and Landlord (the "Early Access Date") for the purpose of performing the Tenant Work (as defined in Exhibit B) and setting up Tenant's furniture, fixtures and equipment. Landlord shall tender to Tenant possession of the 640 Galveston Space on April 1, 2007, which shall be the "640 Galveston Commencement Date". From and after the date on which Landlord provides early access, all the terms and conditions of the Lease shall apply, and Tenant shall observe and perform all terms and conditions of the Lease, except that, in recognition of Tenant's construction and installations in, and preparation of, the 640 Galveston Space for the use and occupancy permitted by this Lease, until the 640 Galveston Commencement Date, Tenant shall not be obligated to pay Rent Adjustments and until one month after the 640 Galveston Commencement Date (as set forth in Subsection (c) below, Tenant shall not be obligated to pay Monthly Base Rent. The Term of this Lease of the 640 Galveston Space ("640 Galveston Term") shall be sixty-one (61) months starting on the 640 Galveston Commencement Date and the "640 Galveston Expiration Date" shall be the last day of such sixty-one (61) month period. Tenant and Landlord acknowledge and agree that the 640 Galveston Expiration Date is later than the Expiration Date of the Term of the Existing Lease of the Existing Premises.

(2) Tenant Additions/Tenant Improvements. Tenant hereby acknowledges that all improvements installed in the 640 Galveston by Landlord prior to the Execution Date or by Landlord or Tenant in connection with this Amendment or hereafter under the Lease, including, without limitation, all lab benches and corresponding casework, lab sinks, lab hoods, supplemental or special ventilating and air conditioning equipment, and any and all lab installations and fixtures, shall, without compensation or credit to Tenant, become part of the 640 Galveston Space and the property of Landlord at the time of their installation and shall remain in Building 5, unless pursuant to express provision of this Lease or a written agreement between the parties hereto, Tenant may remove them or is required to remove them at Landlord's request.

(3) Confirmation of Commencement Date. Upon request by Landlord, Tenant and Landlord shall enter into an agreement (the form of which isExhibit C to this Amendment) confirming the 640 Galveston Commencement Date and the 640 Galveston Expiration Date. If within five (5) business days after Landlord's request enclosing the proposed agreement Tenant fails either (i) to enter into such agreement, or (ii) give Landlord written notice of any item(s) therein which Tenant believes are incorrect, the correction(s) proposed by Tenant and reasons therefor, then the 640 Galveston Commencement Date and the 640 Galveston Expiration Date shall be the dates designated by Landlord in such agreement.

(4) Failure to Deliver Possession. If Landlord shall be unable to give possession of the 640 Galveston Space no later than the Early Access Date by reason of the following: (i) the holding over or retention of possession of any tenant, tenants or occupants, or (ii) for any other reason, then Landlord shall not be subject to any liability for the failure to give possession on said date. Under such circumstances, each of the Early Access Date and the 640 Galveston Commencement Date shall be automatically adjusted to a later date by one day for each day after the Early Access Date on which access shall not have been provided until the date Landlord actually provides to Tenant early access to the 640 Galveston Space. Failure to provide access on the originally scheduled Early Access Date shall not affect the validity of this Lease or the obligations of the Tenant hereunder.

(c) Monthly Base Rent for 640 Galveston Space. Notwithstanding any provision of the Existing Lease to the contrary, Monthly Base Rent for the 640 Galveston Space shall be payable on the 640 Galveston Commencement Date and thereafter on the first day of each calendar month of the 640 Galveston Term, in the manner required for Monthly Base Rent in the Existing Lease, but the amounts are additional to rent payable under the Existing Lease, and the amount of Monthly Base Rent due and payable by Tenant for the 640 Galveston Space and monthly schedule therefor starting on the 640 Galveston Commencement Date shall be as set forth in the schedule below:

Period from/to	Monthly	Monthly Rate/SF of Rentable Area
Month 01 – 01	$ 0.00	$ 0.00
Months 02 – 12	$27,730.00	$ 2.95
Months 13 – 24	$28.576.00	$ 3.04
Months 25 – 36	$29,422.00	$ 3.13
Months 37 – 48	$30,268.00	$ 3.22
Months 49 – 60	$31,208.00	$ 3.32
Month 61 – 61	$32,148.00	$ 3.42

Tenant shall pay Landlord the initial installment of Monthly Base Rent for the second month of the 640 Galveston Term concurrently with execution of this Amendment.

(d) Tenant's Share of Operating Expenses. Notwithstanding any provision of the Existing Lease to the contrary, in addition to Tenant's payment of Rent Adjustment Deposits and Rent Adjustments with respect to Building 3 and Building 4, Tenant shall pay Rent Adjustment Deposits and Rent Adjustments with respect to the 640 Galveston Space during the 640 Galveston Term as set forth in the Existing Lease, except that for such purposes Tenant's Building 5 Share shall be as set forth below, and Tenant's Phase Share and Tenant's Project Share (for the Existing Premises and 640 Galveston Space together totaling 48,782 square feet of Rentable Area) shall be modified as set forth below:

Tenant's Building 5 Share:	18.44%
Tenant's Phase 1 Share:	16.162%* (see provision below)
Tenant's Project Share:	9.077%* (see provision below)

* If the Term of the Existing Premises is not extended, then from the later of such expiration or the date Tenant vacates the Existing Premises, and continuing for the remaining 640 Galveston Term, Tenant's Phase 1 Share shall be reduced by 13.05% to 3.112% and Tenant's Project Share shall be reduced by 7.33% to 1.747%.

(e) Parking. Notwithstanding any provision of the Existing Lease to the contrary, on and after the 640 Galveston Commencement Date for the 640 Galveston Term, Tenant shall have the right to use, on an unassigned basis, an additional thirty-one (31) Parking Spaces, and if the Term of the Existing Premises is not extended, then from the later of such expiration or the date Tenant vacates the Existing Premises, and continuing for the remaining 640 Galveston Term, Tenant shall be entitled to use only thirty-one (31) Parking Spaces.

(f) Signage.

(1) Grant of Right. Notwithstanding any provision of the Existing Lease to the contrary, on and after the 640 Galveston Commencement Date for the 640 Galveston Term, Tenant shall have the right to (1) place its company name and logo on the door(s) at the main entry to the 640 Galveston Space (the "Entry Signage"); and (2) only for so long as Tenant leases, is continuously conducting regular, active, ongoing business in, and is in occupancy (and occupancy by a subtenant, licensee or other party permitted or suffered by Tenant shall not satisfy such condition) of the entire 640 Galveston Space, place its company name and logo on its pro-rata share of the signage area on the existing, exterior monument sign for Building 5, subject to the terms and conditions set forth in this Section ("Monument Signage") (collectively, the Entry Signage and Monument Signage are referred to as the "Exterior Sign Right").

(2) General Conditions & Requirements. The size, type, style, materials, color, method of installation and exact location of the sign, and the contractor for and all work in connection with the sign, contemplated by this Section shall (i) be subject to Tenant's compliance with all applicable laws, regulations and ordinances and with any covenants, conditions and restrictions of record which affect the Property; (ii) be subject to Tenant's compliance with all requirements of Landlord's current Project signage criteria at the time of installation; (iii) be consistent with the design of the Building and the Project; (iv) be further subject to Landlord's prior written consent. Tenant shall, at its sole cost and expense, procure, install, maintain in first class appearance and condition, and remove such sign.

(3) Removal & Restoration. Upon the expiration or termination of the Exterior Sign Right, but in no event later than the expiration of the 640 Galveston Term or earlier termination of the Lease, Tenant shall, at its sole cost and expense, remove such sign and shall repair and restore the area in which the sign was located to its condition prior to installation of such sign.

(4) Right Personal. The right to Monument Signage under this Section is personal to Codexis and may not be used by, and shall not be transferable or assignable (voluntarily or involuntarily) to, any person or entity.

Section 4. Increase in the Security. Notwithstanding any provision of the Existing Lease to the contrary:

(a) Tenant and Landlord acknowledge that pursuant to Section 5.02 of the Existing Lease, Tenant elected to deliver the Letter of Credit in lieu of cash Security Deposit, and in February, 2006, the amount of the Letter of Credit required under the Existing Lease and held by Landlord was reduced to Four Hundred and Five Thousand Dollars ($405,000.00) in accordance with Section 5.02(c) of the Existing Lease;

(b) in accordance with Section 5.02(c) of the Existing Lease, as of February 1, 2007, Tenant is entitled to provide Landlord with an amendment or replacement of the Letter of Credit which would decrease by Forty-five Thousand Dollars ($45,000) the amount of the Letter of Credit to a new total of Three Hundred Sixty Thousand Dollars ($360,000), but Tenant has not done so as of the Execution Date and accordingly such reduction will be given effect together with the increase of Ninety-three Thousand Six Hundred Twenty-four Dollars ($93,624.00) in the Security and amount of the Letter of Credit required by this Amendment in connection with the lease of the 640 Galveston Space, and after giving effect to such reduction and increase, the total amount of the Security Deposit and Letter of Credit required as of the Execution Date of this Amendment shall be Four Hundred Fifty-three Thousand Six Hundred Twenty-four Dollars ($453,624.00), and no later than ten (10) business days after execution of this Amendment Tenant shall deliver to Landlord an amendment or replacement of the Letter of Credit which increases the amount of the Letter of Credit to Four Hundred Fifty-three Thousand Six Hundred Twenty-four Dollars ($453,624.00);

(c) The text of Section 5.02(c) of the Existing Lease is deleted and the following is inserted in its place:

"Notwithstanding anything to the contrary contained herein, after the Execution Date of the Second Amendment to Lease, the following reduction provisions shall apply. If Tenant is not in Default under the Lease on February 1, 2008, an amendment or replacement of the Letter of Credit may be issued which decreases by Forty-five Thousand Dollars ($45,000) the amount of the Letter of Credit to the revised total amount of Four Hundred Eight Thousand Six Hundred Twenty-four Dollars ($408,624). If Tenant is not in Default under the Lease on February 1, 2009, an amendment or replacement of the Letter of Credit may be issued which decreases by Forty-five Thousand Dollars ($45,000) the amount of the Letter of Credit to the revised total amount of Three Hundred Sixty-three Thousand Six Hundred Twenty-four Dollars ($363,624). If Tenant is not in Default under the Lease on February 1, 2010, an amendment or replacement of the Letter of Credit may be issued which decreases by Forty-five Thousand Dollars ($45,000) the amount of the Letter of Credit to the revised total amount of Three Hundred Eighteen Thousand Six Hundred Twenty-four Dollars ($318,624)."

(d) The second sentence of Section 5.02(a) is deleted and the following is inserted in its place: "The Letter of Credit shall be maintained in effect until the "LOC Expiration Date", which shall mean the date which is ninety (90) days after the last to occur of the four events specified in Section 5.02(d) of the Existing Lease or the 640 Galveston Expiration Date, and provided that on the LOC Expiration Date, Tenant shall not be in Default, Landlord shall return to Tenant the Letter of Credit and any Letter of Credit Proceeds then held by Landlord (other than those held for application by Landlord on account of a Default as provided below)".

(e) The phrase ", together with a written certification from Landlord that Tenant is in Default" is hereby deleted from Sub-item (ii) of the second sentence of Section 5.02(b) of the Existing Lease, Sub-item (iii) of such sentence is hereby deleted, and the Letter of Credit shall be amended to delete Sub-item (ii) from the third paragraph of the Letter of Credit and to substitute the following in its place: "(ii) accompanied by the original of this Letter of Credit and a letter of transmittal executed by a representative of the Beneficiary stating the amount for which a draw under this Letter of Credit is made."

Section 5. Amendment of Casualty and Condemnation Provisions in Light of Multiple Buildings in Which the Premises are Located

(a) Section 14.01 of the Existing Lease is hereby amended to add the following Subsection (g) at the end thereof:

"(g) Notwithstanding anything in this Article Fourteen to the contrary, in the event that the Premises is located in more than one building of the Project and any damage or destruction covered by this Article affects only one of the buildings in which the Premises is located, then the determination of the extent of damage or destruction shall be made only with respect to the building so affected, and Landlord or Tenant shall be entitled to terminate this Lease only with respect to the part of the Premises in the building so affected, and the Lease shall continue in full force and effect to the extent of the remainder, if any, of the Premises."

(b) Section 15.01 of the Existing Lease is hereby amended to add the following sentence at the end thereof:

"Notwithstanding anything to the contrary herein set forth, in the event that the Premises is located in more than one building of the Project and any taking covered by this Article Fifteen affects only one of the buildings in which the Premises is located, then the determination of the extent of the taking shall be made only with respect to the building so affected, and Landlord or Tenant shall be entitled to terminate this Lease only with respect to the part of the Premises in the building so affected, and the Lease shall continue in full force and effect to the extent of the remainder, if any, of the Premises."

Section 6. Negotiation Right.

(a) Landlord hereby grants Tenant a one-time right to negotiate the lease of the Negotiation Space (defined below) if and to the extent such space is Available (defined below) during the period beginning on the Execution Date of this Amendment and expiring April 30, 2010 (the "Negotiation Period"), upon and subject to the terms and conditions of this Section

(the “Negotiation Right”), and provided that at the time of exercise of such right: (i) Tenant must be conducting regular, active, ongoing business in, and be in occupancy (and occupancy by a subtenant, licensee or other party permitted or suffered by Tenant shall not satisfy such condition) of the entire Premises, (ii) there has been no material adverse change in Tenant’s financial position from such position as of the date of execution of the Lease, as certified by Tenant’s independent certified public accountants, and as supported by Tenant’s certified financial statements, copies of which shall be delivered to Landlord with Tenant’s written notice exercising its right hereunder, and (iii) Tenant has duly exercised the Option to Extend for the Existing Premises pursuant to Section 26.21 of the Original Lease. Without limiting the generality of the foregoing, Landlord may reasonably conclude there has been a material adverse change if Tenant’s independent certified public accountants do not certify there has been no such change.

(b) The “Negotiation Space” shall mean the space with a street address of 525 Chesapeake Drive and Rentable Area of approximately 15,393 square feet. The term “Available” shall mean that the space in question is either: (1) vacant and free and clear of all “Prior Rights” (defined below); or (2) space as to which Landlord has received a proposal, or Landlord is making a proposal, for a lease or rights of any nature applicable in the future when such space would be free and clear of all Prior Rights. The term “Prior Rights” shall mean rights of other parties, including without limitation, a lease, lease option, or option or other right of extension, renewal, expansion, refusal, negotiation or other right, either: (i) pursuant to any lease or written agreement which is entered into on or before the beginning of the Negotiation Period; or (ii) pursuant to any extensions or renewal of any of the foregoing, whether or not set forth in such lease or written agreement, and Landlord shall be free at any time to enter such extension or renewal; or (iii) pursuant to any amendment or modification of any of the foregoing, and Landlord shall be free at any time to enter such amendment or modification.

(c) Nothing herein shall be deemed to limit or prevent Landlord from marketing, discussing or negotiating with any other party for a lease-of, or rights of any nature as to, any part of the Negotiation Space, but during the Negotiation Period before Landlord makes any written proposal to any other party (other than a party with Prior Rights) for any Negotiation Space which becomes Available (including giving a written response to any proposal or offer received from another party), or contemporaneously with making any such proposal, and in any event within thirty (30) days after such space becomes vacant and free and clear of all Prior Rights, Landlord shall give Tenant written notice (“Landlord’s Notice”), which notice identifies the space Available and Landlord’s estimate of the projected date such space will be vacant and deliverable to Tenant. Notwithstanding any of the foregoing to the contrary, Tenant acknowledges that Landlord has disclosed that as of the date of execution of this Lease, the Negotiation Space is leased for a term that will expire approximately March 14, 2012, and as set forth more fully in Subsection (b) above, Landlord shall remain free at any time to enter into an extension or renewal of such lease, whether or not any such right is set forth in such lease, and to enter into any amendment or modification of such lease, all of which constitute Prior Rights with respect to the Negotiation Space. For a period of five (5) business days after Landlord gives Landlord’s Notice (the “Election Notice Period”), Tenant shall have the right to initiate negotiations in good faith for the lease of all (and not less than all) the space identified in Landlord’s Notice by giving Landlord written notice (“Election Notice”) of Tenant’s election to exercise its Negotiation Right to lease such space.

(d) If Tenant timely and properly gives the Election Notice, Landlord and Tenant shall, during the five (5) business day period (the "Second Period") following Landlord's receipt of the Election Notice, negotiate in good faith for the lease of the Negotiation Space which is the subject of the Landlord Notice as set forth below. Any lease by Tenant pursuant to this Negotiation Right: (1) shall be for all (and not less than all) the Negotiation Space which is the subject of the Landlord Notice; (2) the subject Negotiation Space shall, upon delivery, be part of the Premises under this Lease, such that the term "Premises" thereafter shall include the subject Negotiation Space; (3) starting on such delivery date, with respect to the subject Negotiation Space Tenant shall additionally pay Tenant's Share of Operating Expenses, with Tenant's Share recalculated to reflect addition of the Negotiation Space; (4) the number of parking spaces applicable to the subject Negotiation Space shall be calculated at the rate of 3.3 spaces per 1000 square feet of Rentable Area of the subject Negotiation Space, and the type of, location of and charge for such spaces shall be as otherwise provided in the Lease; and (5) such lease shall be upon and subject to all the other terms, covenants and conditions provided in the Lease, except that the following terms shall be subject to such negotiation and agreement of the parties: (aa) the amount of the Monthly Base Rent with respect to the Negotiation Space; (bb) the term of the lease of the Negotiation Space shall be subject to negotiation, but shall not expire before the 640 Galveston Expiration Date (as it may be extended pursuant to the Option to Extend); (cc) any improvements or alterations to be done, or allowance therefor, if any, specifically agreed upon, and absent such agreement, Tenant shall accept the Negotiation Space in its then AS IS condition without any obligation of Landlord to repaint, remodel, improve or alter the subject Negotiation Space for Tenant's occupancy or to provide Tenant any allowance therefor, but such space shall be delivered broom clean and free of all tenants or occupants (and their personal property); (dd) increase in the Security; and (ee) Landlord shall deliver the subject Negotiation Space to Tenant in such AS IS condition no later than thirty (30) days after Landlord regains possession of such space, but in no event shall Landlord have any liability for failure to deliver the subject Negotiation Space to Tenant on any projected delivery date due to the failure of any occupant to timely vacate and surrender such space or due to Force Majeure, and such failure shall not be a default under the Lease or impair its validity. The foregoing obligation of Landlord to negotiate is non-exclusive and nothing herein shall be deemed to prevent Landlord from negotiating with any other party for the Negotiation Space, whether or not Landlord and Tenant are negotiating for the same, but any other such negotiation shall be subject to the aforesaid obligation to negotiate with Tenant in good faith.

(e) If Tenant either fails or elects not to exercise its Negotiation Right as to the Negotiation Space covered by Landlord's Notice by not giving its Election Notice within the Election Notice Period, or if Tenant gives Tenant's Election Notice but Tenant and Landlord do not execute (1) a written letter of intent reflecting the significant business terms for the lease of the Negotiation Space within five (5) business days after delivery of the Election Notice, and (2) a corresponding amendment prepared by Landlord within five (5) days after Landlord gives Tenant such proposed amendment, then in any such event Tenant's Negotiation Right shall terminate, and be null and void, as to the subject space identified in the applicable Landlord's Notice (but not as to any Negotiation Space subject to this Negotiation Right which has not become Available and been included in a Landlord's Notice), and at any time thereafter Landlord shall be free to lease and/or otherwise grant options or rights to the subject space on any terms and conditions whatsoever free and clear of the Negotiation Right.

(f) During any period that Tenant does not occupy the entire Premises or that there is an uncured default by Tenant under the Lease, or any state of facts which with the passage of time or the giving of notice, or both, would constitute such a default, the Negotiation Right shall not apply and shall be ineffective and suspended, and Landlord shall not be obligated to give a Landlord's Notice as to any space which becomes Available during such suspension period, and Landlord shall not be obligated to negotiate (or enter into any amendment) with respect to any Negotiation Space which was the subject of a pending Landlord's Notice for which an amendment has not been fully executed, and during such suspension period Landlord shall be free to lease and/or otherwise grant options or rights to such space on any terms and conditions whatsoever free and clear of the Negotiation Right. The Negotiation Right shall terminate upon any of the following: (1) the termination of the Lease, whether by Landlord upon the occurrence of a Tenant default or otherwise; or (2) the failure of Tenant timely to exercise, give any notices, perform or agree, within any applicable time period specified above, with respect to any Negotiation Space which was the subject of any Landlord's Notice.

(g) The Negotiation Right is personal to Codexis and may not be used by, and shall not be transferable or assignable (voluntarily or involuntarily) to any person or entity.

Section 7. Option to Extend. The Option to Extend set forth in Section 26.21 of the Original Lease shall apply to the 640 Galveston Space as part of the Premises, but as to only the 640 Galveston Space the Option to Extend shall be modified as follows: (a) there shall be a separate and distinct Option Term with respect to the 640 Galveston Space which shall commence immediately after the 640 Galveston Expiration Date and shall expire five years thereafter (the "640 Galveston Option Term," and Tenant and Landlord acknowledge and agree that the 640 Galveston Option Term shall expire later than the expiration of the Option Term for the Existing Premises; and (b) the Prevailing Market Rent for the 640 Galveston Space shall be determined for the 640 Galveston Space and the type and quality of tenant improvements for it, but the monthly rate of the Option Term Rent for the 640 Galveston Space shall be not less than the monthly rate of the Preceding Rent for the last month of the initial 640 Galveston Term.

Section 8. Standby Generator.

(a) During the Term, Tenant shall have the right, at Tenant's sole cost and expense, to install, operate, maintain, repair, replace, remove and use Standby Generator Installations (as defined below), upon and subject to the terms and conditions of this Section and the Lease. The "Standby Generator Installations" shall mean (i) one standby diesel generator to be installed or housed, along with its diesel fuel tank with a maximum capacity of 250 gallons, above ground, outside the Building in a walled enclosure, in an area no larger than approximately 12 feet by 24 feet (and such fuel shall also be a Permitted Hazardous Material); (ii) wiring, cabling and conduit (subject to Subsection (b) below) from it to the separate electrical circuit(s) serving only the Premises, and all associated switchover equipment and circuits to connect & operate the generator on a standby basis without interference with or damage to any utility systems of the Project or any other equipment of Landlord or other occupants of the Project; and (iii) all ancillary containment vessels, pipe, ventilation systems and equipment. The Standby Generator Installations shall be for the sole purpose of providing Tenant electrical power for its operation in the Premises in the event of any interruption in the supply of electricity, and shall not be used at any other times or in any other way except for occasional testing, as necessary, at times subject

to Landlord's prior written approval. This right to Standby Generator Installations is further conditioned upon the following: (1) in all respects, such right shall be subject to Tenant seeking and obtaining from applicable governmental authorities and the electric utility serving the Project all approvals and permits to install, operate, maintain, repair, replace and use such Standby Generator Installations; (2) except if and as otherwise specified above, the exact location, size and all specifications of such Standby Generator Installations, shall be subject to Landlord's prior written approval, in its sole discretion; (3) without limiting the generality of any other provisions of the Lease, Tenant shall install, operate, maintain, repair, replace, remove and use Standby Generator Installations in compliance with the Lease, all Environmental Laws and all other Laws; (4) without limiting the generality of any other provisions of the Lease, the Standby Generator Installations, whether located in the Premises or elsewhere at the Project, shall be subject to and covered by the indemnities by Tenant under the Lease, including, without limitation, those of Sections 7.02 and 17.02 of the Original Lease, and shall be deemed to be in and part of the Premises under all indemnities with respect to the Premises; and (5) notwithstanding any provision of the Lease to the contrary, Tenant shall, as of the expiration or earlier termination of the Lease, at Tenant's sole cost and expense, remove all Hazardous Material introduced to the Property by Tenant or any Tenant Parties (as defined in Section 7.02 of the Original Lease) in connection with the Standby Generator Installations, remove the Standby Generator Installations if requested by Landlord, and restore the Property to its condition immediately prior to the introduction of such Hazardous Material and/or installation of the Standby Generator Installations. Landlord has no obligation to seek or obtain from applicable governmental authorities or the electric utility serving the Real Property any approvals or permits to install, operate, maintain, repair, replace, remove or use such Standby Generator Installations. Landlord makes no representation or warranty either (x) as to whether or not the Standby Generator Installations comply with Law or is or will be acceptable to or approved by applicable governmental authorities, the electric utility serving the Real Property or (y) as to the suitability of space at the Project for such installations.

(b) The installations contemplated by this Section 8 (this "Section") shall be part of the Tenant Work pursuant to the Workletter if proposed to be done preparatory to or in connection with Tenant's initial occupancy of the 640 Galveston Space and, if proposed to be done thereafter, shall be Tenant Alterations subject to Article Nine of the Lease, except, in each case, Landlord's prior written approval in Landlord's sole discretion shall be required where specified in this Section, including the location and method of installation of conduits and related equipment in any area outside each Building in which the Premises is located, at the entry point to each such Building and in any of the horizontal and vertical pathways or other Common Areas of each such Building. With respect to all conduit for electrical connections contemplated by this Section, Landlord shall permit Tenant to install up to three conduits (no larger than one conduit two (2) inches in diameter and two conduits no larger than one (1) inch in diameter apiece) to connect Tenant's standby generator to the separate electrical circuit(s) serving only the Premises. Further, with respect to any installations, maintenance, repair, replacement or removal of any installations outside the Premises, whether outside the Building or in the Building's horizontal or vertical pathways or similar areas whose use is shared by Landlord or other occupants of the Building or other service providers to the Building, such work shall be performed by contractors reasonably approved by Landlord and subject to the direction of Landlord, and Landlord reserves the right to restrict and control access to such areas. All installations pursuant to this Section (whether as part of or after the initial installations) and their

maintenance, repair, replacement, removal and use shall not adversely affect the operation, maintenance or replacement of any Building Systems, and shall be subject to compliance with other provisions of the Lease. Without limiting the generality of the foregoing, Tenant shall be responsible to provide all switchover equipment and circuits to connect & operate the generator on a standby basis without interference with or damage to any Building Systems or any other equipment of Landlord or other occupants of the Project. With respect to all operations (including all installations, maintenance, repair, replacement, removal and use) with respect to this Section, Tenant shall conduct its business and control its agents, employees and invitees in such manner as not to create any nuisance, or interfere with, annoy or disturb any other licensee or tenant of the Building or Landlord in its operation of the Building. The Standby Generator Installations shall be deemed to be trade fixtures of Tenant, shall be covered by Tenant's insurance under the Lease, and Landlord shall have no obligation to repair or rebuild them in the event of fire or other loss. Landlord reserves the right to relocate the Standby Generator Installations or any part thereof upon not less than sixty (60) days prior written notice, and Landlord shall pay the actual and reasonable expenses of physically moving and reconnecting any such relocated installation.

Section 9. Brokers. Notwithstanding any other provision of the Existing Lease to the contrary, Tenant represents that in connection with this Amendment it is represented by CB Richard Ellis ("Tenant's Broker") and, except for Tenant's Broker and Cornish and Carey Commercial ("Landlord's Broker") identified below, Tenant has not dealt with any real estate broker, sales person, or finder in connection with this Amendment, and no such person initiated or participated in the negotiation of this Amendment. Tenant hereby indemnifies and agrees to protect, defend and hold Landlord and Landlord's Broker harmless from and against all claims, losses, damages, liability, costs and expenses (including, without limitation, attorneys' fees and expenses) by virtue of any broker, agent or other person claiming a commission or other form of compensation by virtue of alleged representation of, or dealings or discussions with, Tenant with respect to the subject matter of this Amendment, except for Landlord's Broker and except for a commission payable to Tenant's Broker to the extent provided for in a separate written agreement between Tenant's Broker and Landlord's Broker. Tenant is not obligated to pay or fund any amount to Landlord's Broker, and Landlord hereby agrees to pay such commission, if any, to which Landlord's Broker is entitled in connection with the subject matter of this Amendment pursuant to Landlord's separate written agreement with Landlord's Broker. Such commission shall include an amount to be shared by Landlord's Broker with Tenant's Broker to the extent that Tenant's Broker and Landlord's Broker have entered into a separate agreement between themselves to share the commission paid to Landlord's Broker by Landlord. The provisions of this Section shall survive the expiration or earlier termination of the Lease.

Section 10. Attorneys' Fees. Each party to this Amendment shall bear its own attorneys' fees and costs incurred in connection with the discussions preceding, negotiations for and documentation of this Amendment. In the event that either party brings any suit or other proceeding with respect to the subject matter or enforcement of this Amendment or the Lease, the parties acknowledge and agree that the provisions of Section 11.03 of the Existing Lease shall apply.

Section 11. Effect of Headings: Recitals: Exhibits. The titles or headings of the various parts or sections hereof are intended solely for convenience and are not intended and shall not be deemed to or in any way be used to modify, explain or place any construction upon any of the provisions of this Amendment. Any and all Recitals set forth at the beginning of this Amendment are true and correct and constitute a part of this Amendment as if they had been set forth as covenants herein. Exhibits, schedules, plats and riders hereto which are referred to herein are a part of this Amendment.

Section 12. Entire Agreement: Amendment. This Amendment taken together with the Existing Lease, together with all exhibits, schedules, riders and addenda to each, constitutes the full and complete agreement and understanding between the parties hereto and shall supersede all prior communications, representations, understandings or agreements, if any, whether oral or written, concerning the subject matter contained in this Amendment and the Existing Lease, as so amended, and no provision of the Lease as so amended may be modified, amended, waived or discharged, in whole or in part, except by a written instrument executed by all of the parties hereto.

Section 13. Authority. Each person executing this Amendment represents and warrants that he or she is duly authorized and empowered to execute it, and does so as the act of and on behalf of the party indicated below. Each party represents and warrants to the other that it has full authority and power to enter into and perform its obligations under this Amendment, that the person executing this Amendment is fully empowered to do so, and that no consent or authorization is necessary from any third party. Landlord may request that Tenant provide Landlord evidence of due authorization and execution of this Amendment.

Section 14. Change of Addresses. Section 1.01(2) is hereby amended to delete the address at which copies of notices to Landlord are sent and to replace it with the following:

Metropolitan Life Insurance Company
425 Market Street, Suite 1050
San Francisco, CA 94105
Attention: Assistant Vice President

And Section 1.01(3) is hereby amended to delete the address at which notices to Tenant are sent and to replace it with the following:

Codexis, Inc.
200 Penobscot Drive
Redwood City, California 94063
Attention: Chief Financial Officer

Section 15. Counterparts. This Amendment may be executed in duplicates or counterparts, or both, and such duplicates or counterparts together shall constitute but one original of the Amendment. Each duplicate and counterpart shall be equally admissible in evidence, and each original shall fully bind each party who has executed it.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first set forth above.

TENANT: **CODEXIS, INC.,**
a Delaware corporation

By: /s/ D R Walshaw
Print Name: David R Walshaw
Title: VP Operations
(Chairman of Board, President of Vice President)

By: /s/ Robert S. Breuil
Print Name: Robert S. Breuil
Title: CFO
(Secretary, Assistant Secretary, CFO or Assistant Treasurer)

LANDLORD: **METROPOLITAN LIFE INSURANCE COMPANY,**
a New York corporation

By: /s/ Greg Hill
Print Name: Greg Hill
Title: Director

Exhibit 10.19

THIRD AMENDMENT TO LEASE

This Third Amendment to Lease ("Amendment") is entered into, and dated for reference purposes, as of March 31, 2008 (the "Execution Date") by and between METROPOLITAN LIFE INSURANCE COMPANY, a New York corporation ("Metropolitan"), as Landlord ("Landlord"), and Codexis, Inc. a Delaware corporation ("Codexis"), as Tenant ("Tenant"), with reference to the following facts ("Recitals"):

A. Landlord and Tenant are the parties to that certain written lease which is comprised of the following: that certain written Lease, dated as of October, 2003, by and between Landlord and Tenant (the "Original Lease") ") for certain premises described therein and commonly known as 501 Chesapeake Drive in Building 3 and all the rentable area of Building 4 (consisting of 200 and 220 Penobscot Drive (collectively, the "Original Premises"), all as more particularly described in the Original Lease, as amended by that certain First Amendment to Lease, dated as of June 1, 2004, by and between Landlord and Tenant (the "First Amendment"), as amended by that certain Second Amendment to Lease, dated as of March 9, 2007, by and between Landlord and Tenant (the "Second Amendment") for certain premises described therein and commonly known as 640 Galveston Drive, which is part of Building 5 (the "640 Galveston Premises"), all as more particularly described in the Second Amendment. The Original Lease, as amended, is referred to as the "Existing Lease" and the Original Premises plus the 640 Galveston Premises is collectively referred to as the "Existing Premises".

B. Landlord and Tenant desire to provide for (i) the lease to Tenant of the Building 2 Space (defined below) for a term longer than the term applicable respectively to each of the Original Premises and the 640 Galveston Premises; and (ii) other amendments of the Existing Lease as more particularly set forth below.

NOW, THEREFORE, in consideration of the foregoing, and of the mutual covenants set forth herein and of other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

Section 1. Scope of Amendment; Defined Terms. Except as expressly provided in this Amendment, the Existing Lease shall remain in full force and effect. Should any inconsistency arise between this Amendment and the Existing Lease as to the specific matters which are the subject of this Amendment, the terms and conditions of this Amendment shall control. The term "Lease" as used herein and in the Existing Lease shall refer to the Existing Lease as modified by this Amendment. All capitalized terms used in this Amendment and not defined herein shall have the meanings set forth in the Existing Lease unless the context clearly requires otherwise.

Section 2. Confirmation of Term. Landlord and Tenant acknowledge and agree that notwithstanding any provision of the Existing Lease to the contrary: (a) as contemplated by the Existing Lease, the Expiration Date of the Term of the Lease of the Original Premises is January 31, 2011; (b) as contemplated by the Existing Lease, the 640 Galveston Expiration Date is April 30, 2012; and (c) the initial Term of the Lease of the Building 2 Space shall expire later as provided below.

Section 3. Lease of Building 2 Space.

(a) Landlord hereby leases to Tenant and Tenant hereby hires from Landlord the Building 2 Space (defined below) upon and subject to all of the terms, covenants and conditions of the Existing Lease except as expressly provided herein. "Building 2 Space" is the entire rentable area of Building Number 2 located in Phase I of Seaport Centre at the street address of 400 Penobscot Drive, Redwood City, California 94063, as shown on Exhibit A to this Amendment. Landlord and Tenant hereby agree that the Building 2 Space is conclusively presumed to be 37,856 rentable square feet.

(b) Delivery; Construction & Construction Period; Commencement Date; Term; Other Provisions. Notwithstanding any provision of the Existing Lease to the contrary, the following provisions shall govern the Building 2 Space:

(1) Delivery; Construction; Construction Period; Commencement Date; Term. Landlord shall tender to Tenant possession of the Building 2 Space in the condition specified in the Workletter (Exhibit B to this Amendment) no later than one (1) business day after execution of this Amendment by both Tenant and Landlord (the "Projected Commencement Date"). The date on which Landlord actually tenders to Tenant possession of the Building 2 Space shall be the "Building 2 Commencement Date" on which the Term of this Lease of the Building 2 Space commences, and on and after such date all the terms and conditions of the Lease shall apply, and Tenant shall observe and perform all terms and conditions of the Lease, except that until April 1, 2008 (the "Building 2 Rent Start Date"), Tenant shall not be obligated to pay Monthly Base Rent or Rent Adjustments. The Term of this Lease of the Building 2 Space ("Building 2 Term") shall start on the Building 2 Commencement Date and end March 31, 2013 (the "Building 2 Expiration Date").

(2) Tenant Additions/Tenant Improvements. Subject to Section 4 below, all improvements permanently affixed to or on Building Number 2 by Tenant under this Amendment or hereafter under this Lease, including, without limitation: (a) walls, ceilings, flooring, building fixtures (such as plumbing, power, lighting and HVAC systems), including without limitation, all improvements made as part of the Special Tenant Work (described in Exhibit B-2 to the Workletter); (b) all lab benches and corresponding casework, lab sinks, lab or fume hoods, supplemental or special ventilating and air conditioning equipment, and any and all lab installations and fixtures, shall, without compensation or credit to Tenant, become part of the Building 2 Space and the property of Landlord at the time of their installation and shall remain in Building Number 2, unless pursuant to Subsection 4 below, other express provision of this Lease or a subsequent written agreement between the parties hereto, Tenant is permitted or required to remove them. For the avoidance of doubt, the term "permanently affixed" shall not be construed to mean otherwise free-standing equipment that has been secured to the Premises for the primary purpose of seismic stability and/or the prevention of theft.

(3) Confirmation of Commencement Date. Upon request by Landlord, Tenant and Landlord shall enter into an agreement (the form of which isExhibit C to this Amendment) confirming the Building 2 Commencement Date and the Building 2 Expiration Date. If within ten (10) business days after Landlord's request enclosing the proposed agreement, Tenant fails either (i) to enter into such agreement, or (ii) to give Landlord written notice of any item(s) therein which Tenant believes are incorrect, the corrections(s) proposed by Tenant and reasons therefor, then the Building 2 Commencement Date and the Building 2 Expiration Date shall be the dates designated by Landlord in such agreement.

(4) Failure to Deliver Possession. If Landlord shall be unable to give possession of the Building 2 Space on the Projected Commencement Date by reason of the following: (i) the holding over or retention of possession of any tenant, tenants or occupants, or (ii) for any other reason, then Landlord shall not be subject to any liability for the failure to give possession on said date. Under such circumstances, by operation of Subsection (1) above, the Commencement Date is automatically adjusted and determined in relation to the date Landlord actually tenders possession of the Building 2 Space to Tenant. If Landlord tenders possession after March 31, 2008, the Building 2 Rent Start Date shall be the date on which Landlord tenders possession. Failure to deliver possession on the originally scheduled Projected Commencement Date shall not affect the validity of this Lease or the obligations of the Tenant hereunder.

(5) Premises. From and after the delivery of the Building 2 Space to Tenant, the term "Premises" as used in the Lease shall mean the Existing Premises together with the Building 2 Space.

(c) Monthly Base Rent for Building 2 Space. Notwithstanding any provision of the Existing Lease to the contrary, Monthly Base Rent for the Building 2 Space shall be payable on the Building 2 Rent Start Date and thereafter on the first day of each calendar month of the Building 2 Term, in the manner

required for Monthly Base Rent in the Existing Lease, but the amounts are additional to rent payable under the Existing Lease, and the amount of Monthly Base Rent due and payable by Tenant for the Building 2 Space and monthly schedule therefor starting on the Building 2 Commencement Date shall be as set forth in the schedule below:

Period from/to	Monthly	Annual Rate/SF of Rentable Area
Commencement Date – 03/31/08	*$ 0.00	$ 0.00
04/01/08 – 09/30/08	$ 32,400.00	(negotiated initial amount)
10/01/08 – 03/31/09	$ 68,140.80	$ 21.60
04/01/09 – 03/31/10	$ 70,191.33	$ 22.25
04/01/10 – 03/31/11	$ 72,304.96	$ 22.92
04/01/11 – 03/31/12	$ 74,450.13	$ 23.60
04/01/12 – 03/31/13	$ 76,689.95	$ 24.31

* If, and only if, this Amendment is executed and the Premises delivered to Tenant before April 1, 2008, the early occupancy period before April 1, 2008 will be free of Monthly Base Rent and Rent Adjustments. Tenant shall pay Landlord the initial installment of Monthly Base Rent (for April, 2008) concurrently with execution of this Amendment.

(d) Tenant's Share of Operating Expenses. Notwithstanding any provision of the Existing Lease to the contrary, in addition to Tenant's payment of Rent Adjustment Deposits and Rent Adjustments with respect to the Existing Premises, Tenant shall pay Rent Adjustment Deposits and Rent Adjustments with respect to the Building 2 Space starting on the Building 2 Rent Start Date and continuing during the Building 2 Term, which shall be payable as set forth in the Existing Lease, except that for such purposes Tenant's Building 2 Share shall be as set forth below, and Tenant's Phase Share and Tenant's Project Share shall be modified as set forth below:

Tenant's Building 2 Share:	100.0%
Tenant's Phase 1 Share:	28.712%* (see provision below)
Tenant's Project Share:	16.147%* (see provision below)

* If the Term of the Original Premises is not extended, then from the later of such expiration or the date Tenant vacates the Original Premises for the remaining Building 2 Term, Tenant's Phase 1 Share shall be reduced by 13.05% and Tenant's Project Share shall be reduced by 7.33%. If the Term of the 640 Galveston Space is not extended, then from the later of such expiration or the date Tenant vacates the 640 Galveston Space for the remaining Building 2 Term, Tenant's Phase 1 Share shall be reduced by 3.112% and Tenant's Project Share shall be reduced by 1.747%.

(e) Parking. Notwithstanding any provision of the Existing Lease to the contrary, on and after the Building 2 Commencement Date during the Building 2 Term, Tenant shall have the right to use, on an unassigned basis, an additional one hundred twenty-five (125) Parking Spaces

(f) Signage.

(1) Grant of Right. Notwithstanding any provision of the Existing Lease to the contrary, on and after the Building 2 Commencement Date for the Building 2 Term, Tenant shall have the right to (1) place its company name and logo on the door(s) at the main entry to Building Number 2 (the "Entry Signage"); and (2) only for so long as Tenant leases, is continuously conducting regular, active, ongoing business in, and is in occupancy (and occupancy by a subtenant, licensee or other party permitted or suffered by Tenant shall not satisfy such condition) of not less than fifty percent (50%) of the entire Building 2 Space, place its company name and logo on its pro-rata share of the signage area on the existing, exterior monument sign for Building Number 2, subject to the terms and conditions set forth in this Section ("Monument Signage")(collectively, the Entry Signage and Monument Signage are referred to as the "Exterior Sign Right").

(2) General Conditions & Requirements. The size, type, style, materials, color, method of installation and exact location of the sign, and the contractor for and all work in connection with the sign, contemplated by this Section shall (i) be subject to Tenant's compliance with all applicable laws, regulations and ordinances and with any covenants, conditions and restrictions of record which affect the Property; (ii) be subject to Tenant's compliance with all requirements of Landlord's current Project signage criteria at the time of installation; (iii) be consistent with the design of Building Number 2 and the Project; (iv) be further subject to Landlord's prior written consent. Tenant shall, at its sole cost and expense, procure, install, maintain in first class appearance and condition, and remove such sign.

(3) Removal & Restoration. Upon the expiration or termination of the Exterior Sign Right, but in no event later than the expiration of the Building 2 Term or earlier termination of the Lease, Tenant shall, at its sole cost and expense, remove such sign and shall repair and restore the area in which the sign was located to its condition prior to installation of such sign.

(4) Right Personal. The right to Monument Signage under this Section is personal to Codexis and may not be used by, and shall not be transferable or assignable (voluntarily or involuntarily) to, any person or entity.

Section 4. Certain Provisions Re Equipment & Trade Fixtures Entirely Paid for by Tenant; Lender Access Rights. Notwithstanding any of the foregoing to the contrary, with respect to any part of the Premises (both the Building 2 Space and Existing Premises):

(a) if so requested by Tenant in writing (and prominently in all capital and bold lettering which also states that such request is pursuant to Section 4 of the Third Amendment) at the time Tenant requests approval of any Tenant Work or Tenant Alterations, Landlord shall advise Tenant at the time of Landlord's approval of such Tenant Work or Tenant Alterations as to whether Landlord will require that such Tenant Work or Tenant Alterations be removed by Tenant; provided, however, regardless of the foregoing, in any event, Landlord may require removal of any Tenant Work or Tenant Alterations containing Hazardous Material, Tenant's trade fixtures, and, subject to Section 6.03 of the Original Lease, cabling and wiring installed for Tenant's personal property or trade fixtures;

(b) with respect to equipment or trade fixtures (but not walls, ceilings, flooring or building fixtures, such as plumbing, power, lighting, HVAC systems) hereafter permanently affixed and paid for entirely by Tenant (without reimbursement in full or part out of any funds provided by Landlord), which items are specifically identified in writing delivered by Tenant to Landlord, including the building address and location within the building where the items are located, with substantiation by Tenant that such items have been paid for entirely by Tenant, then such equipment and trade fixtures shall become the property of Landlord upon the expiration or earlier termination of the Term of the Lease as to the part of the Premises in which such item is located, and Landlord will not unreasonably withhold its consent to a written request by Tenant that such items be part of the Limited Collateral covered by a Landlord's Consent to Encumbrance of Limited Collateral (more particularly described in Section 4(c) below).

(c) in the event that Tenant borrows money and/or obtains other financial accommodations up to an aggregate indebtedness or line of credit in the amount of Fifteen Million Dollars ($15,000,000.00) from General Electric Capital Corporation ("GECC") (for its own account and/or as agent for a group of lenders) or an institutional lender which is its successor or assign, or which provides substitute or replacement financing ("Lender"), and in connection therewith grants the Lender a security interest in "Limited Collateral" (as defined in the form of "Landlord's Consent to Encumbrance of Limited Collateral" which is set forth in Exhibit D to this Amendment) (and any agreement evidencing the foregoing loan and security agreement is referred to as a "Loan Agreement"), provided that there shall be no more than one such Lender with a security interest in the Limited Collateral at any one time, then upon written request from Tenant, during the term of any such Loan Agreement Landlord agrees that it will enter into an agreement providing Lender access to the Premises for the sole purpose of enforcing and perfecting the security interest of such Lender in the Limited Collateral, on those terms and conditions contained in the form of "Landlord's Consent to Encumbrance of Limited Collateral" which is set forth as Exhibit D to this Amendment.

Section 5. Increase in the Security. Notwithstanding any provision of the Existing Lease to the contrary:

(a) Tenant and Landlord acknowledge that pursuant to Section 5.02 of the Existing Lease, Tenant elected to deliver the Letter of Credit in lieu of cash Security Deposit, and immediately prior to execution of this Amendment, the amount of the Letter of Credit required under the Existing Lease and held by Landlord is Four Hundred Fifty-three Thousand Six Hundred Twenty-four Dollars ($453,624);

(b) The amount of Security Deposit and Letter of Credit required as of the Execution Date of this Amendment is hereby increased by One Hundred Fifty-three Thousand Three Hundred Eighty Dollars ($153,380) and simultaneously with delivering to Landlord this Amendment signed by Tenant, Tenant shall deliver to Landlord an amendment or replacement of the Letter of Credit which increases the amount of the Letter of Credit to Six Hundred Seven Thousand and Four Dollars ($607,004);

(c) The text of Section 5.02(c) of the Existing Lease (as amended by Section 4(c) of the Second Amendment) is deleted and the following is inserted in its place:

"Notwithstanding anything to the contrary contained herein, after the Execution Date of the Third Amendment to Lease, the following reduction provisions shall apply. If Tenant is not in Default under the Lease on February 1, 2008, an amendment or replacement of the Letter of Credit may be issued which decreases by Forty-five Thousand Dollars ($45,000) the amount of the Letter of Credit to the revised total amount of Five Hundred Sixty-two Thousand and Four Dollars ($562,004). If Tenant is not in Default under the Lease on February 1, 2009, an amendment or replacement of the Letter of Credit may be issued which decreases by Forty-five Thousand Dollars ($45,000) the amount of the Letter of Credit to the revised total amount of Five Hundred Seventeen Thousand and Four Dollars ($517,004). If Tenant is not in Default under the Lease on February 1, 2010, an amendment or replacement of the Letter of Credit may be issued which decreases by Forty-five Thousand Dollars ($45,000) the amount of the Letter of Credit to the revised total amount of Four Hundred Seventy-two Thousand and Four Dollars ($472,004)."

(d) The second sentence of Section 5.02(a) (as amended by Section 4(d) of the Second Amendment) is deleted and the following is inserted in its place: "The Letter of Credit shall be maintained in effect until the "LOC Expiration Date", which shall mean the date which is ninety (90) days after the last to occur of the four events specified in Section 5.02(d) of the Existing Lease or the 640 Galveston Expiration Date or the Building 2 Expiration Date, and provided that on the LOC Expiration Date, Tenant shall not be in Default, Landlord shall return to Tenant the Letter of Credit and any Letter of Credit Proceeds then held by Landlord (other than those held for application by Landlord on account of a Default as provided below)"

Section 6. Excess Rent. Notwithstanding anything to the contrary contained the Existing Lease, solely with respect only to the Building 2 Space, in determining "Excess Rent" in conjunction with the sublease or assignment of any of the Building 2 Space, Section 10.03 of the Existing Lease is amended to add the following to the end of the first sentence thereof: "; and (4) Excess Initial Improvements. For purposes of this Section 10.03, "Excess Initial Improvements" shall mean (w) the amount of actual out-of-pocket costs incurred by Tenant to build the Tenant Work in or on Building Number 2 (excluding Tenant's moveable personal property) in excess of the Allowance (in the aggregate, including the allowances provided for specific purposes), provided that Tenant has provided Landlord with a detailed itemization of such costs and receipts therefor, (x) which sum shall be divided by the Rentable Area of the Building 2 Space, (y) which quotient shall be further divided by sixty (60), and (z) which quotient shall be multiplied by the rentable area of the portion of the Building 2 Space being assigned or subleased."

Section 7. Negotiation Right.

(a) Landlord hereby grants Tenant a one-time right to negotiate the lease of the 600 Galveston Negotiation Space (defined below). if and to the extent such space is Available (defined below) during the period beginning on the Execution Date of this Amendment and expiring twenty-four (24) months prior to the Expiration Date of the Building 2 Term (the "Negotiation Period"), upon and subject to the terms and conditions of this Section (the "Negotiation Right"), and provided that at the time of exercise of such right: (i) Tenant must be conducting regular, active, ongoing business in, and be in occupancy (and occupancy by a subtenant, licensee or other party permitted or suffered by Tenant shall not satisfy such condition) of the entire Building 2 Space; and (ii) there has been no material adverse change in Tenant's financial position from such position as of the date of execution of the Lease, as certified by Tenant's independent certified public accountants, and as supported by Tenant's certified financial statements, copies of which shall be delivered to Landlord with Tenant's written notice exercising its right hereunder. Without limiting the generality of the foregoing, Landlord may reasonably conclude there has been a material adverse change if Tenant's independent certified public accountants do not certify there has been no such change.

(b) The "600 Galveston Negotiation Space" shall mean the leaseable space with a street address of 600 Galveston Drive and Rentable Area of approximately 25,438 square feet. For purposes of this Negotiation Right, the term "Available" shall mean that the space in question is either: (1) vacant and free and clear of all "Prior Rights" (defined below); or (2) space as to which Landlord has received a proposal, or Landlord is making a proposal, for a lease or rights of any nature applicable in the future when such space would be free and clear of all Prior Rights. For purposes of this Negotiation Right, the term "Prior Rights" shall mean rights of other parties, including without limitation, a lease, lease option, or option or other right of extension, renewal, expansion, refusal, negotiation or other right, either: (i) pursuant to any lease or written agreement which is entered into on or before the Execution Date of this Amendment; or (ii) pursuant to any extensions or renewal of any of the foregoing, whether or not set forth in such lease or written agreement, and Landlord shall be free at any time to enter such extension or renewal; or (iii) pursuant to any amendment or modification of any of the foregoing, and Landlord shall be free at any time to enter such amendment or modification.

(c) Nothing herein shall be deemed to limit or prevent Landlord from marketing, discussing or negotiating with any other party for a lease of, or rights of any nature as to, any part of the Negotiation Space, but during the Negotiation Period before Landlord makes any written proposal to any other party (other than a party with Prior Rights) for any Negotiation Space which becomes Available (including giving a written response to any proposal or offer received from another party), or contemporaneously with making any such proposal, and in any event within thirty (30) days after such space becomes vacant and free and clear of all Prior Rights, Landlord shall give Tenant written notice ("Landlord's Notice"), which notice identifies the space Available and Landlord's estimate of the projected date such space will be vacant and deliverable to Tenant. Notwithstanding any of the foregoing to the contrary, Tenant acknowledges that: (i) Landlord has disclosed that as of the Execution Date of this Amendment, the 600 Galveston Negotiation Space is vacant and free and clear of all Prior Rights, and that after the Execution Date of this Lease, Landlord has the right at any time to give Landlord's Notice with respect to such space. For a period of five (5) business days after Landlord gives Landlord's Notice (the "Election Notice Period"), Tenant shall have the right to initiate negotiations in good faith for the lease of all (and not less than all) the space identified in Landlord's Notice by giving Landlord written notice ("Election Notice") of Tenant's election to exercise its Negotiation Right to lease such space.

(d) If Tenant timely and properly gives the Election Notice, Landlord and Tenant shall, during the five (5) business day period (the "Second Period") following Landlord's receipt of the Election Notice, negotiate in good faith for the lease of the Negotiation Space which is the subject of the Landlord Notice as set forth below. Any lease by Tenant pursuant to this Negotiation Right: (1) shall be for all (and not less than all) the Negotiation Space which is the subject of the Landlord Notice; (2) the subject Negotiation Space shall, upon delivery, be part of the Premises under the Lease, such that the term "Premises" thereafter shall include the subject Negotiation Space; (3) starting on such delivery date, with respect to the subject Negotiation Space Tenant shall additionally pay Tenant's Share of Operating Expenses, with

Tenant's Share recalculated to reflect addition of the Negotiation Space; (4) the number of parking spaces applicable to the subject Negotiation Space shall be calculated at the rate of 3.3 spaces per 1000 square feet of Rentable Area of the subject Negotiation Space, and the type of, location of and charge for such spaces shall be as otherwise provided in the Lease; and (5) such lease shall be upon and subject to all the other terms, covenants and conditions provided in the Lease, except that the following terms shall be subject to such negotiation and agreement of the parties: (aa) the amount of the Monthly Base Rent with respect to the Negotiation Space; (bb) the term of the lease of the Negotiation Space shall be subject to negotiation, but shall not be less than the Term of the Lease of the Building 2 Space (including any extension pursuant to the Option to Extend); (cc) any improvements or alterations to be done, or allowance therefor, if any, specifically agreed upon, and absent such agreement, Tenant shall accept the Negotiation Space in its then AS IS condition without any obligation of Landlord to repaint, remodel, improve or alter the subject Negotiation Space for Tenant's occupancy or to provide Tenant any allowance therefor, but such space shall be delivered broom clean and free of all tenants or occupants (and their personal property); (dd) increase in the Security; and (ee) Landlord shall deliver the subject Negotiation Space to Tenant in such AS IS condition no later than thirty (30) days after Landlord regains possession of such space, but in no event shall Landlord have any liability for failure to deliver the subject Negotiation Space to Tenant on any projected delivery date due to the failure of any occupant to timely vacate and surrender such space or due to Force Majeure, and such failure shall not be a default under the Lease or impair its validity. The foregoing obligation of Landlord to negotiate is non-exclusive and nothing herein shall be deemed to prevent Landlord from negotiating with any other party for the Negotiation Space, whether or not Landlord and Tenant are negotiating for the same, but any other such negotiation shall be subject to the aforesaid obligation to negotiate with Tenant in good faith.

(e) If Tenant either fails or elects not to exercise its Negotiation Right as to the Negotiation Space covered by Landlord's Notice by not giving its Election Notice within the Election Notice Period, or if Tenant gives Tenant's Election Notice but Tenant and Landlord do not execute (1) a written letter of intent reflecting the significant business terms for the lease of the Negotiation Space within five (5) business days after delivery of the Election Notice, and (2) a corresponding amendment prepared by Landlord within five (5) days after Landlord gives Tenant such proposed amendment, then in any such event Tenant's Negotiation Right shall terminate, and be null and void, as to the subject space identified in the applicable Landlord's Notice (but not as to any Negotiation Space subject to this Negotiation Right which has not become Available and been included in a Landlord's Notice), and at any time thereafter Landlord shall be free to lease and/or otherwise grant options or rights to the subject space on any terms and conditions whatsoever free and clear of the Negotiation Right.

(f) During any period that Tenant does not occupy the entire Premises or that there is an uncured default by Tenant under the Lease, or any state of facts which with the passage of time or the giving of notice, or both, would constitute such a default, the Negotiation Right shall not apply and shall be ineffective and suspended, and Landlord shall not be obligated to give a Landlord's Notice as to any space which becomes Available during such suspension period, and Landlord shall not be obligated to negotiate (or enter into any amendment) with respect to any Negotiation Space which was the subject of a pending Landlord's Notice for which an amendment has not been fully executed, and during such suspension period Landlord shall be free to lease and/or otherwise grant options or rights to such space on any terms and conditions whatsoever free and clear of the Negotiation Right. The Negotiation Right shall terminate upon any of the following: (1) the termination of the Lease, whether by Landlord upon the occurrence of a Tenant default or otherwise; or (2) the failure of Tenant timely to exercise, give any notices, perform or agree, within any applicable time period specified above, with respect to any Negotiation Space which was the subject of any Landlord's Notice.

(g) The Negotiation Right is personal to Codexis and may not be used by, and shall not be transferable or assignable (voluntarily or involuntarily) to any person or entity.

Section 8. Option to Extend. The Option to Extend set forth in Section 26.21 of the Existing Lease shall apply to the Building 2 Space as part of the Premises, but as to only the Building 2 Space the Option to Extend shall be modified as follows (such Option, as modified, may be referred to as the "Building 2 Option to Extend"): (a) there shall be a separate and distinct Option Term with respect to the

Building 2 Space which shall commence immediately after the Building 2 Expiration Date and shall expire five years thereafter (the "Building 2 Option Term"), and Tenant and Landlord acknowledge and agree that the Building 2 Option Term shall expire later than the expiration of the Option Terms respectively for each of the Original Premises and the 640 Galveston Space; (b) the Prevailing Market Rent for the Building 2 Option Term shall be determined for the Building 2 Space and the type and quality of tenant improvements for it, but the monthly rate of the Option Term Rent for the Building 2 Space shall be not less than the monthly rate of the Preceding Rent for the last month of the initial Building 2 Term; and (c) the period within which the Building 2 Option to Extend may be exercised shall be calculated in reference to the Building 2 Expiration Date.

Section 9. Brokers. Notwithstanding any other provision of the Existing Lease to the contrary, Tenant represents that in connection with this Amendment it is represented by CB Richard Ellis ("Tenant's Broker") and, except for Tenant's Broker and Cornish and Carey Commercial ("Landlord's Broker") identified below, Tenant has not dealt with any real estate broker, sales person, or finder in connection with this Amendment, and no such person initiated or participated in the negotiation of this Amendment. Tenant hereby indemnifies and agrees to protect, defend and hold Landlord and Landlord's Broker harmless from and against all claims, losses, damages, liability, costs and expenses (including, without limitation, attorneys' fees and expenses) by virtue of any broker, agent or other person claiming a commission or other form of compensation by virtue of alleged representation of, or dealings or discussions with, Tenant with respect to the subject matter of this Amendment, except for Landlord's Broker and except for a commission payable to Tenant's Broker to the extent provided for in a separate written agreement between Tenant's Broker and Landlord's Broker. Tenant is not obligated to pay or fund any amount to Landlord's Broker, and Landlord hereby agrees to pay such commission, if any, to which Landlord's Broker is entitled in connection with the subject matter of this Amendment pursuant to Landlord's separate written agreement with Landlord's Broker. Such commission shall include an amount to be shared by Landlord's Broker with Tenant's Broker as agreed to by Tenant's Broker and Landlord's Broker in a separate agreement between themselves to share the commission paid to Landlord's Broker by Landlord such that Tenant's Broker will receive a commission equal to one dollar ($1.00) per rentable square foot per year of the Building 2 Term. The provisions of this Section shall survive the expiration or earlier termination of the Lease.

Section 10. Attorneys' Fees. Each party to this Amendment shall bear its own attorneys' fees and costs incurred in connection with the discussions preceding, negotiations for and documentation of this Amendment. In the event that either party brings any suit or other proceeding with respect to the subject matter or enforcement of this Amendment or the Lease, the parties acknowledge and agree that the provisions of Section 11.03 of the Existing Lease shall apply.

Section 11. Effect of Headings; Recitals: Exhibits. The titles or headings of the various parts or sections hereof are intended solely for convenience and are not intended and shall not be deemed to or in any way be used to modify, explain or place any construction upon any of the provisions of this Amendment. Any and all Recitals set forth at the beginning of this Amendment are true and correct and constitute a part of this Amendment as if they had been set forth as covenants herein. Exhibits, schedules, plats and riders hereto which are referred to herein are a part of this Amendment.

Section 12. Entire Agreement; Amendment. is Amendment taken together with the Existing Lease, together with all exhibits, schedules, riders and addenda to each, constitutes the full and complete agreement and understanding between the parties hereto and shall supersede all prior communications, representations, understandings or agreements, if any, whether oral or written, concerning the subject matter contained in this Amendment and the Existing Lease, as so amended, and no provision of the Lease as so amended may be modified, amended, waived or discharged, in whole or in part, except by a written instrument executed by all of the parties hereto.

Section 13. Authority. Each person executing this Amendment represents and warrants that he or she is duly authorized and empowered to execute it, and does so as the act of and on behalf of the party indicated below. Each party represents and warrants to the other that it has full authority and power to enter into and perform its obligations under this Amendment, that the person executing this Amendment

is fully empowered to do so, and that no consent or authorization is necessary from any third party. Landlord may request that Tenant provide Landlord evidence of due authorization and execution of this Amendment.

Section 14. Counterparts. This Amendment may be executed in duplicates or counterparts, or both, and such duplicates or counterparts together shall constitute but one original of the Amendment. Each duplicate and counterpart shall be equally admissible in evidence, and each original shall fully bind each party who has executed it.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first set forth above.

TENANT:

CODEXIS, INC.,
a Delaware corporation

By: /s/ Alan Shaw
Print Name: Alan Shaw
Title: President & CEO
(Chairman of Board, President or Vice President)

By: /s/ Robert S. Breuil
Print Name: Robert S. Breuil
Title: CFO & SVP
(Secretary, Assistant Secretary, CFO or Assistant Treasurer)

LANDLORD:

METROPOLITAN LIFE INSURANCE COMPANY,
a New York corporation

By: /s/ Joel R. Redmon
Print Name: Joel R. Redmon
Title: Director

Exhibit A
Site Plan Showing Building 2 Space & Project

The Building 2 Space is generally shown as the Building labeled Building 2 below. Phase III, its Buildings, land and improvements are not a part of the Project as defined in this Lease, & are shown in this Exhibit for illustration only.

EXHIBIT B
WORKLETTER AGREEMENT
(TENANT BUILD WITH ALLOWANCE)

This Workletter Agreement ("Workletter") is attached to and a part of a certain Third Amendment to Lease by and between Metropolitan Life Insurance Company, a New York corporation, as Landlord, and Codexis, Inc., a Delaware corporation, as Tenant, for the Building 2 Space (the "Amendment" and the original lease, as amended shall be referred to as the "Lease"). All references below to the Premises shall instead be deemed to mean the Building 2 Space and all references to the Building shall instead be deemed to mean Building Number 2. Terms used herein but not defined herein shall have the meaning of such terms as defined elsewhere in the Lease. For purposes of this Workletter, references to "State" and "City" shall mean the State and City in which the Building is located.

1. AS IS Condition; Delivery.

Landlord shall deliver the Premises broom clean in its current "as built" configuration with existing build-out of the tenant space, with the Premises and the Building (including the "Base Building", as defined below) in their AS IS condition, without any express or implied representations or warranties of any kind by Landlord, its brokers, manager or agents, or the employees of any of them; and Landlord shall not have any obligation to construct or install any tenant improvements or alterations or to pay for any such construction or installation except to the extent expressly provided in the Amendment and all exhibits thereto. For purposes hereof, the "Base Building" (sometimes also referred to as the "Base Building Work") shall mean the improvements made and work performed during the Building's initial course of construction and modifications thereto, excluding all original and modified build-outs of any tenant spaces. Notwithstanding any provision of this Workletter or the Lease to the contrary, to the extent that within three (3) days after the Commencement Date (i) the roof and roof membrane above the Premises, (ii) foundation and structural components of the Base Building, (iii) Landlord's fire sprinkler and life-safety systems, if any, of the Base Building, and (iv) the electrical, water, sewer and plumbing systems of the Base Building serving the Premises (but only from the local utility's systems to the point of entry into the Premises or to the meter or other point after which such system serves exclusively the Premises) are not in good working condition, except to the extent any of the foregoing are to be removed, demolished or altered by Tenant, and within three (3) days after the Commencement Date Tenant gives Landlord written notice specifying what is not in good working condition, Landlord shall make necessary repairs to put such item or items in good working condition at Landlord's sole cost and expense. Further, Tenant acknowledges and agrees that Tenant has been afforded ample opportunity to inspect the Premises, the Building and the Project, and has investigated their condition to the extent Tenant desires to do so.

2. Landlord Work.

2.1. Notwithstanding any of the foregoing to the contrary, subject to delays caused by Force Majeure or Tenant Delay (defined below), Landlord, at Landlord's sole cost and expense, shall perform the work set forth on Exhibit B-1 hereto ("Landlord Work"), and within ninety (90) days after the Commencement Date shall Substantially Complete (defined below) the Landlord Work and leave the affected area in broom-clean condition with respect to Landlord Work (but Landlord shall not be obligated to do any clean-up or refuse removal related to construction of Tenant Work).

2.2. Tenant acknowledges and agrees that in order to deliver the Premises to Tenant on the schedule contemplated by this Lease, preparation for and performance of the Landlord Work will require access, work and construction within the Premises after delivery of possession to Tenant, and that

Landlord and Landlord's representatives and contractors shall have the right to enter the Premises at all times to perform such work until the Landlord Work is completed, and that such entry and work shall not constitute an eviction of Tenant in whole or in part and shall in no way excuse Tenant from performance of its obligations under the Lease. Tenant and Landlord acknowledge and agree that the Landlord Work and necessary coordination and cooperation to accomplish it will cause certain unavoidable level of disturbance, inconvenience, annoyance to Tenant's use and enjoyment of the Premises, and that in performing such Landlord Work Landlord shall use commercially reasonable efforts not to unreasonably and materially interfere with Tenant's construction, installations and business operations. Tenant shall cooperate with Landlord and Landlord's contractors(s) to allow the Landlord Work and shall move Tenant's trade fixtures, furnishings and equipment as reasonably requested by Landlord or Landlord's contractor(s). The costs of such cooperation and moving, and any related disconnections and installations of Tenant's trade fixtures, equipment, phones, furnishings and other personal property, shall be at Tenant's sole cost and expense. To the extent that Tenant, its contractors or subcontractors delay the Substantial Completion of the Landlord Work, such delay shall be a "Tenant Delay" and the Landlord Work shall be deemed Substantially Complete on the date such Landlord Work would have been completed but for the delay caused by Tenant, its contractors or subcontractors.

2.3. For purposes of this Workletter, "Substantially Complete" and "Substantial Completion" of the Landlord Work shall mean the completion of the Landlord Work, except for minor insubstantial details of construction, decoration or mechanical adjustments which remain to be done and which shall not unreasonably and materially interfere with Tenant's regular business operations in the Premises. Substantial Completion shall be deemed to have occurred notwithstanding a requirement to complete "punchlist" or similar minor corrective work. Contemporaneously with or promptly after Substantial Completion of the Landlord Work, Tenant shall have the right to submit a written "punch list" to Landlord, setting forth any incomplete or defective item of construction. Landlord shall complete with reasonable diligence "punch list" items mutually agreed upon by Landlord and Tenant with respect to the Landlord Work. In addition, Landlord shall repair all latent defects in workmanship and materials of the Landlord Work, provided that Tenant gives Landlord written notice of any such latent defects within six (6) months after the date of Substantial Completion of the Landlord Work. For purposes of this Section, the term "latent defects" shall mean defects which were not readily apparent at the time the "punchlist" was formulated. All construction and installation resulting from the Landlord Work shall immediately become and remain the property of Landlord.

3. Tenant's Plans.

3.1. Description. At its expense, Tenant shall employ:

(i) one or more architects reasonably satisfactory to Landlord and licensed by the State ("Tenant's Architect") to prepare architectural drawings and specifications for all layout and Premises improvements not included in, or requiring any change or addition to, the AS IS condition and Landlord Work, if any.

(ii) one or more engineers reasonably satisfactory to Landlord and licensed by the State ("Tenant's Engineers") to prepare structural, mechanical and electrical working drawings and specifications for all Premises improvements not included in, or requiring any change or addition to, the AS IS condition and Landlord Work, if any.

All such drawings and specifications are referred to herein as "Tenant's Plans". Tenant's Plans shall be in form and detail sufficient to secure all applicable governmental approvals. Tenant's Architect shall be responsible for coordination of all engineering work for Tenant's Plans and shall coordinate with any consultants of Tenant (the use of which is subject to Landlord's consent), and Landlord's space planner or architect to assure the consistency of Tenant's Plans with the Base Building Work and Landlord Work (if any).

Tenant shall pay Landlord, within forty-five (45) days of receipt of each invoice from Landlord, the cost incurred by Landlord for Landlord's architects and engineers to review Tenant's Plans for consistency of same with the Base Building Work and Landlord Work, if any. Tenant's Plans shall also include the following:

(a) Final Space Plan: The "Final Space Plan" for the Premises shall include a full and accurate description of room titles, floor loads, alterations to the Base Building or Landlord Work (if any) or requiring any change or addition to the AS IS condition, and the dimensions and location of all partitions, doors, aisles, plumbing (and furniture and equipment to the extent same affect floor loading). The Final Space Plan shall (i) be compatible with the design, construction, systems and equipment of the Base Building and Landlord Work, if any; (ii) specify only materials, equipment and installations which are new and of a grade and quality no less than existing components of the Building when they were originally installed (collectively, (i) and (ii) may be referred to as "Building Standard" or "Building Standards"); (iii) comply with Laws, (iv) be capable of logical measurement and construction, and (v) contain all such information as may be required for the preparation of the Mechanical and Electrical Working Drawings and Specifications (including, without limitation, a capacity and usage report, from engineers designated by Landlord pursuant to Section 3.1(b). below, for all mechanical and electrical systems in the Premises).

(b) Mechanical and Electrical Working Drawings and Specifications: Tenant shall employ engineers approved by Landlord to prepare Mechanical and Electrical Working Drawings and Specifications showing complete plans for electrical, life safety, automation, plumbing, water, and air cooling, ventilating, heating and temperature control (collectively, the "Mechanical and Electrical Working Drawings and Specifications") and shall employ engineers designated by Landlord to prepare for Landlord a capacity and usage report ("Capacity Report") for all mechanical and electrical systems in the Premises.

(c) Issued for Construction Documents: The "Issued for Construction Documents" shall consist of all drawings ($^1/_8$" scale) and specifications necessary to construct all Premises improvements including, without limitation, architectural and structural working drawings and specifications and Mechanical and Electrical Working Drawings and Specifications and all applicable governmental authorities plan check corrections.

3.2. Approval by Landlord. Tenant's Plans and any revisions thereof shall be subject to Landlord's approval, which approval or disapproval:

(i) shall not be unreasonably withheld, provided however, that Landlord may disapprove Tenant's Plans in its sole and absolute discretion if they (a) adversely affect the structural integrity of the Base Building, including applicable floor loading capacity; (b) adversely affect any of the Building Systems (as defined below), the Common Areas or any other tenant space (whether or not currently occupied); (c) fail to fully comply with Laws, (d) affect the exterior appearance of the Building; (e) provide for improvements which do not meet or exceed the Building Standards; or (f) involve any installation on the roof, or otherwise affect the roof, roof membrane or any warranties regarding either. Building Systems collectively shall mean the structural, electrical, mechanical (including, without limitation, heating, ventilating and air conditioning), plumbing, fire and life-safety (including, without limitation, fire protection system and any fire alarm), communication, utility, gas (if any), and security (if any) systems in the Building.

(ii) shall not be delayed beyond ten (10) business days with respect to initial submissions and major change orders (those which impact Building Systems or any other item listed in subpart (i) of Section 3.2 above) and beyond five (5) business days with respect to required revisions and any other change orders.

If Landlord disapproves of any of Tenant's Plans, Landlord shall advise Tenant of what Landlord disapproves in reasonable detail. After being so advised by Landlord, Tenant shall submit a redesign, incorporating the revisions required by Landlord, for Landlord's approval. The approval procedure shall be repeated as necessary until Tenant's Plans are ultimately approved. Approval by Landlord shall not be deemed to be a representation or warranty by Landlord with respect to the safety, adequacy, correctness, efficiency or compliance with Laws of Tenant's Plans. Tenant shall be fully and solely responsible for the safety, adequacy, correctness and efficiency of Tenant's Plans and for the compliance of Tenant's Plans with any and all Laws.

3.3. Landlord Cooperation. Landlord shall cooperate with Tenant and make good faith efforts to coordinate Landlord's construction review procedures to expedite the planning, commencement, progress and completion of Tenant Work. Landlord shall complete its review of each stage of Tenant's Plans and any revisions thereof and communicate the results of such review within the time periods set forth in Section 3.2 above.

3.4. City Requirements. Any changes in Tenant's Plans which are made in response to requirements of the applicable governmental authorities and/or changes which affect the Base Building Work shall be immediately submitted to Landlord for Landlord's review and approval.

3.5. "As-Built" Drawings and Specifications. A CADD-DXF file on CD-ROM, pdf versions of the drawings on CD-ROM, and a set of "Xerox" type blackline on bond prints of all "as-built" drawings and specifications of the Premises (reflecting all field changes and including, without limitation, architectural, structural, mechanical and electrical drawings and specifications) prepared by Tenant's Architect and Engineers or by Contractors (defined below) shall be delivered by Tenant at Tenant's expense to the Landlord within thirty (30) days after completion of the Tenant Work. If Landlord has not received such drawings and CD-ROM(s) within thirty (30) days, Landlord may give Tenant written notice of such failure. If Tenant does not produce such drawings and CD-ROM(s) within ten (10) days after Landlord's written notice, Landlord may, at Tenant's sole cost which may be deducted from the Allowance, produce such drawings and CD-ROM(s) using Landlord's personnel, managers, and outside consultants and contractors. Landlord shall receive an hourly rate reasonable for such production.

4. Tenant Work.

4.1. Tenant Work Defined.

(a) All tenant improvement work required by the Issued for Construction Documents (including, without limitation, any approved changes, additions or alterations pursuant to Section 7 below) is referred to in this Workletter as "Tenant Work."

(b) As part of the Tenant Work Tenant shall perform the work set forth onExhibit B-2 hereto.

4.2. Tenant to Construct. Tenant shall construct all Tenant Work pursuant to this Workletter, and except to the extent modified by or inconsistent with express provisions of this Workletter, pursuant with the provisions of the terms and conditions of Article Nine of the Lease, governing Tenant Alterations (except to the extent modified by this Workletter) and all such Tenant Work shall be considered "Tenant Alterations" for purposes of the Lease.

4.3. Construction Contract. All contracts and subcontracts for Tenant Work shall include any commercially reasonable terms and conditions required by Landlord.

4.4. Contractor. Tenant shall select one or more contractors to perform the Tenant Work ("Contractor") subject to Landlord's prior written approval, which shall not unreasonably be withheld.

4.5. Division of Landlord Work and Tenant Work. Tenant Work is defined in Section 4.1. above and Landlord Work, if any, is defined in Section 2.

5. Tenant's Expense; Allowance; Special Allowances.

5.1. Tenant agrees to pay for all Tenant Work, including, without limitation, the costs of design thereof, whether or not all such costs are included in the "Permanent Improvement Costs" (defined below). Subject to the terms and conditions of this Workletter, Tenant shall apply the "Allowance" (defined below) to payment of the Permanent Improvement Costs. The term "Permanent Improvement Costs" shall mean the actual and reasonable costs of construction of that Tenant Work which constitutes permanent improvements to the Premises, actual and reasonable costs of design thereof and governmental permits therefor, costs incurred by Landlord for Landlord's architects and engineers pursuant to Section 3.1, and Landlord's construction administration fee (defined in Section 8.10 below). Provided, however, Permanent Improvement Costs shall exclude costs of "Tenant's FF& E" (defined below). For purposes of this Workletter, "Tenant's FF& E" shall mean furniture, furnishings, telephone systems, computer systems, equipment, any other personal property or fixtures, and installation thereof. Landlord shall provide Tenant a tenant improvement allowance ("Allowance") in the amount equal to Ten Dollars ($10.00) per square foot of the Rentable Area of the Premises (a total of Three Hundred Seventy-eight Thousand Five Hundred Sixty Dollars [$378,560.00]). The Allowance shall be used solely to reimburse Tenant for the Permanent Improvement Costs.

5.2. In addition to the Allowance set forth above, Landlord shall provide Tenant those certain allowances to be used solely to reimburse Tenant for the actual and reasonable costs incurred by Tenant for the Tenant Work specified on Exhibit B-2 hereto, which allowances consist of the following: the Special AC Allowance, Special Chiller/Boiler/Air Handler Allowance, Special Energy Management Allowance and Special Compressor and Vacuum Pump Allowance (collectively, the "Special Allowances").

5.3 If Tenant does not utilize one hundred percent (100%) of the Allowance for Permanent Improvement Costs and one hundred percent (100%) of the Special Chiller/Boiler/Air Handler Allowance, Special Energy Management Allowance and Special Compressor and Vacuum Pump Allowance for the purposes for which each is permitted within one (1) year after the Commencement Date of the Premises, Tenant shall have no right to the unused portion of the respective Allowance. If Tenant does not utilize one hundred percent (100%) of the Special AC Allowance for the purposes for which it is permitted within two (2) years after the Commencement Date of the Premises, Tenant shall have no right to the unused portion of the Special AC Allowance.

6. Application and Disbursement of the Allowance.

6.1. Landlord acknowledges that Tenant will perform the Tenant Work in phases, and that for each phase, Tenant may apply a portion of the Allowance and a portion of one or more of the Special Allowances until either such Allowance or Special Allowance is exhausted or the time period

during which such Allowance or Special Allowance may be used has expired. Tenant shall prepare a budget for each phase of the Tenant Work, including the Permanent Improvement Costs and all other costs of the Tenant Work (a "Budget") prior to the commencement of such phase, which Budget shall be subject to the reasonable approval of Landlord. Each such Budget shall be supported by such documentation as Landlord reasonably may require to evidence the total costs for such phase (Landlord and Tenant hereby acknowledge and agree that Tenant will not be required to deliver guaranteed maximum price construction contracts in support of the Budgets, but instead will deliver a Budget for each phase with built-in contingencies to address potential cost overruns). To the extent the Budget for a phase requires funds in excess of the available Allowance and available Special Allowances that are applicable to such phase (such excess, an "Excess Cost"), Tenant shall be solely responsible for payment of such Excess Cost. Further, prior to any disbursement of the Allowance by Landlord with respect to a phase, Tenant shall pay and disburse its own funds for all that portion of the Permanent Improvement Costs included in such phase equal to the sum of (a) such Permanent Improvement Costs in excess of the then-available Allowance allocated to such phase, to the extent that there is any such excess; plus (b) the amount of "Landlord's Retention" (defined below). "Landlord's Retention" shall mean an amount equal to fifteen percent (15%) of the portion of the Allowance allocated to the phase in question, which Landlord shall retain out of the Allowance and shall not be obligated to disburse unless and until after Tenant has completed the applicable phase of the Tenant Work and complied with Section 6.4 below. Further, with respect to each phase, Landlord shall not be obligated to make any disbursement of the Allowance unless and until Tenant has provided Landlord with (a) bills and invoices covering all labor and material expended and used, (b) an affidavit from Tenant stating that all of such bills and invoices have either been paid in full by Tenant or are due and owing, and all such costs qualify as Permanent Improvement Costs, (c) contractors affidavit covering all labor and materials expended and used, (d) Tenant, contractors and architectural completion affidavits (as applicable), and (e) valid mechanics' lien releases and waivers pertaining to any completed portion of the Tenant Work which shall be conditional or unconditional, as applicable, all as provided pursuant to Section 6.2 and 6.4 below.

6.2. With respect to each phase of the Tenant Work and upon Tenant's full compliance with the provisions of Section 6 for such phase, and if Landlord determines that there are no applicable or claimed stop notices (or any other statutory or equitable liens of anyone performing any of the Tenant Work for such phase or providing materials for such phase of the Tenant Work) or actions thereon, Landlord shall disburse the applicable portion of the Allowance and/or the Special Allowances, as applicable, as follows:

(a) In the event of conditional releases, to the respective contractor, subcontractor, vendor, or other person who has provided labor and/or services in connection with such phase of the Tenant Work, upon the following terms and conditions: (i) such costs are included in the Budget for such phase, are Permanent Improvement Costs, are covered by the Allowance or Special Allowances, as applicable, and Tenant has completed and delivered to Landlord a written request for payment, in form reasonably acceptable to Landlord, setting forth the exact name of the contractor, subcontractor or vendor to whom payment is to be made and the date and amount of the bill or invoice, (ii) the request for payment is accompanied by the documentation set forth in Section 6.1; and (iii) Landlord, or Landlord's appointed representative, has inspected and approved the work for which Tenant seeks payment; or

(b) In the event of unconditional releases, directly to Tenant upon the following terms and conditions: (i) Tenant seeks reimbursement for costs of Tenant Work which have been paid by Tenant, are included in the Budget for such phase, are Permanent Improvement Costs, and are covered by the Allowance or Special Allowances, as applicable; (ii) Tenant has completed and delivered to Landlord a request for payment, in form reasonably acceptable to Landlord, setting

forth the name of the contractor, subcontractor or vendor paid and the date of payment, (iii) the request for payment is accompanied by the documentation set forth in Section 6.1; and (iv) Landlord, or Landlord's appointed representative, has inspected and approved the work for which Tenant seeks reimbursement.

6.3. Provided that Tenant provides Landlord with the aforementioned documents by the 15th of any month, payment shall be made by Landlord by the 30th day of the month following the month in which such documentation is provided. Notwithstanding any provision of this Workletter to the contrary, Tenant shall make requests for disbursement of the Allowance or Special Allowances, as applicable, and Landlord shall be obligated to pay to Tenant such amounts as are payable, no more often than once per calendar month and only if the disbursement is for $100,000.00 or more, and otherwise such requests and payments shall be as set forth above.

6.4. Prior to Landlord disbursing the Landlord's Retention to Tenant for a particular phase of the Tenant Work, Tenant shall submit to Landlord the following items within sixty (60) days after completion of such phase of the Tenant Work: (i) "As Built" drawings and specifications pursuant to Section 3.5 above, (ii) all unconditional lien releases for all work performed for such phase by all general contractor(s) and subcontractor(s) performing work for such phase, (iii) a "Certificate of Completion" for such phase prepared by Tenant's Architect, and (iv) a final report for such phase with supporting documentation detailing all actual costs associated with the Permanent Improvement Costs incurred for such phase.

7. Changes, Additions or Alterations.

If Tenant desires to make any non-de minimis change, addition or alteration or desires to make any change, addition or alteration to any of the Building Systems after approval of the Issued for Construction Documents, Tenant shall prepare and submit to Landlord plans and specifications with respect to such change, addition or alteration. Any such change, addition or alteration shall be subject to Landlord's approval in accordance with the provisions of Section 3.2 of this Workletter. Tenant shall be responsible for any submission to and plan check and permit requirements of the applicable governmental authorities. Tenant shall be responsible for payment of the cost of any such change, addition or alteration if it would increase the Budget and Excess Cost previously submitted and approved pursuant to Section 6 above.

8. Miscellaneous.

8.1. Scope. Except as otherwise set forth in the Lease, this Workletter shall not apply to any space added to the Premises by Lease option or otherwise.

8.2. Tenant Work shall include (at Tenant's expense) for all of the Premises:

(a) Landlord approved lighting sensor controls as necessary to meet applicable Laws;

(b) Building Standard fluorescent fixtures in all Premises office areas;

(c) Building Standard meters for each of electricity and chilled water used by Tenant shall be connected to the Building's system and shall be tested and certified prior to Tenant's occupancy of the Premises by a State certified testing company;

(d) Building Standard ceiling systems (including tile and grid) and;

(e) Building Standard air conditioning distribution and Building Standard air terminal units.

8.3. Sprinklers. Subject to any terms, conditions and limitations set forth herein, Landlord shall provide an operative sprinkler system consisting of mains, laterals, and heads "AS IS" on the date of delivery of the Premises to Tenant. Tenant shall pay for piping distribution, drops and relocation of, or additional, sprinkler system heads and Premises firehose or firehose valve cabinets, if Tenant's Plans and/or any applicable Laws necessitate such.

8.4. Floor Loading. Floor loading capacity shall be within building design capacity. Tenant may exceed floor loading capacity with Landlord's consent, at Landlord's sole discretion and must, at Tenant's sole cost and expense, reinforce the floor as required for such excess loading.

8.5. Work Stoppages. If any work on the Real Property other than Tenant Work is delayed, stopped or otherwise affected by construction of Tenant Work, Tenant shall immediately take those actions necessary or desirable to eliminate such delay, stoppage or effect on work on the Real Property other than Tenant Work.

8.6. Life Safety. Tenant (or Contractor) shall employ the services of a fire and life-safety subcontractor reasonably satisfactory to Landlord for all fire and life-safety work at the Building.

8.7. Locks. Tenant agrees to purchase from Landlord or its representative all cylinders and keys used in locks used in the Premises.

8.8. Authorized Representatives. Tenant has designated Loren Barrett to act as Tenant's representative with respect to the matters set forth in this Workletter. Such representative(s) shall have full authority and responsibility to act on behalf of Tenant as required in this Workletter. Tenant may add or delete authorized representatives upon five (5) business days notice to Landlord.

8.9. Access to Premises. Promptly after execution of this Amendment, Tenant and its architects, engineers, consultants, and contractors shall have access at reasonable times and upon advance notice and coordination with the Building management, to the Premises for the purpose of planning and conducting Tenant Work. Such access shall not in any manner interfere with Landlord Work, if any. Such access, and all acts and omissions in connection with it, shall be subject to and governed by all other provisions of the Lease, including, without limitation, Tenant's indemnification obligations, insurance obligations, etc, except for the payment of Base Rent and Additional Rent. To the extent that such access by Tenant delays the Substantial Completion of the Landlord Work (if any), such delay shall be a Tenant Delay and the Landlord Work shall be deemed Substantially Complete on the date such Landlord Work would have been completed but for such access.

8.10. Fee. Landlord shall receive a construction administration fee equal to one percent (1.0%) of the Allowance in connection with the construction of the Tenant Work. Such fee is in addition to Tenant's reimbursement of costs incurred by Landlord pursuant to other provisions hereof, including, without limitation, for Landlord's architects and engineers to review Tenant's Plans.

9. Force and Effect.

The terms and conditions of this Workletter shall be construed to be a part of the Lease and shall be deemed incorporated in the Lease by this reference. Should any inconsistency arise between this Workletter and the Lease as to the specific matters which are the subject of this Workletter, the terms and conditions of this Workletter shall control.

EXHIBIT B-1
TO WORKLETTER AGREEMENT

LANDLORD WORK

Landlord Work shall mean the following work, to be performed by Landlord's contractor(s):

1. Landlord shall make necessary repairs and/or replacements to put in good working condition the existing Building lighting and existing exit signs (on emergency battery power, and add such emergency battery power for exit signs to the extent it does not exist as of the Commencement Date).

2. Landlord shall make necessary repairs and/or replacements to put in good working condition the power to operate Landlord's existing fire sprinkler system and sprinkler heads, including repair of any sagging ceilings and insulation obstructing operation of sprinkler heads; and Landlord shall provide a copy of an updated 5-year certificate of the fire sprinkler system.

3. Landlord shall make necessary repairs and/or replacements of: (a) copper condensate drain lines that have been removed (prior to the Commencement Date) from the Building; (b) copper cabling from the main power supply to the chiller that has been removed (prior to the Commencement Date) from the Building.

4. If and to the extent that the City of Redwood City requires, as a condition of approval of Tenant Plans or Tenant Work, installation of additional building exit ramp(s) to comply with Title III of the ADA, Landlord shall build such required ramp(s). If the City does not require installation of such additional ramp(s), Landlord shall install a new step at one exit door location to be specified by Tenant. Notwithstanding any other provision of this Workletter to the contrary, such work shall be performed within a reasonable time after the City orders such additional ramp(s) or in the event the step is to be installed, after the time has passed within which the City can order such additional ramp(s) and Tenant has specified the exit door location.

5. Notwithstanding any of the foregoing to the contrary, the Landlord Work described above shall be reduced to the extent any of the foregoing items described in Sections 1 – 3 above (for example only and without limitation, lighting, power cabling, ceiling or insulation components) are to be removed, demolished or altered by Tenant in connection with anticipated Tenant Work.

EXHIBIT B-2
TO WORKLETTER AGREEMENT

SPECIAL TENANT WORK
SPECIAL ALLOWANCES FOR SUCH WORK ONLY

Special Tenant Work shall mean the work set forth below, , subject to reimbursement by Landlord to the extent of the Special Allowances as specified below. All such work, including the design thereof, plans and specifications, contractors, work and procedure for reimbursement to Tenant of costs of such work, shall be subject to and governed by the provisions of the Workletter applicable to Tenant Work and the Allowance, except that the amounts of the Special Allowances, time such allowances shall be available and purposes for which each such allowance may be used, shall be as specified below. Upon installation, all such Special Tenant Work shall be deemed to be part of the Building and owned by Landlord.

1. Replacement of 13 Package AC Units on the Building's Roof. Within 2 years after the Commencement Date, Tenant shall, subject to reimbursement by Landlord to the extent of the "Special AC Allowance" specified below, replace the existing thirteen (13) rooftop air conditioning ("AC") units serving the Building with new equipment of good quality (which includes rooftop AC units, certain associated controls and ductwork, and related materials and expenses) ("AC Units"), sufficient to provide AC cooling capacity for the entire Building (no less than eighty-two [82] tons of AC cooling capacity in the aggregate). The vendors, contractors and contracts for such AC Unit replacement shall be subject to Landlord's prior written approval, including among other things, providing for warranties acceptable to Landlord and that such warranties shall name Landlord and be issued directly for the benefit of and enforceable by Landlord. Tenant shall provide a replacement schedule to Landlord. Landlord shall provide the amount of One Hundred Fifty-three Thousand Six Hundred Dollars ($153,600) solely to reimburse Tenant's actual and reasonable costs of such AC replacement, and only for such purpose ("Special AC Allowance"). If Tenant does not utilize one hundred percent (100%) of the Special AC Allowance for the specified purpose within two (2) years after the Commencement Date, Tenant shall have no right to the unused portion of the Special AC Allowance. The Special AC Allowance shall be in addition to, and shall not diminish the Tenant's Allowance.

2. Chillers, Boilers, Boilers Exhaust Fans and Air Handlers on the Building's Roof. Within one (1) year after the Commencement Date, Tenant shall, subject to reimbursement by Landlord to the extent of the "Special Chiller/Boiler/Air Handler Allowance" specified below, repair and/or replace the existing chillers, boilers, exhaust fans and air handlers on the roof of the Building in order to put such items in good working condition (the "Chiller/Boiler/Air Handler Work"). The vendors, contractors and contracts for such Chiller/Boiler/Air Handler Work shall be subject to Landlord's prior written approval, including among other things, providing for warranties acceptable to Landlord and that such warranties shall name Landlord and be issued directly for the benefit of and enforceable by Landlord. Landlord shall provide the amount of Forty-nine Thousand Seven Hundred Forty-four Dollars ($49,744) solely to reimburse Tenant's actual and reasonable costs of such Chiller/Boiler/Air Handler Work, and only for such purpose ("Special Chiller/Boiler/Air Handler Allowance"). If Tenant does not utilize one hundred percent (100%) of the Special Chiller/Boiler/Air Handler Allowance for the specified purpose within one (1) year after the Commencement Date, Tenant shall have no right to the unused portion of the Special Chiller/Boiler/Air Handler Allowance. The Special Chiller/Boiler/Air Handler Allowance shall be in addition to, and shall not diminish the Tenant's Allowance.

3. Building Energy Management System. Within one (1) year after the Commencement Date, Tenant shall, subject to reimbursement by Landlord to the extent of the "Special Energy Management Allowance" specified below, repair and/or replace the existing Building Energy Management System in

order to put such items in good working condition (the "Energy Management Work"). The vendors, contractors and contracts for such Energy Management Work shall be subject to Landlord's prior written approval, including among other things, providing for warranties acceptable to Landlord and that such warranties shall name Landlord and be issued directly for the benefit of and enforceable by Landlord. Landlord shall provide the amount of Twelve Thousand Four Hundred Ninety-three Dollars ($12,493) solely to reimburse Tenant's actual and reasonable costs of such Energy Management Work, and only for such purpose ("Special Energy Management Allowance"). If Tenant does not utilize one hundred percent (100%) of the Special Energy Management Allowance for the specified purpose within one (1) year after the Commencement Date, Tenant shall have no right to the unused portion of the Special Energy Management Allowance. The Special Energy Management Allowance shall be in addition to, and shall not diminish the Tenant's Allowance.

4. Air Compressor and Vacuum Pump on the Building's Roof. Within one (1) year after the Commencement Date, Tenant shall, subject to reimbursement by Landlord to the extent of the "Special Compressor and Vacuum Pump Allowance" specified below, inspect, repair and/or replace the existing air compressor and vacuum pump on the roof of the Building in order to put such items in good working condition (the "Compressor and Vacuum Pump Work"). The vendors, contractors and contracts for such Compressor and Vacuum Pump Work shall be subject to Landlord's prior written approval, including among other things, providing for warranties acceptable to Landlord and that such warranties shall name Landlord and be issued directly for the benefit of and enforceable by Landlord. Landlord shall provide the amount of Seven Thousand Five Hundred Dollars ($7,500) solely to reimburse Tenant's actual and reasonable costs of such Compressor and Vacuum Pump Work, and only for such purpose ("Special Compressor and Vacuum Pump Allowance"). If Tenant does not utilize one hundred percent (100%) of the Special Compressor and Vacuum Pump Allowance for the specified purpose within one (1) year after the Commencement Date, Tenant shall have no right to the unused portion of the Special Compressor and Vacuum Pump Allowance. The Special Compressor and Vacuum Pump Allowance shall be in addition to, and shall not diminish the Tenant's Allowance.

EXHIBIT C
COMMENCEMENT DATE AGREEMENT

METROPOLITAN LIFE INSURANCE COMPANY, a New York corporation ("Landlord"), and CODEXIS, INC., a Delaware corporation ("Tenant"), have entered into a certain Third Amendment to Lease, which Amendment is dated as of _____, 2008 (the "Amendment"). The original Lease, as amended by the Amendment, may be referred to as the "Lease".

WHEREAS, Landlord and Tenant wish to confirm and memorialize the Building 2 Commencement Date and Building 2 Expiration Date;

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants contained herein and in the Amendment, Landlord and Tenant agree as follows:

1. Unless otherwise defined herein, all capitalized terms shall have the same meaning ascribed to them in the Amendment and the Lease.

2. The Building 2 Commencement Date is _____.

3. The Building 2 Expiration Date is _____.

4. Tenant hereby confirms that: (a) it has accepted possession of the Building 2 Space pursuant to the terms of the Amendment; and (b) the Lease is in full force and effect.

5. Except as expressly modified hereby, all terms and provisions of the Lease are hereby ratified and confirmed and shall remain in full force and effect and binding on the parties hereto.

6. The Lease and this Building 2 Commencement Date Agreement contain all of the terms, covenants, conditions and agreements between the Landlord and the Tenant relating to the subject matter herein. No prior other agreements or understandings pertaining to such matters are valid or of any force and effect.

TENANT:

CODEXIS, INC.,
a Delaware corporation

By: _____
Print Name: _____
Title: _____

LANDLORD:

METROPOLITAN LIFE INSURANCE COMPANY,
a New York corporation

By: _____
Print Name: _____
Title: _____

EXHIBIT D
FORM OF LANDLORD'S CONSENT TO ENCUMBRANCE OF LIMITED COLLATERAL

THIS LANDLORD'S CONSENT TO ENCUMBRANCE OF LIMITED COLLATERAL (the "Consent") is made as of_____, 2008 by and between Metropolitan Life Insurance Company, a New York corporation ("Met" or "Landlord"), having an address at 425 Market Street, Suite 1050, San Francisco, CA 94105, and General Electric Capital Corporation, a Delaware corporation ("Agent"), having an address at 83 Wooster Heights Road, Fifth Floor, Danbury, CT 06810, with reference to the following:

A. Met is the Landlord and Codexis, Inc., a Delaware corporation ("Codexis" or "Tenant") is the Tenant under that certain lease dated as of October__, 2003[sic], entered into by and between Landlord and Tenant, as amended by that certain First Amendment to Lease by and between Landlord and Tenant dated June 1, 2004 and by that certain Second Amendment to Lease dated as of March 9, 2007 (as amended to date and hereafter, the "Lease"). As of the date hereof, the Lease is of the premises particularly described in the Lease (the "Premises"), commonly known as 200 and 220 Penobscot Drive, 501 Chesapeake Drive and 640 Galveston Drive, in the buildings (the "Building") located in Redwood City, California. As of the date hereof, a draft of a possible Third Amendment to Lease to add to the Premises additional space commonly known as 400 Penobscot Drive has been exchanged between Landlord and Tenant, and hereafter Landlord and Tenant may enter into that or other amendments of the Lease. References to the Lease, Premises and Building herein shall be deemed modified to have the same meaning as such terms have under the Lease, as amended from time to time.

B. Tenant and Agent represent to Landlord that Agent and certain other lenders (together with Agent, collectively, "Lenders") and Tenant have entered into, or are about to enter into, a Loan and Security Agreement, dated on or about September __, 2007, pursuant to which Tenant has or will borrow, or obtain a line of credit, up to a maximum principal amount of Fifteen Million Dollars ($15,000,000.00) to be used by Tenant for working capital purposes (as amended, restated, supplemented or otherwise modified from time to time, the "Loan Agreement", provided however, this Consent shall have no force or effect if and to the extent that Lenders permit or suffer the maximum principal amount to increase above the amount stated above) and pursuant to which Tenant has granted or will grant to Agent, on behalf of Agent and the other Lenders, a security interest in certain assets owned by Tenant described on Exhibit A hereto, all or part of which is from time to time installed or located at the Premises (the "Collateral").

C. Tenant has requested that Landlord consent to the encumbrance of the Collateral. Landlord is not willing to consent to encumbrance of the Collateral, but subject to and with certain clarifications and limitations set forth in Exhibit A hereto defining and describing the "Limited Collateral", Landlord is willing to consent to encumbrance of the Limited Collateral upon and subject to the following terms and conditions:

NOW, THEREFORE, in consideration of the covenants and conditions contained herein, and for other good and valuable consideration, receipt of which is hereby acknowledged, Landlord and Agent agree as follows:

1 During the term of the Loan Agreement, Landlord hereby consents to the encumbrance of the Limited Collateral and agrees to subordinate to the interest of Agent in the Limited Collateral any Landlord's lien in or to the Limited Collateral existing by reason of the Lease and the location of the Limited Collateral in the Premises; provided, however, that said consent and subordination shall be ineffective to the extent that Agent has released its security interest in the Limited Collateral.

2 Subject to Agent's obligations pursuant to Sections 4 and 5 hereof, Landlord agrees that the Limited Collateral is and shall remain personal property.

3 Subject to the rights of Tenant under the Lease, Landlord will permit Agent reasonable access onto the Premises for the purpose of exercising any right it may have under the terms of the Loan Agreement, including, without limitation, the right to remove the Limited Collateral, subject to all the terms and conditions hereof.

4 To the extent that Tenant or Agent do not remove Limited Collateral which is located in the Premises prior to the expiration or earlier termination of the Lease, after such expiration or termination Landlord may deem such Limited Collateral abandoned property, except if and to the extent that Agent has obtained additional time to remove the Limited Collateral pursuant to Section 5 below. Subject to Landlord's obligations under Section 6 below, Agent understands that Tenant is to bear the obligation of notifying Agent of Tenant's default under the Lease or of the expiration or earlier termination of the Lease, and that Landlord has no obligation to notify Agent or Lenders.

5 Agent's right to enter the Premises is further subject to the following terms and conditions:

5.1 Subject to the rights of Tenant under the Lease, Agent shall have the right to enter onto the Premises and take possession of the Limited Collateral provided that Agent (i) gives Landlord written notice that it seeks to enter and take possession of the Limited Collateral, which notice shall include a representation by Agent that it is entitled to take possession of the Limited Collateral, and (ii) coordinates the date and time of possession with Landlord or Landlord's managers prior thereto, and such date may be no earlier than one (1) day after Landlord's receipt of such notice and no later than eighteen (18) days after Landlord's receipt of such notice, unless Landlord, in Landlord's sole discretion, in writing allows entry earlier or later. Tenant agrees that Landlord may rely on such representation by Agent without further inquiry or any obligation to verify same. Tenant hereby waives any claims it may have against Landlord which arise out of or are connected with Landlord's actions in compliance with such notice from Agent.

5.2 Except as provided below, in no event shall Agent have the right to enter the Premises during any period for which the rent is unpaid by Tenant before or after termination of the Lease. Agent shall have a right of entry for eighteen (18) days after the earlier of the date Agent gives notice to Landlord pursuant to Section 5.1 or Landlord gives notice to Agent pursuant to Section 6, provided that Agent pays Landlord rent for the number of days Agent requires entry to the Premises at the daily rental rate calculated by dividing by thirty (30) the sum of the monthly base rent plus rent equal to the expenses and taxes payable by Tenant for the same period under the Lease (as such amounts are more particularly described in the Lease). The payment of daily rental for the number of days Agent requires entry to the Premises is a condition precedent prior to any such entry. In the event that Agent removes all (and not less than all) the Limited Collateral and in fact uses a shorter period for its entry than the number of days entry for which it paid in advance on an estimated basis, then Landlord shall reimburse Agent for any excess rental paid at the daily rate. Agent shall not have any rights whatsoever for its right of entry to be longer than eighteen (18) days after the date of the applicable notice, and in the event that both parties have given notice, after the earliest notice given. Notwithstanding any of the foregoing to the contrary, Agent (a) shall not be required to pay any rent if, within the initial seven days after the date the earliest such notice was given, Agent removes all (and not less than all) the Limited Collateral, or (b) shall not be required to pay rent for the initial seven days after the date the earliest such notice was given unless Agent fails to remove all (and not less than all) the Limited Collateral within the eighteen (18) day period after the date the earliest such notice was given.

5.3 Agent shall not have the right to conduct or cause to be conducted any auction at the Premises.

5.4 If Agent, in removing the Limited Collateral, damages any improvements at the Premises or the building of which the Premises is a part, Agent, at its sole expense, shall cause the same to be repaired and restored to a condition at least equal to the condition existing immediately prior to the installation of the Limited Collateral.

6 So long as the Loan Agreement is in effect, Landlord agrees to subordinate to the interest of Agent in the Limited Collateral any Landlord's lien in or to the Limited Collateral existing by reason of the Lease and the location of the Limited Collateral in the Premises; provided, however, that said consent and subordination shall be ineffective to the extent that Agent has released its security interest in the Limited Collateral. In the event that Landlord has not received notice from Agent given pursuant to Section 5.1 and Landlord finds it necessary to remove all or part of the Limited Collateral in the exercise of any right under the Lease, then Landlord shall notify Agent of such necessity and Agent shall be given the right to enter the Premises for no more than eighteen (18) days after such notice, for the purpose of removing all of the Limited Collateral from the Premises. Agent's right to enter the Premises is subject to Agent's obligation to pay rent as set forth in Section 5.2. Landlord is under no obligation to store the Limited Collateral for the benefit of Agent beyond eighteen (18) days after the earlier of the date Agent gave notice pursuant to Section 5.1 or the date Landlord gave notice to Agent under this Section. Accordingly, upon the expiration of such eighteen (18) day notice period, if Agent has not removed the Limited Collateral from the Premises then Agent's lien and all right, title and interest of Agent in the Limited Collateral shall be deemed to be abandoned and all Limited Collateral located in the Premises may be removed, sold and/or disposed of as Landlord may elect in its sole discretion. Further, if Agent seeks to remove the Limited Collateral (to the extent not sold or otherwise disposed of by Landlord) after such eighteen (18) day period, and Landlord, in its sole discretion consents to such removal, Agent shall be liable for all of Landlord's costs incurred in connection with storage at the Premises, removal and storage elsewhere, and with any aborted sale and notices and advertising therefor. Further, within ninety (90) days after expiration of such eighteen (18) day period, with respect to all such Limited Collateral deemed abandoned, Agent shall file and/or record, in the formal record system for perfection of security interests of applicable jurisdictions, appropriate documentation evidencing the abandonment, release and termination of Agent's security interest in such Limited Collateral and Agent shall deliver to Landlord a copy of such documents filed and/or recorded.

7 To the extent permitted by law, Agent shall protect, defend, indemnify and hold harmless Landlord and its agents and managers from and against any and all actions, causes of action, claims, losses, costs, expenses, damages and liabilities, including without limitation reasonable attorneys' fees, arising out of or in any way connected with the acts or negligence of Agent in connection with any entry to the Premises or the project in which the Premises is located.

8 All representations, warranties and indemnifications made or given by Agent herein, together with any causes of action, rights and remedies which Landlord has or may have as a result of a breach of any term of this Consent, shall survive any expiration or termination of this Consent.

9 Intentionally omitted.

10 This Consent is only a subordination of lien rights with express terms and conditions of a right of entry; and shall not be deemed or construed to be a consent to anything else including, but not limited to, alterations on the Premises.

11 Landlord makes no representation or warranty as to the ownership of the Limited Collateral or the priority of the security interest of the Agent. Agent acknowledges that Landlord, at the request of Tenant, has previously been asked may in the future be asked to execute one or more such consents in favor of other personal property lenders and/or personal property lessors. Landlord is under no duty whatsoever to advise Agent in the event the Limited Collateral described herein shall be scheduled or claimed by any other such lender or personal property lessor. Tenant and Agent hereby agree that Landlord shall have no liability arising out of or relating to the entry by Agent upon the Premises for the purpose of removal of the Limited Collateral.

12 At all times during any entry by Agent for the purpose of removal of any of the Limited Collateral from the Premises under this consent, Agent shall maintain comprehensive general liability insurance, on an occurrence basis, in the amount of at least Five Million dollars ($5,000,000.00), covering the acts and omissions of Agent, its agents and contractors, issued by reputable companies licensed to do business in California, and naming Landlord as an additional insured. Prior to any such entry Agent shall provide Landlord with a certificate of such insurance reasonably satisfactory to Landlord. So long as General Electric Capital Corporation, a Delaware corporation, is the Agent acting on behalf of Lenders and personally holds the security interest in the Limited Collateral as such Agent, then its insurance shall not be required to name Landlord as additional insured and a certificate of insurance shall not be required.

13 This Consent may not be modified or amended except by written agreement of the parties hereto.

14 This Agreement may not be recorded.

15 All notices required to be given hereunder shall be in writing, and shall be mailed by certified mail, return receipt requested, or by nationally recognized overnight courier service that provides proof of delivery. Notices shall be deemed effective upon the date actually received, date receipt is refused or date of inability to deliver due to change of address without notice.

Notices to Landlord shall be addressed:

Metropolitan Life Insurance Company
425 Market Street, Suite 1050
San Francisco, California 94105
Attention: Director, EIM

with copies to the following:

Metropolitan Life Insurance Company
425 Market Street, Suite 1050
San Francisco, California 94105
Attention: Associate General Counsel

Notices to Agent shall be addressed:

General Electric Capital Corporation
c/o GE Healthcare Financial Services, Inc., LSF
83 Wooster Heights Road, Fifth Floor
Danbury, CT 06810
Attention: Senior Vice President of Risk
Phone: (203) 205-5200
Facsimile: (203) 205-2192

with a copy to:

General Electric Capital Corporation
c/o GE Healthcare Financial Services, Inc.
Two Bethesda Metro Center, Suite 600
Bethesda, MD 20814
Attention: General Counsel
Phone: (301) 961-1640
Facsimile: (301) 664-9866

Notices to Tenant shall be addressed:

Codexis, Inc.
200 Penobscot Drive
Redwood City, California 94063
Attention: Director of Finance

16 In the event either party shall bring any action against the other for any matter arising out of or relating to this Consent, the prevailing party shall be entitled to recover reasonable attorney's fees and costs.

17 This Consent shall be binding upon and inure to the benefit of the respective heirs, administrators, successors and assigns to the parties hereto.

18 Each of Agent, Landlord and Tenant separately and for itself warrants and represents that the person or persons signing below is or are duly authorized to execute this Consent on its behalf.

IN WITNESS WHEREOF, the undersigned have duly executed this Landlord's Consent to Encumbrance of Limited Collateral as of the day and year first above written.

LANDLORD:

METROPOLITAN LIFE INSURANCE COMPANY, a New York corporation

By: _____
Name: _____
Its: _____

AGENT:

GENERAL ELECTRIC CAPITAL CORPORATION, a Delaware corporation

By: _____
Name: _____
Its: _____

AGREED, as of the day and year first above written, for the purposes of the Recitals, Section 5, Section 11 and Sections 13 through 18 hereof.

TENANT:
CODEXIS, INC., a Delaware corporation

By _____
Name: _____
Its _____

EXHIBIT A
TO LANDLORD'S CONSENT TO ENCUMBRANCE OF LIMITED COLLATERAL

DESCRIPTION OF COLLATERAL

Certain assets of Tenant, including, without limitation, all of Tenant's cash, cash equivalents, accounts, books and records, goods, inventory, machinery, equipment, furniture and trade fixtures (such as equipment bolted to floors), together with all addition, substitutions, replacements and improvements to, and proceeds, including, insurance proceeds, of the foregoing, but excluding building fixtures (such as plumbing, lighting and HVAC systems) (collectively, the "Collateral")

DESCRIPTION OF LIMITED COLLATERAL

The "Limited Collateral" shall mean the following personal property owned by Tenant: all of Tenant's cash, cash equivalents, accounts, books and records, goods, inventory, machinery not permanently affixed to the Premises, equipment not permanently affixed to the Premises, furniture and trade fixtures not permanently affixed to the Premises, together with all addition, substitutions, replacements and improvements to, and proceeds, including, insurance proceeds, of the foregoing, and for avoidance of doubt the following shall not be part of the "Limited Collateral": (a) walls, ceilings, flooring, building fixtures (such as plumbing, power, lighting and HVAC systems), including without limitation all improvements made as part of the Special Tenant Work (as defined in the Third Amendment to Lease dated as of _____, 2008); (b) all improvements installed in the 640 Galveston Space (as defined in the Second Amendment to Lease dated as of March 9, 2007) by Landlord prior to March 9, 2007 or thereafter permanently affixed to the 640 Galveston Space, including, without limitation, all lab benches and corresponding casework, lab sinks, lab hoods, supplemental or special ventilating and air conditioning equipment, and any and all lab installations and fixtures**,** unless pursuant to express provision of the Lease or a written agreement between Landlord and Tenant, Tenant is permitted or required to remove a specified item or items and such item or items is listed below; and (c) insurance proceeds to which Landlord is entitled pursuant to the Lease, including without limitation, insurance proceeds of any tangible property, machinery, equipment or trade fixtures which is permanently affixed to the Premises. For the avoidance of doubt, the term "permanently affixed" in the preceding sentence shall not be construed to mean otherwise free-standing equipment that has been secured to the Premises for the primary purpose of seismic stability and/or the prevention of theft. If pursuant to Section 4 of the Third Amendment, Landlord has agreed in writing, in response to written request made by Tenant, that specified equipment or trade fixtures paid for entirely by Tenant (without reimbursement in full or part out of any funds provided by Landlord) be included as part of the Limited Collateral, which items shall be specifically identified in writing delivered by Tenant to Landlord, including the building address and location within the building where the items are located, such items shall be listed below and thereby be part of the Limited Collateral.

[IF APPLICABLE, SPECIFICALLY LIST ITEM OF EQUIPMENT AND LOCATION BY BUILDING ADDRESS & LOCATION WITHIN THE BUILDING.]

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT NO. 3771 (this "*Agreement*") is entered into as of February 12, 2004 by and between**LIGHTHOUSE CAPITAL PARTNERS V, L.P.** ("*Lender*") and **CODEXIS, INC.**, a Delaware corporation ("*Borrower*").

RECITALS

Borrower wishes to borrow money from time to time from Lender and Lender desires to lend money to Borrower. This Agreement sets forth the terms on which Lender will lend to Borrower and Borrower will repay the loan to Lender.

AGREEMENT

The parties agree as follows:

1. DEFINITIONS AND CONSTRUCTION

1.1 Definitions. As used in this Agreement, the following terms shall have the following definitions:

"*ACH*" means the nationwide Automated Clearing House electronic funds transfer system that processes electronically originated batches of credit and debit transfers.

"*ACH Authorization Form*" means the ACH Authorization Form in substantially the form of that attached hereto as Exhibit E.

"*Affiliate*" means any Person that owns or controls directly or indirectly five percent (5%) or more of the stock of another entity, any Person that controls or is controlled by or is under common control with such Persons or any Affiliate of such Persons or each of such Person's officers, directors, joint venturers or partners.

"*Basic Rate*" means five and one quarter percent (5.25%) per annum provided that should the Prime Rate as quoted in the western edition of the Wall Street Journal ("Prime Rate") exceed four percent (4.00%), then, in each instance the Basic Rate for Loans that have not yet been funded or Loans for which the Loan Commencement Date has not started, the Basic Rate for each such Loan will be increased by the same amount by which the Prime Rate exceeds four percent (4.00%), *provided further* that, from and after the Loan Commencement Date for each Loan, there shall be no change in the Basic Rate applicable to such Loan.

"*Borrower's Books*" means all of Borrower's books and records including: ledgers; records concerning Borrower's assets or liabilities, the Collateral, business operations or financial condition; and all computer programs, or tape files, and the equipment, containing such information.

"*Business Day*" means any day that is not a Saturday, Sunday, or other day on which banks in the State of California are authorized or required to close.

"*Code*" means the Uniform Commercial Code as adopted and in effect in the State of California, as amended from time to time.

"*Collateral*" means the Property described on ***Exhibit A*** attached hereto.

"*Commitment*" means Four Million Seven Hundred Fifty Thousand Dollars ($4,750,000).

"*Commitment Fee*" means Twenty-five Thousand Dollars ($25,000).

"*Commitment Termination Date*" means December 31, 2004.

"*Contingent Obligation*" means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to any indebtedness, lease, dividend, letter of credit or other obligation of another, including any such obligation directly or indirectly guaranteed, endorsed (otherwise than for collection or deposit in the ordinary course of business), co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable. The amount of any Contingent Obligation shall be equal to the amount of the obligation so guaranteed or otherwise supported.

"*Default*" means any event which with the passing of time or the giving of notice or both would become an Event of Default hereunder.

"*Default Rate*" means the *per annum* rate of interest equal to four percent (4%) over the Basic Rate, but such rate shall in no event be more than the highest rate permitted by applicable law to be charged on commercial loans.

"*Event of Default*" has the meaning given to such term in **Section 8**.

"*Event of Loss*" has the meaning given to such term in **Section 6.10**.

"*Final Payment*" means, with respect to each Loan, a payment (in addition to and not in substitution for the regular monthly payments of principal and accrued interest) due on the Maturity Date, equal to the original Loan Amount for each such Loan multiplied by the Final Payment Percentage.

"*Final Payment Percentage*" means nine percent (9%).

"*Funding Date*" means any date on which a Loan is made to or on account of Borrower under this Agreement.

"*Governmental Authority*" means (a) any federal, state, county, municipal or foreign government, or political subdivision thereof, (b) any governmental or quasi-governmental agency, authority, board, bureau, commission, department, instrumentality or public body, (c) any court or administrative tribunal or (d) with respect to any Person, any arbitration tribunal or other non-governmental authority to whose jurisdiction that Person has consented.

"*Indebtedness*" means (a) all indebtedness for borrowed money or the deferred purchase price of Property or services (excluding trade payables aged less than one hundred eighty (180) days), including reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all Contingent Obligations.

"*Lender's Expenses*" means all reasonable costs or expenses (including reasonable attorneys' fees and expenses) incurred in connection with the preparation and negotiation, administration, and enforcement of the Loan Documents; and Lender's reasonable attorneys' fees and

expenses incurred in amending, modifying, enforcing or defending the Loan Documents, including in the exercise of any rights or remedies afforded hereunder or under applicable law, whether or not suit is brought; *provided, however*, that Lender's Expenses shall not exceed Two Thousand Five Hundred Dollars ($2,500) for the preparation and negotiation of the initial set of Loan Documents unless more than three (3) drafts, including the execution documents are necessary.

"*Lien*" means any pledge, bailment, lease, mortgage, hypothecation, conditional sales and title retention agreement, charge, claim, encumbrance or other lien in favor of any Person.

"*Liquidation Event*" means any of the following: (i) a merger of Borrower with another entity; or (ii) the sale of all or substantially all of Borrower's assets; or (iii) a transaction in which the shareholders immediately prior to such transaction own less than fifty percent (50%) of the equity securities of Borrower immediately after such transaction; or (iv) the initial public offering of any of Borrower's equity securities.

"*Loan*" means each advance of credit by Lender to Borrower under this Agreement.

"*Loan Agreement Supplement*" means a supplement to this Agreement in substantially the form of ***Exhibit C***.

"*Loan Amount*" means, with respect to each Loan, as of any date, the original principal amount of such Loan less the aggregate of all Prepayment Amounts relating to prepayments of such Loan paid prior to such date.

"*Loan Commencement Date*" means, with respect to each Loan, the first Business Day of the calendar month following the Funding Date of such Loan.

"*Loan Documents*" means, collectively, this Agreement, the Warrants, and all other documents, instruments and agreements entered into between Borrower and Lender in connection with this Agreement, all as amended or extended from time to time.

"*Loan Factor*" means, with respect to each Loan, the amount set forth as a percentage in the Summary of Loan Agreement Supplement with respect to such Loan, calculated using the Basic Rate applicable to such Loan.

"*Maturity Date*" means, with respect to each Loan, the last day of the Repayment Period for such Loan, or the date of prepayment under **Section 2.5**.

"*Minimum Funding Amount*" means Ten Thousand Dollars ($10,000).

"*Obligations*" means all debt, principal, interest, fees, charges, expenses and attorneys' fees and costs and other amounts, obligations, covenants, and duties owing by Borrower to Lender of any kind and description (pursuant to or evidenced by the Loan Documents and pursuant to and evidenced by any documents or instruments executed in connection therewith, and whether or not for the payment of money), whether direct or indirect, absolute or contingent, due or to become due, now existing or hereafter arising, including the principal, interest and Final Payment due with respect to the Loans, and including any debt, liability, or obligation owing from Borrower to others that Lender may have obtained by assignment or otherwise, and further including all interest not paid when due and all Lender's Expenses that Borrower is required to pay or reimburse by the Loan Documents, by law, or otherwise.

"*Payment Date*" has the meaning given to that term in **Section 2.4(a)**.

"*Permitted Liens*" means the following:

(a) The Lien created by this Agreement;

(b) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings, *provided* the same have no superior priority over Lender's Lien in the Collateral; and

(c) Liens to secure payment of worker's compensation, employment insurance, old age pensions or other social security obligations of Borrower in the ordinary course of business of Borrower.

"*Person*" means and includes any individual, any partnership, any corporation, any business trust, any joint stock company, any limited liability company, any unincorporated association or any other entity and any domestic or foreign national, state or local government, any political subdivision thereof, and any department, agency, authority or bureau of any of the foregoing.

"*Prepayment Amount*" means in the case of a mandatory prepayment pursuant to **Sections 2.5(a)** and **6.10**, the original Stated Cost of the item of Collateral with respect to which such prepayment relates.

"*Property*" means any interest in any kind of property or asset, whether real, personal or mixed, whether tangible or intangible.

"*Repayment Period*" means the period beginning on the first Payment Date and continuing for forty-eight (48) calendar months.

"*Responsible Officer*" means each of the President or the Chief Financial Officer of Borrower.

"*Scheduled Payments*" has the meaning given to such term in **Section 2.4(a)**.

"*Stated Cost*" means with respect to an item of Collateral, the original cost to Borrower of the item of Collateral including such amounts as may be funded as Soft Costs (as defined in **Section 2.2(a)**).

"*Subsidiary*" means any corporation of which a majority of the outstanding capital stock entitled to vote for the election of directors (otherwise than as the result of a default) is owned by Borrower directly or indirectly through Subsidiaries.

"*Summary of Loan Agreement Supplement*" means, with respect to each Loan, the "Summary of Loan Agreement Supplement" attached as ***Annex C*** to the Loan Agreement Supplement prepared by Lender in connection with such Loan.

"*Term*" means the period from and after the date hereof until termination of the Commitment and the payment in full of all Obligations, including amounts and liabilities payable under this Agreement and the other Loan Documents, including principal and interest on the Loans and the Final Payment with respect to each Loan.

"*Warrants*" means the Warrants in favor of Lender and its affiliated fund, Lighthouse Capital Partners IV, L.P. ("*LCP-IV*") to purchase securities of Borrower substantially in the form of ***Exhibit B-1*** and ***B-2***.

1.2 Other Interpretive Provisions. References in this Agreement to "Recitals," "Articles," "Sections," "Exhibits," "Schedules" and "Annexes" are to recitals, articles, sections, exhibits, schedules and annexes herein and hereto unless otherwise indicated. References in this Agreement and each of the other Loan Documents to any document, instrument or agreement shall include (a) all exhibits, schedules, annexes and other attachments hereto and thereto, (b) all documents, instruments or agreements issued or executed in replacement thereof, and (c) such document, instrument or agreement, or replacement or predecessor hereto and thereto, as amended, modified and supplemented from time to time and in effect at any given time. The words "hereof," "herein" and "hereunder" and words of similar import when used in this Agreement or any other Loan Document shall refer to this Agreement or such other Loan Document, as the case may be, as a whole and not to any particular provision of this Agreement or such other Loan Document, as the case may be. The words "include" and "including" and words or similar import when used in this Agreement or any other Loan Document shall not be construed to be limiting or exclusive. Unless otherwise indicated in this Agreement or any other Loan Document, all accounting terms used in this Agreement or any other Loan Document shall be construed, and all accounting and financial computations hereunder or thereunder shall be computed, in accordance with generally accepted accounting principles as in effect in the United States of America from time to time.

2. LOAN AND TERMS OF PAYMENT

2.1 Commitment. Upon the terms and subject to the conditions of this Agreement and relying upon the representations and warranties herein set forth as and when made or deemed to be made, Lender agrees to lend to Borrower the Loans; *provided* that the aggregate principal amount of all Loans made hereunder shall not exceed the Commitment; *provided further,* that the aggregate principal amount of any Loan shall not exceed the Stated Cost of the equipment financed with such Loan;*provided further* that such financed equipment is delivered to Borrower within ninety (90) days of the Funding Date for such equipment. With respect to the first Loan only which shall occur within thirty (30) days of the date of this Agreement, Lender agrees to finance equipment which was delivered to Borrower on or after January 1, 2003. If prepaid, the principal of the Loans may not be re-borrowed.

2.2 Use of Proceeds; The Loan.

(a) Use of Proceeds. The proceeds of the Loan shall be used for the acquisition of new and used computers, peripherals, analytical and test equipment, laboratory equipment and furniture, office furniture and equipment, and other equipment as approved by Lender. Each invoice for such equipment shall a have a minimum value of One Thousand Dollars ($1,000). Up to thirty percent (30%) of the Commitment may be used for general corporate purposes and software, software licenses, software tools, leasehold improvements, freight, installation, taxes, permits, use fees, filing fees, maintenance, insurance and similar items and other soft costs requested in writing by Borrower (the "Soft Costs").

(b) The Loans. The Loans shall be repayable in consecutive monthly installments in accordance with the terms of**Section 2.4**. Lender may, and is hereby authorized by Borrower to, endorse in its books and records appropriate notations regarding Lender's interest in the Loans; *provided, however*, that the failure to make, or an error in making, any such notation shall not limit or otherwise affect the Obligations of Borrower hereunder.

2.3 Procedure for Making Loan.

(a) Notice. Whenever Borrower desires that Lender make a Loan, Borrower shall so notify Lender in writing (or by telephone with prompt confirmation in writing) at least ten (10) Business Days in advance of the desired Funding Date, which notice shall be irrevocable. Lender's obligation to make Loans shall be expressly subject to the satisfaction of the conditions set forth in **Sections 3.1** with regard to the initial Loan, and **3.2**. Lender shall have the right, exercisable at any time, to request that Borrower furnish Lender with such additional information with respect to the Loans as Lender shall reasonably request.

(b) Loan Interest Rate. Borrower shall pay interest on the unpaid principal amount of each Loan from the Loan Commencement Date until such Loan has been paid in full, at a *per annum* rate of interest equal to the Basic Rate, determined as of the date that is ten (10) Business Days prior to the Loan Commencement Date. The Basic Rate applicable to each Loan shall be fixed for the Repayment Period and shall not be subject to change in the absence of a manifest error. All computations of interest on each Loan shall be based on a year of three hundred sixty (360) days for actual days elapsed. Notwithstanding any other provision hereof, the amount of interest payable hereunder shall not in any event exceed the maximum amount permitted by the law applicable to interest charged on commercial loans.

(c) Loan Factor Calculation. On each Loan Commencement Date, Lender shall establish the Loan Factor with respect to the applicable Loan. The Loan Factor shall be calculated in a manner to fully amortize the Loan over the Repayment Period applicable to such Loan in equal periodic installments of principal and interest. The Loan Factor applicable to such Loan shall be set forth in the Loan Agreement Supplement prepared by Lender with respect to such Loan and shall be conclusive in the absence of a manifest error.

(d) Disbursement. Subject to the satisfaction of the conditions set forth in **Sections 3.1** and **3.2** with respect to the initial Loan and the satisfaction of the conditions set forth in **Section 3.2** with respect to each subsequent Loan, Lender shall at its election, disburse the Loans either through an ACH funds transfer arrangement or via wire transfer of funds, in each case to an account designated by Borrower.

(e) Termination of Commitment to Lend. Notwithstanding anything in the Loan Documents, Lender's obligation to lend the undisbursed portion of the Commitment to Borrower hereunder shall terminate on the earlier of (i) at the Lender's sole election, the occurrence and continuance of any Default or Event of Default hereunder, or (ii) the Commitment Termination Date. Notwithstanding the foregoing, Lender's obligation to lend the undisbursed portion of the Commitment to Borrower shall terminate if, in Lender's reasonable judgment, there has been a material adverse change in the general affairs, management, and business of the Borrower, whether or not arising from transactions in the ordinary course of business, or there has been any material adverse deviation by Borrower from the business plan of Borrower presented to Lender, since the date of this Agreement.

2.4 Amortization of Principal and Interest; Interim Payment; Final Payment

(a) Principal and Interest Payments On Payment Dates Borrower shall make payments of principal and interest in advance for each Loan (collectively, "*Scheduled Payments*"), commencing on the Loan Commencement Date (or commencing on the Funding Date if the Funding Date is the first Business Day of the calendar month) with respect to such Loan and continuing thereafter during the Repayment Period on the first Business Day of each calendar month (each a "*Payment Date*"),

in an amount equal to the Loan Factor multiplied by the Loan Amount for such Loan as of such Payment Date. In any event, all unpaid principal and accrued interest shall be due and payable in full on the last Payment Date with respect to such Loan. In addition to the foregoing, on the Funding Date, Borrower shall pay to Lender in advance, an amount equal to the Scheduled Payment that would otherwise be payable on the last Payment Date.

(b) Interim Payment. In addition to the Scheduled Payments, on the Loan Commencement Date for the Loan (unless the Funding Date is the first Business Day of the calendar month) Borrower shall pay to Lender an amount (the "*Interim Payment*") equal to accrued interest on the aggregate principal amount of the Loans calculated at the Basic Rate from the Funding Date (and thereafter recalculated on the first Business Day of each calendar month during which an Interim Payment is due), until commencement of the Repayment Period with respect to the Loan.

(c) Final Payment. On the Maturity Date, Borrower shall pay, in addition to the unpaid principal, if any, and accrued interest, if any, and all other amounts due on such date with respect to such Loan, an amount equal to the Final Payment with respect to such Loan.

(d) Commitment Fee. The Commitment Fee shall be applied to the expenses, advance payment, interim payments, the first month's payment and every subsequent payment until fully applied.

(e) Late Fee. A late charge on any Scheduled Payments or other sums due hereunder which are past due, in an amount equal to two percent (2%) of the past due amount, payable on demand.

2.5 Prepayments.

(a) Prepayment Upon an Event of Loss. If any Collateral is subject to an Event of Loss and Borrower is required to or elects to prepay the Loans with respect to such Collateral pursuant to **Section 6.10**, then the Loans shall be prepaid to the extent and in the manner provided in such section.

(b) Mandatory Prepayment Upon an Acceleration. If the Loans are accelerated following the occurrence of an Event of Default (other than following an Event of Loss), then Borrower shall immediately pay to Lender (i) all unpaid and remaining Interim Payments and/or Scheduled Payments with respect to the Loans outstanding and due hereunder, (ii) the Final Payment, and (iii) all other sums, if any, that shall have become due and payable hereunder with respect to any and all Obligations.

(c) Mandatory Prepayment Upon Certain Liquidation Events.

(A) If a Liquidation Event with respect to a sale of all or substantially all assets of the Borrower as set forth in clause (ii) of the definition of Liquidation Event shall occur, then Borrower shall within five (5) days following the consummation of such Liquidation Event pay to Lender (i) all unpaid and remaining Interim Payments and/or Scheduled Payments with respect to the Loans outstanding and due hereunder, (ii) the Final Payment, and (iii) all other sums, if any, that shall have become due and payable hereunder with respect to any and all Obligations.

(B) In the event there shall occur a merger or change of control of the type set forth in clauses (i) or (iii) of the definition of Liquidation Event (a "*Change of Control*"), Borrower may request in writing (a "*Continuation Request*"), not less than twenty (20) days prior to the

proposed date for the consummation of such Change of Control that Lender consent to the continued existence and enforceability of the Loan Documents against the surviving entity of such Change of Control. Lender shall, in its sole discretion, determine whether to grant such Continuation Request and Lender may consider, among other things in making its determination the credit-worthiness of the surviving entity (including Borrower if it is the surviving entity), its parents and affiliates, the financial statements and reports of operations of such entities and such other data and information as Lender may determine to be relevant to its determination; *provided however*, that in the event the surviving entity (including Borrower if it is the surviving entity) and/or its parent or affiliates is, immediately following such Change of Control, at least as credit-worthy as Borrower was as of the date of this Agreement, then Lender shall grant the Continuation Request to Borrower *provided* that Borrower furnish any items (or take any actions) requested by Lender in accordance with the next sentence. Lender may require, in connection with the granting of the Continuation Request, that (i) the surviving entity and its parents and/or affiliates expressly assume the duties and performance obligations of Borrower under each Loan Document as a condition to the granting of the Continuation Request by Lender and (ii) Borrower enter into an assignment and assumption agreement with such entity or entities as applicable. Such assignment and assumption agreement(s) shall be in form and substance reasonably satisfactory to Lender. Should (i) Borrower choose not to make a Continuation Request, (ii) Lender, in its sole discretion, determine not to grant the Continuation Request, (iii) Borrower fail to provide any information reasonably requested by Lender as part of Lender's consideration of Borrower's Continuation Request or (iv) Borrower fail to obtain the requisite assignment and assumption agreement(s), Borrower or the surviving entity may, and Lender shall be entitled to require Borrower or the surviving entity to, make a prepayment in full within five (5) days following the consummation of the Change of Control of (i) all unpaid and remaining Interim Payments and/or Scheduled Payments with respect to the Loans outstanding and due hereunder, (ii) the Final Payment, and (iii) all other sums, if any, that shall have become due and payable hereunder with respect to any and all Obligations. Nothing herein shall obligate Lender to grant such Continuation Request or to refrain from requiring prepayment under the terms of this **Section 2.5(c)** in connection with a Change of Control.

(C) There shall be no mandatory prepayment upon the happening of an initial public offering of Borrower's securities under clause (iv) of the definition of Liquidation Event in the absence of any Default or Event of Default otherwise caused thereby.

(D) The failure of Borrower to comply with the terms of this **Section 2.5** in connection with a Liquidation Event as set forth herein shall constitute an Event of Default.

(d) Voluntary Prepayment. Borrower may voluntarily prepay in full the aggregate of all Loans outstanding, *provided* that each of the following conditions is satisfied at the time of such prepayment: Borrower shall pay to Lender in full (i) all unpaid and remaining Interim Payments and/or Scheduled Payments with respect to the Loans outstanding and due hereunder, (ii) the Final Payment, and (iii) all other sums, if any, that shall have become due and payable hereunder with respect to any and all Obligations.

(e) No Other Prepayment. Borrower may not prepay any Loan except upon the occurrence of an event described in **Section 2.5(a)**, **(b)**, **(c)** or **(d)** above in which event the prepayment shall be made as described in such sections.

2.6 Other Payment Terms.

(a) Place and Manner. Borrower shall authorize Lender to cause all payments due to Lender hereunder, whether such payments are on account of the Loans, expenses, fees or other payments due Lender, to be made through an ACH funds transfer arrangement reasonably

acceptable to Lender, in lawful money of the United States, in good same day or immediately available funds to an account designated by Lender. Borrower shall execute and deliver the ACH Authorization Form substantially in the form of ***Exhibit E*** hereto, which shall authorize Lender to take all steps necessary or desirable to cause payments due Lender by Borrower hereunder to be made via an ACH system. In the event the ACH payment arrangement is terminated for any reason, Borrower shall make all payments due to Lender by payments to Lender at the address specified in **Section 11**, in lawful money of the United States and in good same day or immediately available funds.

(b) Date. Whenever any payment due hereunder shall fall due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

(c) Default Rate. If either (i) any amounts required to be paid by Borrower under this Agreement or the other Loan Documents (including principal, interest, the Final Payment payable with respect to any Loan, and any fees or other amounts) remain unpaid after such amounts are due, or (ii) an Event of Default has occurred and is continuing, Borrower shall pay interest on the aggregate, outstanding balance hereunder from the date due or from the date of the Event of Default, as applicable, until such past due amounts are paid in full or until all Events of Default are cured, as applicable, at a *per annum* rate equal to the Default Rate. All computations of such interest shall be based on a year of three hundred sixty (360) days for actual days elapsed.

2.7 Minimum Funding Amount. Except with the prior consent of Lender, in Lender's sole discretion, the amount of the requested Loan shall not be less than the Minimum Funding Amount.

2.8 Crediting Payments. The receipt by Lender of any wire transfer of funds, funds transfer, check, or other item of payment including ACH initiated debits shall be immediately applied conditionally to reduce Obligations, but shall not be considered a payment on account unless (i) such item of payment is of immediately available federal funds and (ii) other than with respect to an ACH initiated debit, is made to the appropriate deposit account of Lender or unless and until such check or other item of payment is honored when presented for payment. Notwithstanding anything to the contrary contained herein, any wire transfer or other payment received by Lender after 11:00 a.m. California time shall be deemed to have been received by Lender as of the opening of business on the immediately following Business Day.

2.9 Term. This Agreement shall become effective upon execution by Lender and Borrower, and shall continue in full force and effect during the Term. Notwithstanding the foregoing, Lender shall have the right to terminate this Agreement immediately and without notice upon the occurrence and continuance of an Event of Default.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Loan. The obligation of Lender to make the initial Loan is subject to the condition precedent that Lender shall have received, in form and substance satisfactory to Lender, all of the following:

(a) This Agreement duly executed by Borrower.

(b) The Warrants to be issued to Lender and LCP-IV duly executed by Borrower.

(c) The ACH Authorization Form in the form of ***Exhibit F*** attached hereto duly executed and delivered by Borrower.

(d) Copies of the contracts and agreements referenced in **Section 5.14** that are required by **Section 5.14** to have been delivered to Lender, and any third party consents related thereto required by Lender in connection with such contracts and agreements.

(e) An officer's certificate of Borrower with copies of the following documents attached: (i) the certificate of incorporation and by-laws of Borrower certified by Borrower as being in full force and effect on the Funding Date, (ii) incumbency and representative signatures, and (iii) resolutions authorizing the execution and delivery of this Agreement and each of the other Loan Documents.

(f) A good standing certificate from Borrower's state of incorporation and the state in which Borrower's principal place of business is located, together with certificates of the applicable governmental authorities stating that Borrower is in compliance with the franchise tax laws of each such state, each dated as of a recent date.

(g) The insurance coverage required by **Section 6.9** of this Agreement.

(h) All necessary consents of shareholders and other third parties with respect to the execution, delivery and performance of this Agreement, the Warrants and the other Loan Documents in form and substance reasonably acceptable to Lender.

(i) Payment of any unreimbursed Lender's Expenses.

(j) Such other documents, and completion of such other matters, as Lender may reasonably deem necessary or appropriate.

3.2 Conditions Precedent to all Loans. The obligation of Lender to make each Loan, including the initial Loan, is further subject to the following conditions:

(a) Evidence that no Default or Event of Default shall have occurred and be continuing.

(b) Borrower shall have provided to Lender with respect to the Collateral, original vendor invoices, bills of sale, receipts, agreements, proof of payment, and other documents as Lender shall reasonably request to evidence the ownership by Borrower of, the payment in full of the purchase price of, and the fair market value of, such Collateral, each in form and substance reasonably satisfactory to Lender. Borrower shall notify Lender in writing with respect to a request for funding for general corporate purposes as set forth in **Section 2.2(a)**.

(c) Borrower and Lender shall have executed a Loan Agreement Supplement with respect to the proposed Loan.

(d) Lender shall have received such documents, instruments and agreements, including UCC financing statements or amendments to UCC financing statements, as Lender shall reasonably request to evidence the perfection and priority of the security interests granted to Lender pursuant to **Section 4**.

(e) Borrower shall have delivered to Lender a subordination agreement, release, or estoppel letter, as appropriate, from any Person having an existing Lien superior to the Lien of Lender on any item of Collateral.

(f) Such other documents, and completion of such other matters, as Lender may reasonably deem necessary or appropriate.

3.3 Covenant to Deliver. Borrower agrees (not as a condition but as a covenant) to deliver to Lender each item required to be delivered to Lender as a condition to the Loan, if such Loan is advanced. Borrower expressly agrees that the extension of such Loan prior to the receipt by Lender of any such item shall not constitute a waiver by Lender of Borrower's obligation to deliver such item.

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower grants to Lender a valid, first priority, continuing security interest in all presently existing and hereafter acquired or arising Collateral in order to secure prompt, full and complete payment of any and all Obligations and in order to secure prompt, full and complete performance by Borrower of each of its covenants and duties under each of the Loan Documents.

4.2 Duration of Security Interest. Lender's security interest in the Collateral shall continue until the payment in full and the satisfaction of all Obligations, whereupon such security interest shall terminate; *provided, however*, if any item of Collateral is subject to an Event of Loss, then following the prepayment of the Loan with respect to such item pursuant to **Section 2.5**, Lender shall release its security interest in such item of Collateral. Lender shall, at Borrower's sole cost and expense, execute such further documents and take such further actions as may be necessary to effect the release contemplated by this **Section 4.2**, including duly executing and delivering termination statements for filing in all relevant jurisdictions under the Code.

4.3 Possession of Collateral. So long as no Event of Default has occurred and is continuing, Borrower shall remain in full possession, enjoyment and control of the Collateral (except only as may be otherwise required by Lender for perfection of their security interest therein) and shall be entitled to manage, operate and use the same and each part thereof with the rights and franchises appertaining thereto; *provided, however*, that the possession, enjoyment, control and use of the Collateral shall at all times be subject to the observance and performance of the terms of this Agreement.

4.4 Markings on the Collateral. At Lender's request at any time during the Term of the Loan (including any extension thereof), Borrower shall place in a conspicuous location on each item of Collateral a plaque or other marking to be supplied by Lender which reads substantially as follows:

Lighthouse Capital Partners V, L.P. has a first priority security interest in this item of equipment.

Such plaque or other marking shall not be removed (or if removed or damaged such plaque or other marking shall be replaced) until the security interest in favor of Lender in such item of Collateral is terminated pursuant to this Agreement.

4.5 Delivery of Additional Documentation Required. Borrower shall from time to time execute and deliver to Lender, all financing statements and other documents such Lender may reasonably request, in form satisfactory to Lender, to perfect and continue Lender's perfected security interests in the Collateral and in order to consummate fully all of the transactions contemplated under the Loan Documents.

4.6 Right to Inspect. Lender (through any of its officers, employees, or agents) shall have the right, upon reasonable prior notice, from time to time during Borrower's usual business hours, to inspect Borrower's Books and to make copies thereof and to check, test, and appraise the Collateral in order to verify Borrower's financial condition or the amount, condition of, or any other matter relating to, the Collateral.

5. REPRESENTATIONS AND WARRANTIES

Borrower represents, warrants and covenants as follows:

5.1 Due Organization and Qualification. Borrower is a corporation duly existing and in good standing under the laws of its state of incorporation and qualified and licensed to do business in, and is in good standing in, any state in which the conduct of its business or its ownership of Property requires that it be so qualified or in which the Collateral is located, except for such states as to which any failure so to qualify would not have a material adverse effect on Borrower.

5.2 Authority. Borrower has all necessary power and authority to execute, deliver, and perform in accordance with the terms thereof, the Loan Documents to which it is a party. Borrower has all requisite power and authority to own and operate its properties and to carry on its businesses as now conducted.

5.3 Subsidiaries. Borrower has no Subsidiaries, except those listed in ***Schedule 2*** hereto.

5.4 Conflict with Other Instruments, etc. Neither the execution and delivery of any Loan Document to which Borrower is a party nor the consummation of the transactions therein contemplated nor compliance with the terms, conditions and provisions thereof will conflict with or result in a breach of any of the terms, conditions or provisions of the certificate of incorporation and the by-laws, or other organizational documents of Borrower or any material violation of any law applicable to Borrower or any regulation, order, writ, injunction or decree of any court or governmental instrumentality applicable to Borrower or any material agreement or instrument to which Borrower is a party or by which it or any of its properties is bound or to which it or any of its properties is subject, or constitute a default thereunder or result in the creation or imposition of any Lien, other than Permitted Liens.

5.5 Authorization; Enforceability. The execution and delivery of this Agreement, the granting of the security interest in the Collateral, the incurring of the Loans, the execution and delivery of the other Loan Documents to which Borrower is a party and the consummation of the transactions herein and therein contemplated have each been duly authorized by all necessary action on the part of Borrower. The Loan Documents have been duly executed and delivered and constitute legal, valid and binding obligations of Borrower, enforceable against Borrower in accordance with their respective terms, except as the enforceability thereof may be limited by bankruptcy, insolvency or other similar laws of general application relating to or affecting the enforcement of creditors' rights or by general principles of equity.

5.6 No Prior Encumbrances. Borrower has good and marketable title to the Collateral, free and clear of Liens, except for the first priority lien held by the Lender and except for other Permitted Liens. Borrower has not acquired any part of the Collateral from an assignor outside the ordinary course of such assignor's business.

5.7 Name; Location of Chief Executive Office, Principal Place of Business and Collateral Borrower has not done business under any name other than that specified on the signature page hereof. The chief executive office, principal place of business, and the place where Borrower maintains its records concerning the Collateral are presently located at the address set forth in **Section 11**. The Collateral is presently located at the addresses set forth in**Section 11** or as listed on ***Schedule 2*** hereof.

5.8 Litigation. There are no actions or proceedings pending by or against Borrower before any court or administrative agency in which an adverse decision could have a material adverse effect on Borrower or the aggregate value of the Collateral. Borrower does not have knowledge of any such pending or threatened actions or proceedings.

5.9 Financial Statements. All financial statements relating to Borrower or any Affiliate that have been or may hereafter be delivered by Borrower to Lender present fairly in all material respects Borrower's financial condition as of the date thereof and Borrower's results of operations for the period then ended.

5.10 Solvency. Borrower is solvent and able to pay its debts (including trade debts) as they mature.

5.11 Taxes. Borrower has filed or caused to be filed all tax returns required to be filed, and has paid, or has made adequate provision for the payment of, all taxes that are due and payable, except for such taxes that are being contested in good faith by appropriate proceedings and for which adequate reserves have been created in accordance with generally accepted accounting principles.

5.12 Consents and Approvals. No approval, authorization or consent of any trustee or holder of any indebtedness or obligation of Borrower or of any other Person under any material agreement, contract, lease or license or similar document or instrument to which Borrower is a party or by which Borrower is bound, is required to be obtained by Borrower in order to make or consummate the transactions contemplated under the Loan Documents. All consents and approvals of, filings and registrations with, and other actions in respect of, all Governmental Authorities required to be obtained by Borrower in order to make or consummate the transactions contemplated under the Loan Documents have been, or prior to the time when required will have been, obtained, given, filed or taken and are or will be in full force and effect.

5.13 Trademarks, Patents, Copyrights, Franchises and Licenses. Borrower licenses, possesses and/or owns all necessary trademarks, trade names, copyrights, patents, patent rights, franchises and licenses which are material to the conduct of its business as now operated.

5.14 Material Contracts. Borrower has disclosed to Lender in writing all currently effective material contracts and material agreements (whether written or oral) to which Borrower is a party. There are no material defaults under any such contract or agreement by Borrower. Borrower has delivered to Lender true and correct copies of all such contracts or agreements with respect to any Indebtedness of Borrower (or, with respect to oral contracts or agreements, written descriptions of the material terms thereof).

5.15 Full Disclosure. No representation, warranty or other statement made by Borrower in any Loan Document, certificate or written statement furnished to Lender contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in such certificates or statements not misleading.

6. AFFIRMATIVE COVENANTS

Borrower covenants and agrees that, until the full and complete payment of the Obligations and the termination of the Commitments, Borrower shall do all of the following:

6.1 Good Standing. Borrower shall maintain its corporate existence and its good standing in its jurisdiction of incorporation and maintain qualification in each jurisdiction in which the failure to so qualify could have a material adverse effect on the financial condition, operations or business of Borrower. Borrower shall maintain in force all licenses, approvals and agreements, the loss of which could have a material adverse effect on its financial condition, operations or business.

6.2 Government Compliance. Borrower shall comply with all statutes, laws, ordinances and government rules and regulations to which it is subject, noncompliance with which could materially adversely affect the financial condition, operations or business of Borrower.

6.3 Financial Statements, Reports, Certificates. Borrower shall deliver to Lender: (a) as soon as available, but in any event within thirty (30) days after the end of each month, a company prepared balance sheet, income statement and cash flow statement covering Borrower's operations during such period, certified by a Responsible Officer; (b) commencing with the 2003 fiscal year, as soon as available, but in any event within one hundred twenty (120) days after the end of Borrower's fiscal year, audited financial statements of Borrower prepared in accordance with generally accepted accounting principles, consistently applied, together with an unqualified opinion on such financial statements of a nationally recognized or other independent public accounting firm reasonably acceptable to Lender; (c) promptly upon becoming available, copies of all statements, reports and notices sent or made available generally by Borrower to its security holders; (d) immediately upon receipt of notice thereof, a report of any material legal actions pending or threatened against Borrower; and (e) such other financial information as Lender may reasonably request from time to time.

6.4 Certificates of Compliance. Each time financial statements are furnished pursuant to Section 6.3 above, there shall be delivered to Lender a certificate signed by a Responsible Officer (each an "*Officer's Certificate*") with respect to such financial reports to the effect that: (i) no Event of Default or Default has occurred and is continuing hereunder since the date of this Agreement or, if later, since the date of the prior Officer's Certificate or, if such an event or condition has occurred and is continuing, the nature and extent thereof and the action Borrower proposes to take with respect thereto, and (ii) Borrower is in compliance with the provisions of **Sections 6** and **7**.

6.5 Notice of Event of Loss. As soon as possible, and in any event within ten (10) days thereafter, Borrower shall notify Lender in writing in reasonable detail of any Event of Loss.

6.6 Notice of Defaults. As soon as possible, and in any event within five (5) days after the discovery of a Default or an Event of Default provide Lender with an Officer's Certificate of Borrower setting forth the facts relating to or giving rise to such Default or Event of Default and the action which Borrower proposes to take with respect thereto.

6.7 Taxes. Borrower shall make due and timely payment or deposit of all federal, state, and local taxes, assessments, or contributions required of it by law or imposed upon any properties belonging to it, and will execute and deliver to Lender, on demand, appropriate certificates attesting to the payment or deposit thereof; and Borrower will make timely payment or deposit of all tax payments and withholding taxes required of it by applicable laws, including those laws concerning F.I.C.A., F.U.T.A., state disability, and local, state, and federal income taxes, and will, upon request, furnish Lender with proof satisfactory to Lender indicating that Borrower has made such payments or deposits; *provided* that Borrower need not make any payment if the amount or validity of such payment is contested in good faith by appropriate proceedings and is adequately reserved against by Borrower.

6.8 Use; Maintenance.

(a) Borrower, at its expense, shall make all necessary site preparations and cause the Collateral to be operated in accordance with any applicable manufacturer's manuals or instructions. So long as no Default or Event of Default has occurred and is continuing, Borrower shall have the right to quietly possess and use the Collateral as provided herein without interference by Lender (except as necessary to protect Lender's security interest in the Collateral).

(b) Borrower, at its expense, shall maintain the Collateral in good condition, reasonable wear and tear excepted, and will comply in all material respects with all laws, rules and regulations to which the use and operation of the Collateral may be or become subject. Such obligation shall extend to repair and replacement of any partial loss or damage to the Collateral, regardless of the cause. If maintenance is mandated by manufacturer, Borrower shall obtain and keep in effect, at all times during the Term maintenance service contracts with suppliers approved by Lender, such approval not to be unreasonably withheld. All parts furnished in connection with such maintenance or repair shall immediately become part of the Collateral. All such maintenance, repair and replacement services shall be immediately paid for and discharged by Borrower with the result that no Lien will attach to the Collateral.

6.9 Insurance.

(a) Borrower, at its own expense, shall obtain and maintain in amounts and coverages reasonably satisfactory to Lender (a) insurance against loss or damage to the Collateral, (b) commercial general liability insurance, including contractual liability, products liability and completed operations coverage according to standard industry practices, and (c) such other insurance against such other risks of loss and with such terms as shall be reasonably satisfactory to or reasonably required by Lender as to carriers, amounts and otherwise. The amount of insurance covering loss or damage to the Collateral shall be the greater of (i) outstanding balance of the Loan Amount with respect to such Collateral or (ii) replacement cost of the Collateral.

(b) The amount of commercial general public liability insurance (other than products liability coverage and completed operations insurance) shall be at least Two Million Dollars ($2,000,000) per occurrence. The amount of such products liability and completed operations insurance shall be at least Two Million Dollars ($2,000,000) per occurrence. The general public liability insurance may be maintained through use of an "umbrella" (excess liability) policy, provided that such "umbrella" policy together with the primary policy which it supplements shall provide coverage in the aggregate meeting the requirements of this Section. The deductible with respect to insurance against loss or damage to the Collateral and product liability insurance shall not exceed Twenty-five Thousand Dollars ($25,000); otherwise there shall be no deductible with respect to any insurance required to be maintained hereunder without the prior written approval of Lender. Each such insurance policy shall: (i) name Lender loss payee or additional insured, as appropriate, (ii) provide for insurer's waiver of its right of subrogation against Lender and Borrower, (iii) provide that such insurance shall not be invalidated by any action of, or breach of warranty by, Borrower and waive set-off, counterclaim or offset against Lender, (iv) provide that Borrower's insurance shall be primary without a right of contribution of Lender's insurance, if any, or any obligation on the part of Lender to pay premiums of Borrower, and (v) require the insurer to give Lender at least thirty (30) days prior written notice of cancellation. Borrower shall, on or prior to the first disbursement of funds hereunder and prior to each policy renewal, furnish to Lender certificates of insurance. Borrower shall give Lender prompt notice of any damage to, or loss of, any Collateral.

6.10 Loss; Damage; Destruction and Seizure.

(a) Borrower shall bear the risk of the Collateral being lost, stolen, destroyed, damaged beyond repair, rendered permanently unfit for use, or seized by a governmental authority for any reason whatsoever at any time until the expiration or termination of the Term.

(b) If during the Term any item of Collateral becomes obsolete or is lost, stolen, destroyed, damaged beyond repair, rendered permanently unfit for use, or seized by a governmental authority for any reason whatsoever for a period equal to at least the remainder of the Term (an "*Event of Loss*"), then in each case Lender shall receive from the proceeds of insurance maintained pursuant to **Section 6.9**, from any award paid by the seizing governmental authority or, to the extent not received from the proceeds of insurance or award or both, from Borrower, on or before the Payment Date next succeeding such Event of Loss, an amount equal to the sum of: (i) the pro rata portion of all unpaid and remaining Interim Payments and/or Scheduled Payments with respect to the Loans outstanding and due hereunder related to the specific item(s) of Collateral which were the subject of an Event of Loss, and (ii) the pro rata portion of Final Payment related to the Loans outstanding and due hereunder related to the item(s) of Collateral which were the subject of an Event of Loss, and (iii) all other sums, if any, that shall have become due and payable hereunder with respect to such item(s) of Collateral which were the subject of an Event of Loss, including interest at the Default Rate with respect to any past due amounts. On the date of receipt by Lender of the amount specified above with respect to each such item of Collateral subject to an Event of Loss, this Agreement shall terminate as to such specific items of Collateral. Except as provided in **Section 6.10(c)**, any proceeds of insurance maintained by Borrower pursuant to **Section 6.9** and received by Borrower up to the amount calculated in the previous sentence shall be paid to Lender promptly upon their receipt by Borrower, net of any sums previously furnished by Borrower to Lender on account of an Event of Loss under this **Section 6.10(b)**. If any proceeds of insurance or awards received from governmental authorities are in excess of the amount owed under this **Section 6.10**, Lender shall promptly remit to Borrower the amount in excess of the amount owed to Lender.

(c) So long as no Event of Default has occurred and is continuing, any proceeds of insurance maintained pursuant to **Section 6.9** received by Lender or Borrower with respect to an item of Collateral, the repair or replacement of which is practicable, shall, at the election of Borrower, be applied either to the repair or replacement of such Collateral or, upon Lender's receipt of evidence of the repair or replacement of the Collateral reasonably satisfactory to Lender, to the reimbursement of Borrower for the cost of such repair or replacement. All replacement parts and equipment acquired by Borrower in replacement of Collateral pursuant to this **Section 6.10(c)** shall immediately become part of the Collateral upon acquisition by Borrower. Borrower shall take such actions and provide such documentation as may be reasonably requested by Lender to protect and preserve their first priority security interest and otherwise to avoid any impairment of Lender's rights under the Loan Documents in connection with such repair or replacement.

6.11 Consultation Rights. Up and until a Liquidation Event and subject to the limitations set forth in subsections **(b)** and **(c)** of this **Section 6.11**, Borrower shall permit Lender to participate in the deliberations of Borrower's management and attempt to influence the conduct of Borrower's management through the exercise, at reasonable times, of the following consultation rights:

(a) Lender shall be entitled to consult with and advise Borrower's management on significant business issues, including management's proposed annual operating plans, and management will meet with Lender regularly during each year at mutually agreeable times (at least twice per calendar year) for such consultation and advice and to review progress and operating results.

(b) In addition to its rights under **Section 4.6**, Lender may request information at reasonable times and intervals concerning Borrower's financial condition and operations, provided that access to highly confidential proprietary information need not be provided unless otherwise required or consented to under this Agreement.

(c) Borrower shall provide Lender's designated representative copies of all notices, minutes, consents and other material that Borrower provides to its board of directors. The representative may be excluded from access to any material or meeting or portion thereof if Borrower believes, upon advice of counsel, that such exclusion is reasonably necessary to preserve the attorney-client privilege, to protect highly confidential proprietary information or for other similar reasons, provided that access is not otherwise required pursuant to another provision of this Agreement. Upon reasonable notice and at a scheduled meeting of the Board of Directors or such other time, if any, as the Board of Directors may determine in its sole discretion, such representative may address the Board of Directors with respect to Lender's concerns regarding significant business issues facing Borrower.

(d) The rights of Lender under this **Section 6.11** to consult with and advise Borrower concerning significant business issues shall not be deemed or urged by Borrower to vest Lender with the power or right to control the conduct of management of Borrower. Borrower agrees that nothing in this **Section 6.11** relieves Borrower's management or Board of Directors of their respective fiduciary duties under applicable law.

Notwithstanding the foregoing provisions of this **Section 6.11**, Lender's rights granted herein shall not extend to, and Borrower agrees that Lender shall have no control, management or influence over Borrower of any kind respecting, any matter concerning: (i) the payment of any vendor or creditor of the Borrower, (ii) the content of any document filed with the Securities and Exchange Commission or any other state or federal regulatory body or agency, (iii) the transport, handling or storage of any material or waste designated as hazardous or otherwise regulated or controlled under any law, regulation or ordinance, (iv) payroll tax, (v) pension plans, or (vi) the termination of non-executive employees.

6.12 ACH Further Assurances. In addition to and without limitation of **Section 6.14**, Borrower agrees that it shall provide Lender with not less than thirty (30) days prior written notice of the closure or planned depletion of any account designated as an account for ACH debits and/or credits on the ACH Authorization Form executed and delivered by Borrower to Lender. Borrower further agrees that should it establish any other accounts in substitution for such closed or depleted accounts, or shall otherwise establish any new deposit or operating accounts from which payments hereunder may be made, it shall notify Lender of the same and at Lender's request, Borrower shall execute a new ACH Authorization Form in favor of Lender granting Lender authority to create ACH debit and/or credit entries in such accounts for the purposes of effecting payments under **Section 2.7(a)**. Borrower shall take all steps reasonably requested by Lender to maintain an ACH payment arrangement with Lender for so long as any Obligations remain outstanding.

6.13 Litigation. Borrower will promptly notify Lender in writing if any action, proceeding or governmental investigation involving Borrower is commenced that may result in damages or costs to Borrower of Two Hundred Fifty Thousand Dollars ($250,000) or more or that could have a material adverse effect on Borrower or the aggregate value of the Collateral or the priority of Lender's security interest in the Collateral.

6.14 Further Assurances. At any time and from time to time Borrower shall execute and deliver such further instruments and take such further action as may reasonably be requested by Lender to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS

Borrower covenants and agrees that until the full and complete payment of the Obligations and termination of the Commitments, Borrower will not do any of the following:

7.1 Chief Executive Office; Location of Collateral. Change Borrower's name, change the state of incorporation, chief executive office or principal place of business or remove or cause to be removed, except in the ordinary course of Borrower's business, the Collateral or the records concerning the Collateral from the premises listed on the cover page without thirty (30) days prior written notice to Lender.

7.2 Extraordinary Transactions and Disposal of Assets. Enter into any transaction not in the ordinary and usual course of Borrower's business, including the sale, lease, license or other disposition of, moving, relocation, or transfer, whether by sale or otherwise, of Borrower's assets, other than (i) sales of inventory in the ordinary and usual course of Borrower's business as presently conducted and (ii) sales or other dispositions in the ordinary course of business of assets, other than Collateral, that have become worn out or obsolete or that are promptly being replaced.

Notwithstanding anything contained in this **Section 7.2**, the Borrower may do any of the following: (i)transfer licenses and similar arrangements for use of its intellectual property, in arm's length transactions, in the ordinary course of its business for adequate consideration (ii) declare and make any dividend payment payable in its equity securities, (iii) convert any of its convertible securities into other securities pursuant to the terms of such convertible securities or otherwise in exchange therefor, (iv) repurchase stock from former employees of Borrower in accordance with the terms of repurchase, vesting or similar agreements between Borrower and such employees in its ordinary course of business in an amount not to exceed Fifty Thousand Dollars ($50,000), (v) repurchase equity securities with the proceeds from the issuance of equity securities, (vi) repurchase, redeem, retire, defease or otherwise acquire for value equity securities in connection with or pursuant to any employees benefit plan or stock option plan of the Borrower, and (vii) enter into a Liquidation Event *provided* the applicable provisions of **Section 2.5** above are met to Lender's satisfaction and*provided* no Event of Default has occurred and is continuing and is not otherwise caused thereby.

7.3 Restructure. Make any material change in Borrower's financial structure or business operations; cause, permit, or suffer any material change in Borrower's ownership (other than through the sale of preferred stock to equity investors or an event as set forth in clause (iv) of the definition of Liquidation Event); or suspend operation of Borrower's business.

7.4 Liens. Create, incur, assume or suffer to exist any Lien or any other encumbrance of any kind with respect to any of its Collateral, whether now owned or hereafter acquired, except for Permitted Liens.

8. EVENTS OF DEFAULT

Any one or more of the following events shall constitute an Event of Default by Borrower under this Agreement:

8.1 Payment Default. If Borrower fails to pay within three (3) days of the date when due and payable or when declared due and payable in accordance with the Loan Documents, any portion of the Obligations.

8.2 Certain Covenant Defaults. If Borrower fails to perform any obligation under **Sections 6.9**, **6.10** or **6.11**, or violates any of the covenants contained in **Section 7** of this Agreement.

8.3 Other Covenant Defaults. If Borrower fails or neglects to perform, keep, or observe any other material term, provision, condition, covenant, or agreement contained in this Agreement, in any of the other Loan Documents, or in any other present or future agreement between Borrower and Lender and as to any default under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure such default within thirty (30) days after the occurrence of such default.

8.4 Attachment. If (i) any material portion of Borrower's assets is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes into the possession of any trustee, receiver or Person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within ten (10) days, or (ii) Borrower is enjoined, restrained, or in any way prevented by court order from continuing to conduct all or any material part of its business affairs, or (iii) a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower's assets, or (iv) a notice of lien, levy, or assessment is filed of record by the United States Government, or any department, agency, or instrumentality thereof, or by any state, county, municipal, or governmental agency, which encompasses or encumbers any items of Borrower's property which are then Collateral and the same is not paid within ten (10) days after Borrower receives notice thereof; *provided* that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower.

8.5 Other Agreements. If there is a default in any agreement to which Borrower is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness.

8.6 Judgments. If a judgment or judgments for the payment of money in an amount, individually or in the aggregate, of at least Fifty Thousand Dollars ($50,000) shall be rendered against Borrower and shall remain unsatisfied and unstayed for a period of thirty (30) days.

8.7 Redemption or Repurchase. Borrower shall, after the date of this Agreement, redeem or repurchase (a) any shares of any class or series of its preferred stock or (b) more than Fifty Thousand Dollars ($50,000) in the aggregate of common stock, in each case whether pursuant to a mandatory redemption or otherwise; *provided however*, that if with respect to the Borrower's Series B Convertible Preferred Stock, issued and outstanding on the date hereof (the "Series B Stock"), such Series B Stock shall be required to be redeemed or requested by the holders thereof to be redeemed in one or more redemptions in accordance with the terms for redemption set forth in Borrower's Amended and Restated Certificate of Incorporation as currently filed in the State of Delaware (the "Charter") (a "Redemption") while any Obligations remain outstanding hereunder or under any of the Loan Documents and (i) Lender is provided not less than sixty (60) days prior written notice of such pending or requested Redemption, and (ii) such Redemption shall not result in Borrower's available cash and cash equivalents aggregating less than Three Million Dollars immediately subsequent to such Redemption, then in such event such Redemption shall not constitute an Event of Default solely with respect to this **Section 8.7**.

8.8 Misrepresentations. If any material misrepresentation or material misstatement exists now or hereafter in any warranty, representation, statement, or report made to Lender by Borrower by any executive officer, authorized agent, or director of Borrower which relates to the Borrower or the transactions contemplated by the Loan Documents.

8.9 Breach of Warrants. If Borrower shall materially breach the terms of the Warrants.

8.10 Enforceability. If any Loan Document shall in any material respect cease to be, or Borrower shall assert that any Loan Document is not, a legal, valid and binding obligation of Borrower enforceable against the Borrower in accordance with its terms.

8.11 Involuntary Bankruptcy or Insolvency. If a proceeding shall have been instituted in a court having jurisdiction in the premises seeking a decree or order for relief in respect of Borrower in an involuntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or for the appointment of a receiver, liquidator, assignee, custodian, trustee (or similar official) of Borrower or for any substantial part of its property, or for the winding-up or liquidation of its affairs, and such proceeding shall remain undismissed or unstayed and in effect for a period of sixty (60) consecutive days or such court shall enter a decree or order granting the relief sought in such proceeding.

8.12 Voluntary Bankruptcy or Insolvency. If Borrower shall commence a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, shall consent to the entry of an order for relief in an involuntary case under any such law, or shall consent to the appointment of or taking possession by a receiver, liquidator, assignee, trustee, custodian (or other similar official) of Borrower or for any substantial part of its property, or shall make a general assignment for the benefit of creditors, or is insolvent, or shall fail generally to pay its debts as they become due, or shall take any corporate action in furtherance of any of the foregoing.

9. LENDER'S RIGHTS AND REMEDIES

9.1 Rights and Remedies. Upon the occurrence and continuance of any Default or Event of Default, Lender shall have no further obligation to advance money or extend credit to or for the benefit of Borrower. In addition, upon the occurrence and during the continuance of an Event of Default, Lender shall have the rights, options, duties and remedies of a secured party as permitted by law and, in addition to and without limitation of the foregoing, Lender may, at its election, without notice of election and without demand, do any one or more of the following, all of which are authorized by Borrower:

(a) Declare all Obligations, whether evidenced by this Agreement, by any of the other Loan Documents, or otherwise, including all remaining Interim and/or Scheduled Payments and the Final Payment due pursuant to each Loan, immediately due and payable (provided that upon the occurrence of an Event of Default described in **Section 8.11** or **8.12** all Obligations shall become immediately due and payable without any action by Lender);

(b) Without notice to or demand upon Borrower, make such payments and do such acts as Lender considers necessary or reasonable to protect its security interest in the Collateral. Borrower agrees to assemble the Collateral if Lender so requires, and to make the Collateral available to Lender as Lender may designate. Borrower authorizes Lender to enter the premises where the Collateral is located, to take and maintain possession of the Collateral, or any part of it, and to pay, purchase, contest, or compromise any encumbrance, charge, or lien which in Lender's determination appears to be prior or superior to their security interest and to pay all expenses incurred in connection therewith. With

respect to any of Borrower's owned premises, Borrower hereby grants Lender a license to enter into possession of such premises and to occupy the same, without charge, for up to one hundred twenty (120) days in order to exercise any of Lender's rights or remedies provided herein, at law, in equity, or otherwise;

(c) Without notice to Borrower, set off and apply to the Obligations any and all indebtedness at any time owing to or for the credit or the account of Borrower;

(d) Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell (in the manner provided for herein) the Collateral. Lender is hereby granted a license or other right, solely pursuant to the provisions of this **Section 9.1**, to use, without charge, Borrower's labels, patents, copyrights, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any Property of a similar nature, as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Lender's exercise of their rights under this **Section 9.1**, Borrower's rights under all licenses and all franchise agreements shall inure to Lender's benefit;

(e) Sell the Collateral at either a public or private sale, or both, by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as Lender determines are commercially reasonable;

(f) Lender may credit bid and purchase at any public sale; and

(g) Any deficiency that exists after disposition of the Collateral as provided above will be paid immediately by Borrower.

9.2 Effect of Sale. Any sale, whether under any power of sale hereby given or by virtue of judicial proceedings, shall operate to divest all right, title, interest, claim and demand whatsoever, either at law or in equity, of Borrower in and to the Property sold, and shall be a perpetual bar, both at law and in equity, against Borrower, its successors and assigns, and against any and all Persons claiming the Property sold or any part thereof under, by or through Borrower, its successors or assigns.

9.3 Power of Attorney in Respect of the Collateral Borrower does hereby irrevocably appoint Lender (which appointment is coupled with an interest) on the occurrence and continuance of an Event of Default, the true and lawful attorney in fact of Borrower with full power of substitution, for it and in its name: (a) to ask, demand, collect, receive, receipt for, sue for, compound and give acquittance for any and all rents, issues, profits, avails, distributions, income, payment draws and other sums in which a security interest is granted under **Section 4** with full power to settle, adjust or compromise any claim thereunder as fully as if Lender were Borrowers themselves, (b) to receive payment of and to endorse the name of Borrower to any items of Collateral (including checks, drafts and other orders for the payment of money) that come into such Lender's possession or under such Lender's control, (c) to make all demands, consents and waivers, or take any other action with respect to, the Collateral, (d) in Lender's discretion to file any claim or take any other action or proceedings, either in its own name or in the name of Borrower or otherwise, which Lender may reasonably deem necessary or appropriate to protect and preserve the right, title and interest of Lender in and to the Collateral, or (e) to otherwise act with respect thereto as though Lender were the outright owner of the Collateral.

9.4 Lender's Expenses. If Borrower fails to pay any amounts or furnish any required proof of payment due to third persons or entities, as required under the terms of this Agreement, then Lender may do any or all of the following: (a) make payment of the same or any part thereof; (b) set

up such reserves in Borrower's loan account as Lender deems necessary to protect Lender from the exposure created by such failure; or (c) obtain and maintain insurance policies of the type discussed in **Section 6.9** of this Agreement, and take any action with respect to such policies as Lender deem prudent. Any amounts paid or deposited by Lender shall constitute Lender's Expenses, shall be immediately due and payable, and shall bear interest at the then applicable rate hereinabove provided, and shall be secured by the Collateral. Any payments made by Lender shall not constitute an agreement by Lender to make similar payments in the future or a waiver by Lender of any Event of Default under this Agreement.

9.5 Remedies Cumulative. Lender's rights and remedies under this Agreement, the Loan Documents, and all other agreements shall be cumulative. Lender shall have all other rights and remedies not inconsistent herewith as provided under the Code, by law, or in equity. No exercise by Lender of one right or remedy shall be deemed an election, and no waiver by Lender of any Event of Default on Borrower's part shall be deemed a continuing waiver. No delay by Lender shall constitute a waiver, election, or acquiescence by it.

9.6 Application of Collateral Proceeds. The proceeds and/or avails of the Collateral, or any part thereof, and the proceeds and the avails of any remedy hereunder (as well as any other amounts of any kind held by Lender at the time of or received by Lender after, the occurrence of an Event of Default hereunder) shall be paid to and applied as follows:

(a) *First*, to the payment of out-of-pocket costs and expenses, including all amounts expended to preserve the value of the Collateral, of foreclosure or suit, if any, and of such sale and the exercise of any other rights or remedies, and of all proper fees, expenses, liability and advances, including reasonable legal expenses and attorneys' fees, incurred or made hereunder by Lender;

(b) *Second*, to the payment to Lender of the amount then owing or unpaid on the Loans including Scheduled Payments, the Final Payment, and all other payment Obligations with respect to all Loans, *provided, however,* in the event such proceeds shall be insufficient to pay in full the whole amount so due, owing or unpaid upon the Loans, then to the unpaid interest thereon, then to unpaid principal thereof, then to the Final Payment with respect to the Loans, and then to the payment of other amounts then payable to Lender under any of the Loan Documents on account of any other Obligations then outstanding; and

(c) *Third*, to the payment of the surplus, if any, to Borrower, its successors and assigns, or to whomsoever may be lawfully entitled to receive the same.

9.7 Reinstatement of Rights. If Lender shall have proceeded to enforce any right under this Agreement or any other Loan Document by foreclosure, sale, entry or otherwise, and such proceedings shall have been discontinued or abandoned for any reason or shall have been determined adversely, then and in every such case (unless otherwise ordered by a court of competent jurisdiction), Lender shall be restored to their former position and rights hereunder with respect to the Property subject to the security interest created under this Agreement.

10. WAIVERS; INDEMNIFICATION

10.1 Demand; Protest. Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees at any time held by Lender on which Borrower may in any way be liable.

10.2 Lender's Liability for Collateral. So long as Lender complies with its obligations, if any, under Section 9207 of the Code, Lender shall not in any way or manner be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage thereto occurring or arising in any manner or fashion from any cause; (c) any diminution in the value thereof; or (d) any act or default of any carrier, warehouseman, bailee, forwarding agency, or other Person whomsoever. All risk of loss, damage or destruction of the Collateral shall be borne by Borrower.

10.3 Indemnification. Whether or not the transactions contemplated hereby shall be consummated:

(a) General Indemnity. Borrower shall pay, indemnify, and hold Lender and each of its officers, directors, employees, counsel, partners, agents and attorneys-in-fact (each, an "*Indemnified Person*") harmless from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, charges, expenses or disbursements (including Lender's Expenses and reasonable attorney's fees) of any kind or nature whatsoever with respect to the execution, delivery, enforcement, performance and administration of this Agreement and any other Loan Documents, or the transactions contemplated hereby and thereby, and with respect to any investigation, litigation or proceeding (including any case, action or proceeding before any court or other Governmental Authority relating to bankruptcy, reorganization, insolvency, liquidation, dissolution or relief of debtors or any appellate proceeding) related to this Agreement or the Loans or the use of the proceeds thereof, whether or not any Indemnified Person is a party thereto (all the foregoing, collectively, the "*Indemnified Liabilities*"); *provided*, that Borrower shall have no obligation hereunder to any Indemnified Person with respect to Indemnified Liabilities arising from the gross negligence or willful misconduct of an Indemnified Person.

(b) Survival; Defense. The obligations in this **Section 10.3** shall survive payment of all other Obligations. At the election of any Indemnified Person, Borrower shall defend such Indemnified Person using legal counsel satisfactory to such Indemnified Person in such Person's sole discretion, at the sole cost and expense of Borrower. All amounts owing under this **Section 10.3** shall be paid within thirty (30) days after written demand.

11. NOTICES

Unless otherwise provided in this Agreement, all notices or demands by any party relating to this Agreement or any other agreement entered into in connection herewith shall be in writing and (except for financial statements and other informational documents which may be sent by first-class mail, postage prepaid) shall be personally delivered or sent by certified mail, postage prepaid, return receipt requested, or by prepaid facsimile to Borrower or to Lender, as the case may be, at their respective addresses set forth below:

If to Borrower: Codexis, Inc.
200 Penobscot Drive
Redwood City, California 94063
Attention: Chief Financial Officer
FAX: (650) 298-5449

With a copy to:

Patrick A. Pohlen, Esq.
Latham & Watkins LLP
135 Commonwealth Drive
Menlo Park, California 94025
FAX: (650) 463-2600

If to Lender: Lighthouse Capital Partners V, L.P.
500 Drake's Landing Road
Greenbrae, California 94904-3011
Attention: Contract Administration
FAX: (415) 925-3387

The parties hereto may change the address at which they are to receive notices hereunder, by notice in writing in the foregoing manner given to the other.

12. GENERAL PROVISIONS

12.1 Successors and Assigns. This Agreement shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties; *provided, however*, that neither this Agreement nor any rights hereunder may be assigned by Borrower without Lender's prior written consent including any consent provided under **Section 2.5(c)** with respect to certain Liquidation Events, which consent may be granted or withheld in Lender's sole discretion generally or under the provisions of **Section 2.5**, as the case may be. Lender shall have the right without the consent of or notice to Borrower to sell, transfer, negotiate, or grant participations in all or any part of, or any interest in such Lender's rights and benefits hereunder.

12.2 Time of Essence. Time is of the essence for the performance of all obligations set forth in this Agreement.

12.3 Severability of Provisions. Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

12.4 Entire Agreement; Construction; Amendments and Waivers.

(a) This Agreement and each of the other Loan Documents dated as of the date hereof, taken together, constitute and contain the entire agreement between Borrower and Lender and supersede any and all prior agreements, negotiations, correspondence, understandings and communications between the parties, whether written or oral, respecting the subject matter hereof.

(b) This Agreement is the result of negotiations between and has been reviewed by each of Borrower and Lender executing this Agreement as of the date hereof and their respective counsel; *accordingly*, this Agreement shall be deemed to be the product of the parties hereto, and no ambiguity shall be construed in favor of or against Borrower or Lender. Borrower and Lender agree that they intend the literal words of this Agreement and the other Loan Documents and that no parol evidence shall be necessary or appropriate to establish Borrower's or Lender's actual intentions.

(c) Any and all amendments, modifications, discharges or waivers of, or consents to any departures from any provision of this Agreement or of any of the other Loan Documents

shall not be effective without the written consent of Lender and Borrower. Any waiver or consent with respect to any provision of the Loan Documents shall be effective only in the specific instance and for the specific purpose for which it was given. No notice to or demand on Borrower in any case shall entitle Borrower to any other or further notice or demand in similar or other circumstances. Any amendment, modification, waiver or consent effected in accordance with this **Section 12.4** shall be binding upon Lender and on Borrower.

12.5 Reliance by Lender. All covenants, agreements, representations and warranties made herein by Borrower shall, notwithstanding any investigation by Lender, be deemed to be material to and to have been relied upon by Lender.

12.6 No Set-Offs by Borrower. All sums payable by Borrower pursuant to this Agreement or any of the other Loan Documents shall be payable without notice or demand and shall be payable in United States Dollars without set-off or reduction of any manner whatsoever.

12.7 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Agreement.

12.8 Survival. All covenants, representations and warranties made in this Agreement shall continue in full force and effect so long as any Obligations remain outstanding. The obligations of Borrower to indemnify Lender with respect to the expenses, damages, losses, costs and liabilities described in **Section 10.3** shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Lender have run.

13. No Original Issue Discount. Borrower and Lender hereby acknowledge and agree that the Warrants (the "*Warrants*") to purchase stock transferred to Lender under the Warrants to purchase stock is part of an investment unit within the meaning of Section 1273(c)(2) of the Internal Revenue Code which includes the Loans. Borrower and Lender further agree as between Borrower and Lender, that the fair market value of the Warrants is equal to US$100 and that, pursuant to Treas. Reg. § 1.1273-2(h), US$100 of the issue price of the investment unit will be allocable to the Warrants and the balance shall be allocable to the Loans. Borrower and Lender agree to prepare their federal income tax returns in a manner consistent with the foregoing agreement and, pursuant to Treas. Reg. § 1.1273, the original issue discount on the Loans shall be considered to be zero.

14. Relationship of Parties. Borrower and Lender acknowledge, understand and agree that the relationship between the Borrower, on the one hand, and Lender, on the other, is, and at all times shall remain solely that of a borrower and lender. Lender shall not under any circumstances be construed to be a partner or joint venturer of Borrower or any of its Affiliates; nor shall the Lender under any circumstances be deemed to be in a relationship of confidence or trust or a fiduciary relationship with Borrower or any of its Affiliates, or to owe any fiduciary duty to Borrower or any of its Affiliates. Lender does not undertake or assume any responsibility or duty to Borrower or any of its Affiliates to select, review, inspect, supervise, pass judgment upon or otherwise inform the Borrower or any of its Affiliates of any matter in connection with its or their Property, any Collateral held by Lender or the operations of Borrower or any of its Affiliates. Borrower and each of its Affiliates shall rely entirely on their own judgment with respect to such matters, and any review, inspection, supervision, exercise of judgment or supply of information undertaken or assumed by Lender in connection with such matters is solely for the protection of Lender and neither Borrower nor any Affiliate is entitled to rely thereon.

15. Choice of Law and Venue; Jury Trial Waiver. THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE INTERNAL LAWS OF STATE OF CALIFORNIA, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. EACH OF BORROWER AND LENDER HEREBY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS LOCATED IN THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA. BORROWER AND LENDER HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF ANY OF THE LOAN DOCUMENTS OR ANY OF THE TRANSACTIONS CONTEMPLATED THEREIN, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW OR STATUTORY CLAIMS.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first above written.

BORROWER:

CODEXIS, INC.

By: /s/ Tassos Gianakakos

Name: T. Gianakakos

Title: VP Finance & Corporate Development

LENDER:

LIGHTHOUSE CAPITAL PARTNERS V, L.P.

By: **LIGHTHOUSE MANAGEMENT PARTNERS V, L.L.C.**, its general partner

By: /s/ Dennis Ryan

Name: Dennis Ryan

Title: Chief Operating Officer

Exhibit A	- Collateral
Exhibit B-1 and B-2	- Warrants
Exhibit C	- Loan Agreement Supplement
Exhibit D	- Ancillary Documents
Exhibit E	- ACH Authorization Form

Schedule 1 – Existing Liens
Schedule 2 – Subsidiaries and Collateral Locations

EXHIBIT A

DEBTOR/BORROWER: **Codexis, Inc.**

SECURED PARTY/LENDER: **Lighthouse Capital Partners V, L.P.**

COLLATERAL

The Collateral shall consist of all right, title and interest of Debtor in and to all the following:

All right, title, interest, claims and demands of Debtor in and to each and every item of equipment, fixtures or personal property that is financed pursuant to Loan and Security Agreement 3771 by and between Debtor and Secured Party, including without limitation, the equipment, fixtures and personal property described in ***Annex A*** attached hereto whether now owned or hereafter acquired, wherever located, together with all substitutions, renewals or replacements of and additions, improvements, accessions and accumulations to any and all of such equipment, fixtures or personal property together with all the rents, issues, income, profits and avails therefrom and all of the products and proceeds thereof, including without limitation, insurance, proceeds of insurance, proceeds of proceeds, condemnation, requisition or similar payments, and all proceeds from sales, renewals, releases or other dispositions thereof.

ANNEX A
TO
EXHIBIT A

The following represent further specific descriptions of the Financed Equipment:

Financed Equipment

EXHIBITS B-1 AND B-2

WARRANTS

EXHIBIT B-1

THIS WARRANT HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "*1933 ACT*"), OR ANY APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE SOLD OR TRANSFERRED UNLESS SUCH SALE OR TRANSFER IS IN ACCORDANCE WITH THE REGISTRATION REQUIREMENTS OF SUCH ACT AND APPLICABLE LAWS OR SOME OTHER EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF SUCH ACT AND APPLICABLE LAWS IS AVAILABLE WITH RESPECT THERETO.

COMMON STOCK PURCHASE WARRANT

Warrant No._____ Number of Shares: 23,088

CODEXIS, INC.

Effective as of February 12, 2004

Void after February 12, 2011

1. Issuance. This Common Stock Purchase Warrant (the "*Warrant*") is issued to **LIGHTHOUSE CAPITAL PARTNERS V, L.P.** by **CODEXIS, INC.**, a Delaware corporation (hereinafter with its successors called the "*Company*").

2. Purchase Price; Number of Shares. The registered holder of this Warrant (the "*Holder*"), commencing on the date hereof, is entitled upon surrender of this Warrant with the subscription form annexed hereto duly executed, at the principal office of the Company, to purchase from the Company at a price per share of $0.40 (the "*Purchase Price*"), 23,088 fully paid and nonassessable shares of Common Stock, $0.0001 par value, of the Company (the "*Common Stock*").

Until such time as this Warrant is exercised in full or expires, the Purchase Price and the securities issuable upon exercise of this Warrant are subject to adjustment as hereinafter provided. The person or persons in whose name or names any certificate representing shares of Common Stock is issued hereunder shall be deemed to have become the holder of record of the shares represented thereby as at the close of business on the date this Warrant is exercised with respect to such shares, whether or not the transfer books of the Company shall be closed.

3. Payment of Purchase Price. The Purchase Price may be paid (a) in cash or by check, or (b) by any combination of the foregoing.

4. Net Issue Election. The Holder may elect to receive, without the payment by the Holder of any additional consideration, shares of Common Stock equal to the value of this Warrant or any portion hereof by the surrender of this Warrant or such portion to the Company, with the net issue election notice annexed hereto duly executed, at the principal office of the Company. Thereupon, the Company shall issue to the Holder such number of fully paid and nonassessable shares of Common Stock as is computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

where: X = the number of shares of Common Stock to be issued to the Holder pursuant to this **Section 4**.

Y = the number of shares of Common Stock covered by this Warrant in respect of which the net issue election is made pursuant to this **Section 4**.

A = the Fair Market Value (defined below) of one share of Common Stock as determined at the time the net issue election is made pursuant to this **Section 4**.

B = the Purchase Price in effect under this Warrant at the time the net issue election is made pursuant to this **Section 4**.

"*Fair Market Value*" of a share of Common Stock as of the date that the net issue election is made (the "*Determination Date*") shall mean:

(i) If the net issue election is made in connection with and contingent upon the closing of the sale of the Company's Common Stock to the public in a public offering pursuant to a Registration Statement under the 1933 Act (a "*Public Offering*"), and if the Company's Registration Statement relating to such Public Offering ("*Registration Statement*") has been declared effective by the Securities and Exchange Commission, then the initial "Price to Public" specified in the final prospectus with respect to such offering.

(ii) If the net issue election is not made in connection with and contingent upon a Public Offering, then as follows:

(a) If traded on a securities exchange or the Nasdaq National Market, the fair market value of the Common Stock shall be deemed to be the average of the closing or last reported sale prices of the Common Stock on such exchange or market over the five day period ending five trading days prior to the Determination Date;

(b) If otherwise traded in an over-the-counter market, the fair market value of the Common Stock shall be deemed to be the average of the closing ask prices of the Common Stock over the five day period ending five trading days prior to the Determination Date; and

(c) If there is no public market for the Common Stock, then fair market value shall be determined in good faith by the Company's Board of Directors.

5. Partial Exercise. This Warrant may be exercised in part, and the Holder shall be entitled to receive a new warrant, which shall be dated as of the date of this Warrant, covering the number of shares in respect of which this Warrant shall not have been exercised.

6. Fractional Shares. In no event shall any fractional share of Common Stock be issued upon any exercise of this Warrant. If, upon exercise of this Warrant in its entirety, the Holder would, except as provided in this **Section 6**, be entitled to receive a fractional share of Common Stock, then the Company shall pay cash equal to the product of such fraction multiplied by the Common Stock's fair market value (as determined by the Board of Directors) on the date of exercise.

7. Expiration Date; Automatic Exercise. This Warrant shall expire at the close of business on February 12, 2011, and shall be void thereafter. Notwithstanding the foregoing, this Warrant shall automatically be deemed to be exercised in full pursuant to the provisions of **Section 4** hereof, without any further action on behalf of the Holder, immediately prior to the time this Warrant would otherwise expire pursuant to the preceding sentence.

8. Reserved Shares; Valid Issuance. The Company covenants that it will at all times from and after the date hereof reserve and keep available such number of its authorized shares of Common Stock, free from all preemptive or similar rights therein, as will be sufficient to permit the exercise of this Warrant in full. The Company further covenants that such shares as may be issued pursuant to such exercise will, upon issuance in accordance with the terms hereof, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issuance thereof.

9. Stock Splits and Dividends. If after the date hereof the Company shall subdivide the Common Stock, by split-up or otherwise, or combine the Common Stock, or issue additional shares of Common Stock in payment of a stock dividend on the Common Stock, the number of shares of Common Stock issuable on the exercise of this Warrant shall forthwith be proportionately increased in the case of a subdivision or stock dividend, or proportionately decreased in the case of a combination, and the Purchase Price shall forthwith be proportionately decreased in the case of a subdivision or stock dividend, or proportionately increased in the case of a combination.

10. Antidilution Rights. The other antidilution rights applicable to the Common Stock of the Company are set forth in the Amended and Restated Certificate of Incorporation, as amended from time to time (the "*Articles*"), a true and complete copy in its current form which is attached hereto as ***Exhibit A***. Such rights shall not be restated, amended or modified in any manner which affects the Holder differently than the holders of Common Stock without such Holder's prior written consent. The Company shall promptly provide the Holder hereof with any restatement, amendment or modification to the Articles promptly after the same has been made.

11. Dissolutions, Liquidations, Mergers or Changes in Control.

(a) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Company shall notify the Holder as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, the Warrant will terminate immediately prior to the consummation of such proposed action.

(b) Merger or Change in Control. In the event of a merger of the Company with or into another corporation, or a Change in Control, the Warrant shall be assumed or an equivalent warrant substituted by the successor corporation or a parent or subsidiary of the successor corporation. In the event that the successor corporation or parent or subsidiary of the successor corporation in a merger or Change in Control refuses to assume or substitute for the Warrant, then the Company shall notify the Holder in accordance with the provisions of **Section 13** hereof of the pending Change of Control and Holder may then elect to exercise the Warrant not less than three (3) days prior to the effective date of the Change of Control.

(c) "*Change in Control*" means the occurrence of any of the following events:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "*Exchange Act*")) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) The consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or

(iii) The consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

12. Certificate of Adjustment. Whenever the Purchase Price is adjusted, as herein provided, the Company shall promptly deliver to the Holder a certificate of the Company's chief financial officer setting forth the Purchase Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

13. Notices of Record Date, Etc. In the event of:

(a) any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend or other distribution, or any right to subscribe for, purchase, sell or otherwise acquire or dispose of any shares of stock of any class or any other securities or property, or to receive any other right;

(b) any reclassification of the capital stock of the Company, capital reorganization of the Company, consolidation or merger involving the Company, or sale or conveyance of all or substantially all of its assets; or

(c) any voluntary or involuntary dissolution, liquidation or winding-up of the Company;

then in each such event the Company will provide or cause to be provided to the Holder a written notice thereof. Such notice shall be provided at least ten (10) days prior to the date specified in such notice on which any such action is to be taken.

14. Representations, Warranties and Covenants. This Warrant is issued and delivered by the Company and accepted by each Holder on the basis of the following representations, warranties and covenants made by the Company as of the date of issuance of this initial Warrant to the initial Holder:

(a) The Company has all necessary authority to issue, execute and deliver this Warrant and to perform its obligations hereunder. This Warrant has been duly authorized issued, executed and delivered by the Company and is the valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

(b) The shares of Common Stock issuable upon the exercise of this Warrant have been duly authorized and reserved for issuance by the Company and, when issued in accordance with the terms hereof, will be validly issued, fully paid and nonassessable.

(c) The issuance, execution and delivery of this Warrant do not, and the issuance of the shares of Common Stock upon the exercise of this Warrant in accordance with the terms hereof will not, (i) violate or contravene the Company's Articles or by-laws, or any law, statute, regulation, rule, judgment or order applicable to the Company, (ii) violate, contravene or result in a breach or default under any contract, agreement or instrument to which the Company is a party or by which the Company or any of its assets are bound or (iii) require the consent or approval of or the filing of any notice or registration with any person or entity.

(d) As long as obligations under the Loan and Security Agreement No. 3771 between the Company and Lighthouse Capital Partners V, L.P. dated as of February 11, 2004 (the "Loan Agreement") are outstanding, the Company will provide to the Holder the financial and other information described in the Loan Agreement.

(e) As of the date hereof, the authorized capital stock of the Company consists of (i) 18,500,000 shares of Common Stock, of which 1,003,427 shares are issued and outstanding, 2,996,573 shares are reserved for issuance upon the exercise of options issued pursuant to the Company's 2002 Stock Plan and 46,176 shares are reserved for issuance upon the exercise of warrant, (ii) 6,000,000 shares of Series A Preferred Stock, of which 6,000,000 are issued and outstanding shares, and (iii) 8,101,102 shares of Series B Redeemable Preferred Stock, of which 8,101,101 are issued and outstanding shares. Attached hereto as ***Exhibit B*** is a capitalization table summarizing the capitalization of the Company. At Holder's request, not more than once per calendar quarter, the Company will provide Holder with a current capitalization table indicating changes, if any, to the number of outstanding shares of common stock and preferred stock.

15. Amendment. The terms of this Warrant may be amended, modified or waived only with the written consent of the Holder and the Company.

16. Representations and Covenants of the Holder. This Common Stock Purchase Warrant has been entered into by the Company in reliance upon the following representations, warranties and covenants of the Holder, which by its execution hereof each Holder hereby confirms:

(a) Investment Purpose. The right to acquire Common Stock contained herein will be acquired for investment and not with a view to the sale or distribution of any part thereof, and the Holder has no present intention of selling or engaging in any public distribution of the same except pursuant to a registration or exemption.

(b) Accredited Investor. Holder is an "accredited investor" within the meaning of the Securities and Exchange Rule 501 of Regulation D, as presently in effect.

(c) Private Issue. The Holder understands (i) that the Common Stock issuable upon exercise of the Holder's rights contained herein is not registered under the 1933 Act or qualified under applicable state securities laws on the ground that the issuance contemplated by this Warrant will be exempt from the registration and qualifications requirements thereof, and (ii) that the Company's reliance on such exemption is predicated on the representations set forth in this **Section 16.**

(d) Financial Risk. The Holder has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment and has the ability to bear the economic risks of its investment.

17. Notices, Transfers, Etc.

(a) Any notice or written communication required or permitted to be given to the Holder may be given by certified mail or delivered to the Holder at the address most recently provided by the Holder to the Company.

(b) Subject to compliance with applicable federal and state securities laws, this Warrant may be transferred by the Holder with respect to any or all of the shares purchasable hereunder. Upon surrender of this Warrant to the Company, together with the assignment notice annexed hereto duly

executed, for transfer of this Warrant as an entirety by the Holder, the Company shall issue a new warrant of the same denomination to the assignee. Upon surrender of this Warrant to the Company, together with the assignment hereof properly endorsed, by the Holder for transfer with respect to a portion of the shares of Common Stock purchasable hereunder, the Company shall issue a new warrant to the assignee, in such denomination as shall be requested by the Holder hereof, and shall issue to such Holder a new warrant covering the number of shares in respect of which this Warrant shall not have been transferred.

(c) In case this Warrant shall be mutilated, lost, stolen or destroyed, the Company shall issue a new warrant of like tenor and denomination and deliver the same (i) in exchange and substitution for and upon surrender and cancellation of any mutilated Warrant, or (ii) in lieu of any Warrant lost, stolen or destroyed, upon receipt of an affidavit of the Holder or other evidence reasonably satisfactory to the Company of the loss, theft or destruction of such Warrant.

18. No Impairment. The Company will not, by amendment of its Articles or through any reclassification, capital reorganization, consolidation, merger, sale or conveyance of assets, dissolution, liquidation, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance of performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Holder.

19. Governing Law. The provisions and terms of this Warrant shall be governed by and construed in accordance with the internal laws of the State of California.

20. Successors and Assigns. This Warrant shall be binding upon the Company's successors and assigns and shall inure to the benefit of the Holder's successors, legal representatives and permitted assigns.

21. Business Days. If the last or appointed day for the taking of any action required of the expiration of any rights granted herein shall be a Saturday or Sunday or a legal holiday in California, then such action may be taken or right may be exercised on the next succeeding day which is not a Saturday or Sunday or such a legal holiday.

22. Value. The Company and the Holder agree that the value of this Warrant on the date of grant is $50.

CODEXIS, INC.

By: _____

Name: _____

Title: _____

Subscription

To: _____ Date: _____

The undersigned hereby subscribes for _____ shares of Common Stock covered by this Warrant. The certificate(s) for such shares shall be issued in the name of the undersigned or as otherwise indicated below:

_____

Signature

_____

Name for Registration

_____

Mailing Address

Net Issue Election Notice

To: _____ Date: _____

The undersigned hereby elects under **Section 4** to surrender the right to purchase _____ shares of Common Stock pursuant to this Warrant. The certificate(s) for such shares issuable upon such net issue election shall be issued in the name of the undersigned or as otherwise indicated below:

_____
Signature

_____
Name for Registration

_____
Mailing Address

Assignment

For value received _____ hereby sells, assigns and transfers unto _____

[Please print or typewrite name and address of Assignee]
the within Warrant, and does hereby irrevocably constitute and appoint _____ its attorney to transfer the within Warrant on the books of the within named Company with full power of substitution on the premises.

Dated: _____

In the Presence of:

_____

EXHIBIT A

Amended and Restated Certificate of Incorporation

See attached pages.

EXHIBIT B

Capitalization Table

EXHIBIT B-2

THIS WARRANT HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "*1933 ACT*"), OR ANY APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE SOLD OR TRANSFERRED UNLESS SUCH SALE OR TRANSFER IS IN ACCORDANCE WITH THE REGISTRATION REQUIREMENTS OF SUCH ACT AND APPLICABLE LAWS OR SOME OTHER EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF SUCH ACT AND APPLICABLE LAWS IS AVAILABLE WITH RESPECT THERETO.

COMMON STOCK PURCHASE WARRANT

Warrant No. _____ Number of Shares: 23,088

CODEXIS, INC.

Effective as of February 12, 2004

Void after February 12, 2011

1. Issuance. This Common Stock Purchase Warrant (the "*Warrant*") is issued to **LIGHTHOUSE CAPITAL PARTNERS IV, L.P.** by **CODEXIS, INC.**, a Delaware corporation (hereinafter with its successors called the "*Company*").

2. Purchase Price; Number of Shares. The registered holder of this Warrant (the "*Holder*"), commencing on the date hereof, is entitled upon surrender of this Warrant with the subscription form annexed hereto duly executed, at the principal office of the Company, to purchase from the Company at a price per share of $0.40 (the "*Purchase Price*"), 23,088 fully paid and nonassessable shares of Common Stock, $0.0001 par value, of the Company (the "*Common Stock*").

Until such time as this Warrant is exercised in full or expires, the Purchase Price and the securities issuable upon exercise of this Warrant are subject to adjustment as hereinafter provided. The person or persons in whose name or names any certificate representing shares of Common Stock is issued hereunder shall be deemed to have become the holder of record of the shares represented thereby as at the close of business on the date this Warrant is exercised with respect to such shares, whether or not the transfer books of the Company shall be closed.

3. Payment of Purchase Price. The Purchase Price may be paid (a) in cash or by check, or (b) by any combination of the foregoing.

4. Net Issue Election. The Holder may elect to receive, without the payment by the Holder of any additional consideration, shares of Common Stock equal to the value of this Warrant or any portion hereof by the surrender of this Warrant or such portion to the Company, with the net issue election notice annexed hereto duly executed, at the principal office of the Company. Thereupon, the Company shall issue to the Holder such number of fully paid and nonassessable shares of Common Stock as is computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

where: X = the number of shares of Common Stock to be issued to the Holder pursuant to this **Section 4**.

Y = the number of shares of Common Stock covered by this Warrant in respect of which the net issue election is made pursuant to this **Section 4**.

A = the Fair Market Value (defined below) of one share of Common Stock as determined at the time the net issue election is made pursuant to this **Section 4**.

B = the Purchase Price in effect under this Warrant at the time the net issue election is made pursuant to this **Section 4**.

"*Fair Market Value*" of a share of Common Stock as of the date that the net issue election is made (the "*Determination Date*") shall mean:

(i) If the net issue election is made in connection with and contingent upon the closing of the sale of the Company's Common Stock to the public in a public offering pursuant to a Registration Statement under the 1933 Act (a "*Public Offering*"), and if the Company's Registration Statement relating to such Public Offering ("*Registration Statement*") has been declared effective by the Securities and Exchange Commission, then the initial "Price to Public" specified in the final prospectus with respect to such offering.

(ii) If the net issue election is not made in connection with and contingent upon a Public Offering, then as follows:

(a) If traded on a securities exchange or the Nasdaq National Market, the fair market value of the Common Stock shall be deemed to be the average of the closing or last reported sale prices of the Common Stock on such exchange or market over the five day period ending five trading days prior to the Determination Date;

(b) If otherwise traded in an over-the-counter market, the fair market value of the Common Stock shall be deemed to be the average of the closing ask prices of the Common Stock over the five day period ending five trading days prior to the Determination Date; and

(c) If there is no public market for the Common Stock, then fair market value shall be determined in good faith by the Company's Board of Directors.

5. Partial Exercise. This Warrant may be exercised in part, and the Holder shall be entitled to receive a new warrant, which shall be dated as of the date of this Warrant, covering the number of shares in respect of which this Warrant shall not have been exercised.

6. Fractional Shares. In no event shall any fractional share of Common Stock be issued upon any exercise of this Warrant. If, upon exercise of this Warrant in its entirety, the Holder would, except as provided in this **Section 6**, be entitled to receive a fractional share of Common Stock, then the Company shall pay cash equal to the product of such fraction multiplied by the Common Stock's fair market value (as determined by the Board of Directors) on the date of exercise.

7. Expiration Date; Automatic Exercise. This Warrant shall expire at the close of business on February 12, 2011, and shall be void thereafter. Notwithstanding the foregoing, this Warrant shall automatically be deemed to be exercised in full pursuant to the provisions of **Section 4** hereof, without any further action on behalf of the Holder, immediately prior to the time this Warrant would otherwise expire pursuant to the preceding sentence.

8. Reserved Shares; Valid Issuance. The Company covenants that it will at all times from and after the date hereof reserve and keep available such number of its authorized shares of Common Stock, free from all preemptive or similar rights therein, as will be sufficient to permit the exercise of this Warrant in full. The Company further covenants that such shares as may be issued pursuant to such exercise will, upon issuance in accordance with the terms hereof, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issuance thereof.

9. Stock Splits and Dividends. If after the date hereof the Company shall subdivide the Common Stock, by split-up or otherwise, or combine the Common Stock, or issue additional shares of Common Stock in payment of a stock dividend on the Common Stock, the number of shares of Common Stock issuable on the exercise of this Warrant shall forthwith be proportionately increased in the case of a subdivision or stock dividend, or proportionately decreased in the case of a combination, and the Purchase Price shall forthwith be proportionately decreased in the case of a subdivision or stock dividend, or proportionately increased in the case of a combination.

10. Antidilution Rights. The other antidilution rights applicable to the Common Stock of the Company are set forth in the Amended and Restated Certificate of Incorporation, as amended from time to time (the "*Articles*"), a true and complete copy in its current form which is attached hereto as ***Exhibit A***. Such rights shall not be restated, amended or modified in any manner which affects the Holder differently than the holders of Common Stock without such Holder's prior written consent. The Company shall promptly provide the Holder hereof with any restatement, amendment or modification to the Articles promptly after the same has been made.

11. Dissolutions, Liquidations, Mergers or Changes in Control.

(a) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Company shall notify the Holder as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, the Warrant will terminate immediately prior to the consummation of such proposed action.

(b) Merger or Change in Control. In the event of a merger of the Company with or into another corporation, or a Change in Control, the Warrant shall be assumed or an equivalent warrant substituted by the successor corporation or a parent or subsidiary of the successor corporation. In the event that the successor corporation or parent or subsidiary of the successor corporation in a merger or Change in Control refuses to assume or substitute for the Warrant, then the Company shall notify the Holder in accordance with the provisions of **Section 13** hereof of the pending Change of Control and Holder may then elect to exercise the Warrant not less than three (3) days prior to the effective date of the Change of Control.

(c) "*Change in Control*" means the occurrence of any of the following events:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "*Exchange Act*")) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) The consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or

(iii) The consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

12. Certificate of Adjustment. Whenever the Purchase Price is adjusted, as herein provided, the Company shall promptly deliver to the Holder a certificate of the Company's chief financial officer setting forth the Purchase Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment

13. Notices of Record Date, Etc. In the event of:

(a) any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend or other distribution, or any right to subscribe for, purchase, sell or otherwise acquire or dispose of any shares of stock of any class or any other securities or property, or to receive any other right;

(b) any reclassification of the capital stock of the Company, capital reorganization of the Company, consolidation or merger involving the Company, or sale or conveyance of all or substantially all of its assets; or

(c) any voluntary or involuntary dissolution, liquidation or winding-up of the Company;

then in each such event the Company will provide or cause to be provided to the Holder a written notice thereof. Such notice shall be provided at least ten (10) days prior to the date specified in such notice on which any such action is to be taken.

14. Representations, Warranties and Covenants. This Warrant is issued and delivered by the Company and accepted by each Holder on the basis of the following representations, warranties and covenants made by the Company as of the date of issuance of this initial Warrant to the initial Holder:

(a) The Company has all necessary authority to issue, execute and deliver this Warrant and to perform its obligations hereunder. This Warrant has been duly authorized issued, executed and delivered by the Company and is the valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

(b) The shares of Common Stock issuable upon the exercise of this Warrant have been duly authorized and reserved for issuance by the Company and, when issued in accordance with the terms hereof, will be validly issued, fully paid and nonassessable.

(c) The issuance, execution and delivery of this Warrant do not, and the issuance of the shares of Common Stock upon the exercise of this Warrant in accordance with the terms hereof will not, (i) violate or contravene the Company's Articles or by-laws, or any law, statute, regulation, rule, judgment or order applicable to the Company, (ii) violate, contravene or result in a breach or default under any contract, agreement or instrument to which the Company is a party or by which the Company or any of its assets are bound or (iii) require the consent or approval of or the filing of any notice or registration with any person or entity.

(d) As long as obligations under the Loan and Security Agreement No. 3771 between the Company and Lighthouse Capital Partners V, L.P. dated as of February 11, 2004 (the "Loan Agreement") are outstanding, the Company will provide to the Holder the financial and other information described in the Loan Agreement.

(e) As of the date hereof, the authorized capital stock of the Company consists of (i) 18,500,000 shares of Common Stock, of which 1,003,427 shares are issued and outstanding, 2,996,573 shares are reserved for issuance upon the exercise of options issued pursuant to the Company's 2002 Stock Plan and 46,176 shares are reserved for issuance upon the exercise of warrant, (ii) 6,000,000 shares of Series A Preferred Stock, of which 6,000,000 are issued and outstanding shares, and (iii) 8,101,102 shares of Series B Redeemable Preferred Stock, of which 8,101,101 are issued and outstanding shares. Attached hereto as ***Exhibit B*** is a capitalization table summarizing the capitalization of the Company. At Holder's request, not more than once per calendar quarter, the Company will provide Holder with a current capitalization table indicating changes, if any, to the number of outstanding shares of common stock and preferred stock.

15. Amendment. The terms of this Warrant may be amended, modified or waived only with the written consent of the Holder and the Company.

16. Representations and Covenants of the Holder. This Common Stock Purchase Warrant has been entered into by the Company in reliance upon the following representations, warranties and covenants of the Holder, which by its execution hereof each Holder hereby confirms:

(a) Investment Purpose. The right to acquire Common Stock contained herein will be acquired for investment and not with a view to the sale or distribution of any part thereof, and the Holder has no present intention of selling or engaging in any public distribution of the same except pursuant to a registration or exemption.

(b) Accredited Investor. Holder is an "accredited investor" within the meaning of the Securities and Exchange Rule 501 of Regulation D, as presently in effect.

(c) Private Issue. The Holder understands (i) that the Common Stock issuable upon exercise of the Holder's rights contained herein is not registered under the 1933 Act or qualified under applicable state securities laws on the ground that the issuance contemplated by this Warrant will be exempt from the registration and qualifications requirements thereof, and (ii) that the Company's reliance on such exemption is predicated on the representations set forth in this **Section 16.**

(d) Financial Risk. The Holder has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment and has the ability to bear the economic risks of its investment.

17. Notices, Transfers, Etc.

(a) Any notice or written communication required or permitted to be given to the Holder may be given by certified mail or delivered to the Holder at the address most recently provided by the Holder to the Company.

(b) Subject to compliance with applicable federal and state securities laws, this Warrant may be transferred by the Holder with respect to any or all of the shares purchasable hereunder. Upon surrender of this Warrant to the Company, together with the assignment notice annexed hereto duly

executed, for transfer of this Warrant as an entirety by the Holder, the Company shall issue a new warrant of the same denomination to the assignee. Upon surrender of this Warrant to the Company, together with the assignment hereof properly endorsed, by the Holder for transfer with respect to a portion of the shares of Common Stock purchasable hereunder, the Company shall issue a new warrant to the assignee, in such denomination as shall be requested by the Holder hereof, and shall issue to such Holder a new warrant covering the number of shares in respect of which this Warrant shall not have been transferred.

(c) In case this Warrant shall be mutilated, lost, stolen or destroyed, the Company shall issue a new warrant of like tenor and denomination and deliver the same (i) in exchange and substitution for and upon surrender and cancellation of any mutilated Warrant, or (ii) in lieu of any Warrant lost, stolen or destroyed, upon receipt of an affidavit of the Holder or other evidence reasonably satisfactory to the Company of the loss, theft or destruction of such Warrant.

18. No Impairment. The Company will not, by amendment of its Articles or through any reclassification, capital reorganization, consolidation, merger, sale or conveyance of assets, dissolution, liquidation, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance of performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Holder.

19. Governing Law. The provisions and terms of this Warrant shall be governed by and construed in accordance with the internal laws of the State of California.

20. Successors and Assigns. This Warrant shall be binding upon the Company's successors and assigns and shall inure to the benefit of the Holder's successors, legal representatives and permitted assigns.

21. Business Days. If the last or appointed day for the taking of any action required of the expiration of any rights granted herein shall be a Saturday or Sunday or a legal holiday in California, then such action may be taken or right may be exercised on the next succeeding day which is not a Saturday or Sunday or such a legal holiday.

22. Value. The Company and the Holder agree that the value of this Warrant on the date of grant is $50.

CODEXIS, INC.

By: _____

Name: _____

Title: _____

Subscription

To: _____ Date: _____

The undersigned hereby subscribes for _____ shares of Common Stock covered by this Warrant. The certificate(s) for such shares shall be issued in the name of the undersigned or as otherwise indicated below:

_____

Signature

_____

Name for Registration

_____

Mailing Address

Net Issue Election Notice

To: _____ Date: _____

The undersigned hereby elects under **Section 4** to surrender the right to purchase _____ shares of Common Stock pursuant to this Warrant. The certificate(s) for such shares issuable upon such net issue election shall be issued in the name of the undersigned or as otherwise indicated below:

_____
Signature

_____
Name for Registration

_____
Mailing Address

Assignment

For value received _____ hereby sells, assigns and transfers unto _____

[Please print or typewrite name and address of Assignee]
the within Warrant, and does hereby irrevocably constitute and appoint _____ its attorney to transfer the within Warrant on the books of the within named Company with full power of substitution on the premises.

Dated: _____

In the Presence of:

_____

EXHIBIT A

Amended and Restated Certificate of Incorporation

See attached pages.

EXHIBIT B

Capitalization Table

EXHIBIT C

LOAN AGREEMENT SUPPLEMENT NO. 01 dated _____

Borrower: **CODEXIS, INC.**, a Delaware corporation
Lender: **LIGHTHOUSE CAPITAL PARTNERS V, L.P.**
Loan and Security Agreement No.: 3771
Transaction Number: _____-__

Capitalized terms used herein but not otherwise defined herein are used with the respective meanings given to such terms in the Loan Agreement.

The amount being advanced under this Supplement is $____. The Loan Commencement Date is _____. The Funding Date shall be the date the amount to be advanced hereunder is disbursed to the Borrower and shall be set forth in the Summary of Loan Agreement Supplement.

Attached as ***Annex A*** hereto is a list of equipment added to the Collateral financed under the Loan Agreement. This Collateral is located at:_____

Attached as ***Annex B*** hereto is the Summary of Loan Agreement Supplement.

Borrower hereby certifies that (a) the foregoing information is true and correct and authorizes Lender to endorse in its books and records, the Loan Factor applicable to the Loan contemplated in this Loan Agreement Supplement and the principal amount set forth in the Summary of Loan Agreement Supplement; (b) the representations and warranties made by Borrower in **Section 5** of the Loan Agreement and in the other Loan Documents are true and correct on the date hereof and will be true and correct on the Funding Date; (c) Borrower has met or will by the Funding Date meet all conditions set forth in **Section 3** of the Loan Agreement; (d) Borrower is now, and on the Funding Date will be, in compliance with the covenants and the requirements contained in **Sections 6** and **7** of the Loan Agreement; and (e) no Default or Event of Default has occurred and is continuing under the Loan Agreement.

This Loan Agreement Supplement is being delivered in the State of California.

This Loan Agreement Supplement may be executed by Borrower and Lender in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute but one and the same instrument.

IN WITNESS WHEREOF, Borrower and Lender have caused this Loan Agreement Supplement to be duly executed and delivered as of this day and year first above written.

BORROWER:

CODEXIS, INC.

By:

Name:

Title:

Annex A – List of Collateral
Annex B – Summary of Loan Agreement Supplement

LENDER:

LIGHTHOUSE CAPITAL PARTNERS V, L.P.

By: **LIGHTHOUSE MANAGEMENT PARTNERS V, L.L.C.,** its general partner

By: _____

Name: _____

Title: _____

ANNEX A

The following represent further specific descriptions of the Collateral:

List of Collateral

ANNEX B

SUMMARY OF LOAN AGREEMENT SUPPLEMENT NO. 01 dated_____

Borrower: **CODEXIS, INC.**, a Delaware corporation
Lender: **LIGHTHOUSE CAPITAL PARTNERS V, L.P.**
Loan and Security Agreement No.: 3771
Transaction Number: _____-__

(All capitalized terms not otherwise defined herein shall have the meanings given to such terms in the Agreement.)

Funding Date:	_____, 200__
Loan Commencement Date:	_____, 200__
Original Loan Amount:	$____
Interim Payment:	$____
Loan Factor:	[2.3042% subject to adjustment as set forth in the definition of Basic Rate]
Scheduled Payments*:	48 payments of $____ each, payable monthly in advance
Amount of Scheduled Payment paid in advance:	$____

Final Payment*: An additional amount equal to the Final Payment Percentage multiplied by the original Loan Amount then in effect, shall be paid on the Maturity Date with respect to such Loan.

LENDER:

LIGHTHOUSE CAPITAL PARTNERS V, L.P.

By: **LIGHTHOUSE MANAGEMENT PARTNERS V, L.L.C.**, its general partner

By: _____

Name: _____

Title: _____

EXHIBIT D

ANCILLARY DOCUMENTS

Officer's Certificate

Insurance Request form

CODEXIS, INC.

OFFICER'S CERTIFICATE

The undersigned, Alan Shaw, hereby certifies that:

1. He/She is the duly elected and acting Chief Executive Officer of **CODEXIS, INC.**, a Delaware corporation (the "*Company*").

2. That on the date hereof, each person listed below holds the office in the Company indicated opposite his or her name and that the signature appearing thereon is the genuine signature of each such person:

NAME	OFFICE	SIGNATURE
Alan Shaw	Chief Executive Officer	
Tassos Gianakakos	Chief Financial Officer	

3. Attached hereto as ***Exhibit A*** is a true and correct copy of the Certificate of Incorporation of the Company, as amended, as in effect as of the date hereof.

4. Attached hereto as ***Exhibit B*** is a true and correct copy of the Bylaws of the Company, as amended, as in effect as of the date hereof.

5. Attached hereto as ***Exhibit C*** is a copy of the resolutions of the Board of Directors of the Company authorizing and approving the Company's execution, delivery and performance of a loan facility with Lighthouse Capital Partners V, L.P.

IN WITNESS WHEREOF, the undersigned has executed this Officer's Certificate on February 12, 2004.

CODEXIS, INC.

By: _____

Name: _____

Title: _____

I, the Chief Financial Officer of the Company, do hereby certify that Alan Shaw is the duly qualified, elected and acting Chief Executive Officer of the Company and that the above signature is his or her genuine signature.

IN WITNESS WHEREOF, the undersigned has executed and delivered this Officer's Certificate on February 12, 2004.

CODEXIS, INC.

By: _____

Name: _____

Title: _____

EVIDENCE OF INSURANCE

RE: Loan and Security Agreement No. 3771 ("*Agreement*")

Please submit the attached Certificate of Insurance to your Insurance Broker as soon as possible.

Please note that the Certificate of Insurance is required prior to funding.

To:
From: Codexis, Inc.

Broker: Please prepare a Certificate of Insurance as described and send to Certificate Holder via fax and regular mail below.

CERTIFICATE OF INSURANCE
PRODUCER

DATE (MM/DD/YY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE

INSURED

INSURER A:
INSURER B:

Codexis, Inc.

INSURER C:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	EFFECTIVE DATE (MM/DDYY)	EXPIRATION DATE (MM/DD/YY)	LIMITS		
	X GENERAL LIABILITY				EACH OCCURRENCE	$	2,000,000
	COMMERCIAL GENERAL LIABILITY				FIRE DAMAGE (Any one fire)	$	included
	CLAIMS MADE X OCCUR				MED EXP (Any one Person)	$	10,000
A					PERSONAL & ADV INJURY	$	1,000,000
					GENERAL AGGREGATE	$	2,000,000
	GEN'L AGGREGATE LIMIT APPLIES				PRODUCTS-COM/OP AGG	$	2,000,000
	PER POLICY PROJECT LOC						
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident)	$	
	ANY AUTO						
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$	
	SCHEDULED AUTOS						
	HIRED AUTOS				BODILY INJURY (Per accident)	$	
	NON-OWNED AUTOS						
					PROPERTY DAMAGE (Per accident)	$	
					OTHER THAN EA OCC	$	
					AUTO ONLY AGG	$	
A	EXCESS LIABILITY				EACH OCCURRENCE		
	OCCUR CLAIMS MADE				AGGREGATE		
	DEDUCTIBLE						
	RETENTION $						
						$	
						$	
						$	
A	OTHER				Limit:	"All Risk" of Direct Physical Loss or Damage (Subject to Policy Exclusions & Terms)	
	Business Personal Property						

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

Lighthouse Capital Partners is named as Additional Insured and Loss Payee.

CERTIFICATE HOLDER

Lighthouse Capital Partners
500 Drake's Landing Road
Greenbrae, CA. 94904-3011
Attn: Contract Administration
Fax: 415-925-3387
Phone: 415-464-5900

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

EXHIBIT F

AUTHORIZATION FOR AUTOMATIC PAYMENT

The undersigned **CODEXIS, INC.** ("Borrower") authorizes Lighthouse Capital Partners V, L.P. and any and all affiliated funds (collectively, "Lender") and the bank / financial institution ("Bank") named below to initiate variable debit and/or credit entries to Borrower's deposit, checking or savings accounts as designated below and to cause funds transfers to an account of Lender as payment of any and all amounts due under the Loan and Security Agreement between Borrower and Lender dated February 12, 2004 (the "Loan Agreement").

1. Lender is hereby authorized to initiate variable debit and/or credit transactions and resulting funds transfers in Borrower's designated accounts with respect to amounts calculated by Lender to be due and owing to Lender by Borrower periodically under the Loan Agreement. Borrower consents to all such debit and/or credit transactions and resulting funds transfers and hereby authorizes Lender to take all such actions as may be required by Bank with respect to such transactions. Borrower acknowledges and agrees that such credit and/or debit entries may be made in amounts due under the Loan Agreement in order to cause timely payments as required by the terms of the Loan Agreement.
2. Borrower hereby authorizes Lender to release to Bank all information concerning Borrower which may be necessary or desirable for Bank to investigate or recover any erroneous funds transfers which may occur.
3. Borrower acknowledges and agrees that all such debit and/or credit transactions and funds transfers are intended to be made through an Automated Clearing House system and in compliance with the NACHA Rules and in compliance with Bank's security procedures.
4. Borrower represents and warrants that the account information set forth below is accurate and complete and that each of the account(s) set forth below is a business account maintained in Borrower's name and for Borrower's account.

This Consent shall be effective as of February 12, 2004 and shall remain in effect until the Loan Agreement has been terminated. Any cancellation by Borrower of this consent shall (i) be made in writing and (ii) delivered to Bank and Lender in such time as to afford Bank and Lender a reasonable opportunity to act on said cancellation.

_____
(Name of Borrower's Bank)

_____
(Address of Bank) (City) (State) (Zip Code)

Bank Routing Number _____
(between these symbols /: :/ on bottom left of check)

Account Number: _____ (checking /deposit/savings)
(circle one)

Copy of a voided check is attached to this form: ___ with regard to Account No. ___

Borrower Name: **Codexis, Inc.**
Borrower Address: 200 Penobscot Drive
Redwood City, CA 94063

Authorized by: _____
(signature of authorized Borrower representative)

Its: _____
(title of authorized Borrower representative)

Date authorized: _____

Internal ACH Authorizations from Lender:

Approved by: _____ Date: _____

Approved by: _____ Date: _____

SCHEDULE 1

EXISTING LIENS

Pursuant to the Security Agreement, dated January 28, 2004, Wells Fargo Bank, N.A. has a security interest in the Wells Fargo Bank Market Rate Account #7735-114022, up to the amount of $450,000.

SCHEDULE 2

SUBSIDIARIES

NONE

COLLATERAL LOCATIONS

	Each Location Address where Lighthouse Capital Partners has financed assets:	Landlord/Property Management Information:
Current Headquarters (Location 1)	**Contact Name:** Niall Murphy **Address:** 200 Penobscot Drive **City, State, Zip:** Redwood City, California 94063 **Phone:** (650) 298-5365 **Fax:** (650) 298-5449 ****Equip Type:** Lab and computer	**Contact Name:** Ronette Tones **Company Name:** Metropolitan Life Insurance Company c/o CBRE, Property Management **Address:** 701 Chesapeake Drive **City, State, Zip:** Redwood City, California 94063 **Phone:** (650) 366-8383 **Fax:** (650) 366-0409
Location 2	**Contact Name:** Niall Murphy **Company** [LH1] **Name:** Codexis, Inc. **Address:** 501 Chesapeake Drive **City, State, Zip:** Redwood City, California 94063 **Phone:** (650) 298-5365 **Fax:** (650) 298-5449 ****Equip Type:** Lab and computer	**Contact Name:** Ronette Tones **Company Name:** Metropolitan Life Insurance Company c/o CBRE, Property Management **Address:** 701 Chesapeake Drive **City, State, Zip:** Redwood City, California 94063 **Phone:** (650) 366-8383 **Fax:** (650) 366-0409
Location 3	**Contact Name:** Brian Fenton **Company Name:** Codexis, Inc. **Address:** 650 Washington Hwy. **City, State, Zip:** Lincoln, Rhode Island, 02865 **Phone:** (401) 333-8899 **Fax:** (401) 333-8895 ****Equip Type:** Computer	**Contact Name:** Joseph Raheb **Company Name:** Joseph Raheb **Address:** 650 Washington Hwy. **City, State, Zip:** Lincoln, Rhode Island, 02865 **Phone:** (401) 333-3377 **Fax:** (401) 334-4152
Location 4	**Contact Name:** Kevin Taylor **Company Name:** Codexis, Inc. **Address:** 5 Great Valley Parkway, Suite # 216 **City, State, Zip:** Malvern, PA 19355 **Phone:** (610) 648-3995 **Fax:** (610) 648-3996 ****Equip Type:** Computer	**Contact Name:** Sharon Nothnagle **Company Name:** Executive Office Link **Address:** 7 Great Valley Parkway, Suite # 210 **City, State, Zip:** Malvern, PA 19355 **Phone:** (610) 251-6850 **Fax:** (610) 889-9726

** Note Equip Type: (ie: Various, Web Server, Other)

MASTER SECURITY AGREEMENT
No. 5081102
Dated as of October 25, 2005 **("Agreement")**

THIS AGREEMENT is between **Oxford Finance Corporation** (together with its successors and assigns, if any, "***Secured Party***") and **Codexis, Inc.** ("***Debtor***"). Secured Party has an office at 133 N. Fairfax Street, Alexandria, VA 22314. Debtor is a corporation organized and existing under the laws of the state of Delaware. Debtor's mailing address and chief place of business is 200 Penobscot Drive, Redwood City, CA 94063.

1. CREATION OF SECURITY INTEREST.

Debtor grants to Secured Party, its successors and assigns, a security interest in and against all property listed on any collateral schedule now or in the future annexed to or made a part of this Agreement ("***Collateral Schedule***"), and in and against all additions, attachments, accessories and accessions to such property, all substitutions, replacements or exchanges therefor, and all insurance and/or other proceeds thereof (all such property is individually and collectively called the "***Collateral***"). This security interest is given to secure the payment and performance of all debts, obligations and liabilities of any kind whatsoever of Debtor to Secured Party, now existing or arising in the future, including but not limited to the payment and performance of certain Promissory Notes from time to time identified on any Collateral Schedule (collectively "***Notes***" and each a "***Note***"), and any renewals, extensions and modifications of such debts, obligations and liabilities (such Notes, debts, obligations and liabilities are called the "***Indebtedness***"). Debtor acknowledges that, notwithstanding that the Note(s) may be paid in full, this Security Agreement shall continue to secure the payment and performance of all other debts, obligations and liabilities of any kind whatsoever of Debtor to Secured Party, now existing or arising in the future, and that Secured Party shall be under no obligation to release the Collateral unless and until all Indebtedness of Debtor to Secured Party has been paid and satisfied; provided, however, Secured Party, in its sole and exclusive discretion, may elect to release some of the Collateral without prejudice to Secured Party's security interest in the remaining Collateral.

2. REPRESENTATIONS, WARRANTIES AND COVENANTS OF DEBTOR.

Debtor represents, warrants and covenants as of the data of this Agreement and as of the date of each Collateral Schedule that:

(a) Due Organization. Debtor's exact legal name is as set forth in the preamble of this Agreement and Debtor is, and will remain, duly organized, existing and in good standing under the laws of the State set forth in the preamble of this Agreement, has its chief executive offices at the location specified in the preamble, and is, and will remain duly qualified and licensed in every jurisdiction wherever necessary to carry on its business and operations;

(b) Power and Capacity to Enter Into and Perform Obligations. Debtor has adequate power and capacity to enter into, and to perform its obligations under this Agreement, each Collateral Schedule, each Note and any other documents evidencing, or given in connection with, any of the Indebtedness (all of the foregoing are called the "***Debt Documents***");

Codexis Initial Here: _____
Oxford Initial Here: _____

(c) Due Authorization. This Agreement and the other Debt Documents have been duly authorized, executed and delivered by Debtor and constitute legal, valid and binding agreements enforceable in accordance with their terms, except to the extent that the enforcement of remedies may be limited under applicable bankruptcy and insolvency laws;

(d) Approvals and Consents. No approval, consent or withholding of objections is required from any governmental authority or instrumentality with respect to the entry into, or performance by Debtor of any of the Debt Documents, except any already obtained;

(e) No Violations or Defaults. The entry into, and performance by, Debtor of the Debt Documents will not (i) violate any of the organizational documents of Debtor or any judgment, order, law or regulation applicable to Debtor, or (ii) result in any breach of or constitute a default under any contract to which Debtor is a party, or result in the creation of any lien, claim or encumbrance on any of Debtor's property (except for liens in favor of Secured Party) pursuant to any indenture, mortgage, deed of trust, bank loan, credit agreement, or other agreement or instrument to which Debtor is a party;

(f) Litigation. There are no suits or proceedings pending in court or before any commission, board or other administrative agency against or affecting Debtor which could, in the aggregate, have a material adverse effect on Debtor, its business or operations, or its ability to perform its obligations under the Debt Documents, nor does Debtor have reason to believe that any such suits or proceedings are threatened;

(g) Solvency. The fair salable value of Debtor's assets (including goodwill minus disposition costs) exceeds the fair value of its liabilities; the Debtor is not left with unreasonably small capital after the transactions in this Agreement or any Collateral Schedule and Debtor is able to pay its debts (including trade debts) as they mature;

(h) Financial Statements. All financial statements relating to Debtor that have been or may hereafter be delivered by Debtor to Secured Party present fairly in all material respects Debtor's financial condition as of the date thereof and Debtor's results of operations for the period then ended, and since the date of the most recent financial statement, there has been no material adverse change in Debtor's financial condition;

(i) Use of Collateral. The Collateral is not, and will not be, used by Debtor for personal, family or household purposes;

Codexis Initial Here: _____
Oxford Initial Here: _____

(j) Collateral in Good Condition and Repair. The Collateral is, and will remain, in good condition and repair and Debtor will not be negligent in its care and use;

(k) Location of Collateral. All of the tangible Collateral is located at the locations set forth on each Collateral Schedule. Debtor shall give the Secured Party 30 days prior written notice of any relocation of any Collateral;

(l) Ownership of Collateral. Debtor is, and will remain, the sole and lawful owner, and in possession of, the Collateral, and has the sole right and lawful authority to grant the security interest described in this Agreement;

(m) Encumbrances. The Collateral is, and will remain, free and clear of all liens, claims and encumbrances of any kind whatsoever, except for Permitted Liens;

(n) Intellectual Property Rights. Debtor will (i) protect, defend and maintain the validity and enforceability of the Intellectual Property and promptly advise Secured Party in writing of material infringements and (ii) not allow any Intellectual Property material to Debtor's business, as determined by Debtor in its good faith and reasonable discretion, to be abandoned, forfeited or dedicated to the public without Secured Party's written consent;

(o) Taxes. All federal, state and local tax returns required to be filed by Debtor have been filed with the appropriate governmental agencies by the date due (including any extensions) and all taxes due and payable by Debtor have been timely paid. Debtor will pay when due all taxes, assessments and other liabilities except as contested in good faith and by appropriate proceedings and for which adequate reserves have been established;

(p) No Defaults. No event or condition exists under any material agreement, instrument or document to which Debtor is a party or may be subject, or by which Debtor or any of its properties are bound, which constitutes a default or an event of default thereunder, or will, with the giving of notice, passage of time, or both, would constitute a default or event of default thereunder;

(q) Certification of Financial Information. All reports, certificates, schedules, notices and financial information submitted by Debtor to the Secured Party pursuant to this Agreement shall be certified as true and correct by the president or chief financial officer of Debtor;

(r) Notice of Material Adverse Change. Debtor shall give the Secured Party prompt written notice of any event, occurrence or other matter which (a) has resulted or may result in a material adverse change in its financial condition or business operations of Debtor, or (b) which would impair the ability of Debtor to perform its obligations hereunder or under any of the other financing agreements to which it is a party, or (c) which would impair the ability of Secured Party to enforce the Indebtedness or realize upon the Collateral;

Codexis Initial Here: _____
Oxford Initial Here: _____

(s) Change in Management. Debtor shall not, without giving prior written notice to Secured Party, change the persons holding the offices of Chief Executive Officer or Chief Financial Officer;

(t) Transactions with Affiliates. Debtor shall not, without the prior written consent of Secured Party, directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Debtor except for transactions that are in the ordinary course of Debtor's business, upon fair and reasonable terms that are no less favorable to Debtor than would be obtained in an arm's length transaction with a nonaffiliated Person;

(u) [intentionally omitted]

(v) Perfection Certificate. Debtor has previously delivered to the Secured Party a certificate signed by the Debtor and entitled "Perfection Certificate" (the "***Perfection Certificate***"). The Debtor represents and warrants to the Secured Party as follows: (a) the Debtor's exact legal name is that indicated on the Perfection Certificate and on the signature page hereof, (b) the Debtor is an organization of the type, and is organized in the jurisdiction set forth in the Perfection Certificate, (c) the Perfection Certificate accurately sets forth the Debtor's organizational identification number or accurately states that the Debtor has none, (d) the Perfection Certificate accurately sets forth the Debtor's place of business or, if more than one, its chief executive office, as well as the Debtor's mailing address, if different, (e) all other information set forth on the Perfection Certificate pertaining to the Debtor is accurate and complete, and (f) that there has been no change in any information provided in the Perfection Certificate since the date on which it was executed by the Debtor;

(w) Primary Account and Wire Transfer Instructions. Debtor maintains its Primary Account (the "***Primary Operating Account***") and the Wire Transfer Instructions for the Primary Operating Account are as follows:

Wells Fargo Bank
P.O. Box 150, 400 Hamilton Ave.
Palo Alto, CA 94301
ABA No.: 121000248
Account No.: 403-0003362
Account Name: Codexis, Inc.

Debtor hereby agrees that Loans will be advanced to the account specified above and regularly scheduled payments will be automatically debited from the same account;

(x) [intentionally omitted]

(y) Notice of Investor Abandonment. Debtor shall give the Secured Party prompt written notice if (a) it is the clear intention of Debtor's investors to not continue to

Codexis Initial Here: _____
Oxford Initial Here: _____

fund the Debtor in the amounts and timeframe necessary to enable Debtor to satisfy the Indebtedness as it becomes due and payable or (b) there is a material impairment in the perfection or priority of the Secured Party's security interest in the Collateral; and

(z) Indebtedness to Maxygen. Without the prior written consent of Secured Party, which consent shall not be unreasonably withheld or delayed, Debtor shall not create, incur, assume or permit to exist any Indebtedness to Maxygen, Inc. ("Maxygen") in excess of One Million, Two Hundred Twenty-Five Thousand Dollars ($1,225,000) in aggregate in any fiscal year, nor shall Debtor make any payments to Maxygen in any fiscal year in excess of the lower of: (i) the aggregate of the fair market value of services provided by Maxygen to Debtor during such fiscal year, or (ii) the aggregate of One Million, Two Hundred Twenty-Five Thousand Dollars ($1,225,000). Notwithstanding the foregoing, Debtor shall be permitted to pay the balance of previously incurred, existing and anticipated Indebtedness to Maxygen up to a total amount of One Million, Five Hundred Thousand Dollars ($1,500,000) for the period January 1, 2005 to December 31, 2005.

3. COLLATERAL.

The Debtor covenants and agrees that, so long as any of the Debt Documents shall remain in effect, or unless the Secured Party shall otherwise consent in writing:

(a) Possession of Collateral; Inspection of Collateral. Until the declaration of any default, Debtor shall remain in possession of the Collateral, except as necessary for maintenance and repair, except as specified in Section 3(c), and except that Secured Party shall have the right to possess (i) any chattel paper or instrument that constitutes a part of the Collateral, and (ii) any other Collateral in which Secured Party's security interest may be perfected only by possession. Secured Party may inspect any of the Collateral during normal business hours after giving Debtor reasonable prior notice.

(b) Maintenance of Collateral. Debtor shall (i) use the Collateral only in its trade or business, (ii) maintain all of the Collateral in good operating order and repair, normal wear and tear excepted, (iii) use and maintain the Collateral only in compliance with manufacturers recommendations and all applicable laws, and (iv) keep all of the Collateral free and clear of all liens, claims and encumbrances (except for Permitted Liens).

(c) Disposition of Collateral. Secured Party does not authorize and Debtor agrees it shall not (i) part with possession of any of the Collateral (except to Secured Party or for maintenance and repair), (ii) locate any of the Collateral outside the continental United States, other than any Collateral necessary for the operation of Debtor's subsidiary location in Germany in an aggregate value not exceeding $300,000.00, with all of any such Collateral located at Debtor's subsidiary location in Germany to be financed by Secured Party as soft costs, and with

Codexis Initial Here: _____
Oxford Initial Here: _____

ownership to all of such Collateral located at Debtor's subsidiary location in Germany to be retained by Debtor and not passed to its subsidiary; or (iii) sell, rent, lease, mortgage, license, grant a security interest in or otherwise transfer or encumber (except for Permitted Liens) any of the Collateral.

(d) Taxes. Debtor shall pay promptly when due all taxes, license fees, assessments and public and private charges levied or assessed on any of the Collateral, on its use, or on this Agreement or any of the other Debt Documents. At its option, Secured Party may discharge taxes, liens, security interests or other encumbrances at any time levied or placed on the Collateral and may pay for the maintenance, insurance and preservation of the Collateral and effect compliance with the terms of this Agreement or any of the other Debt Documents. Debtor agrees to reimburse Secured Party, on demand, all costs and expenses incurred by Secured Party in connection with such payment or performance and agrees that such reimbursement obligation shall constitute Indebtedness.

(e) Books and Records. Debtor shall, at all times, keep accurate and complete records of the Collateral, and Secured Party shall have the right to inspect and make copies of all of Debtor's books and records relating to the Collateral during normal business hours, after giving Debtor reasonable prior notice.

(f) Third Party Possession of Collateral. Debtor agrees and acknowledges that any third person who may at any time possess all or any portion of the Collateral shall be deemed to hold, and shall hold, the Collateral as the agent of, and as pledge holder for, Secured Party. Secured Party may at any time give notice to any third person described in the preceding sentence that such third person is holding the Collateral as the agent of, and as pledge holder for, the Secured Party.

(g) Change of Address, Name or Jurisdiction. The Debtor has not at any time within the past four (4) months either changed its name or changed the state of jurisdiction in which it is organized and existing, nor has it maintained its chief executive office or any of the Collateral at any other location, except as set forth above, and shall not do so hereafter except upon prior written notice to the Secured Party. The Secured Party shall be entitled to rely upon the foregoing unless it receives 14 days' advance written notice of a change in the Debtor's name, state of jurisdiction, address of the Debtor's chief executive offices or location of the Collateral.

(h) Fixtures. Not permit any item of the Collateral to become a fixture to real estate or an accession to other property without the prior written consent of the Secured Party, and the Collateral is now and shall at all times remain personal property except with the Secured Party's prior written consent. If any of the Collateral is or will be attached to real estate in such a manner as to become a fixture under applicable state law and if such real estate is encumbered, the Debtor will obtain from the holder of each Lien or encumbrance a written consent and subordination to the security interest hereby granted, or a written disclaimer of any interest in the Collateral, in a form acceptable to the Secured Party.

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(i) Distributions. Debtor shall not (i) pay any dividends or make any distributions on its equity securities; (ii) purchase, redeem, retire, defease or otherwise acquire for value any of its equity securities, other than repurchases pursuant to the terms of employee stock purchase plans, employee restricted stock agreements or similar arrangements in an aggregate amount not to exceed One Hundred Thousand Dollars ($100,000); (iii) return any capital to any holder of its equity securities as such; (iv) make any distribution of assets, equity securities, obligations or securities to any holder of its equity securities as such; or (v) set apart any sum for any such purpose; provided, however, Debtor may pay dividends payable solely in common stock.

(j) Indebtedness Payments. Debtor shall not (i) prepay, redeem, purchase, defease or otherwise satisfy in any manner prior to the scheduled repayment thereof any Additional Indebtedness for borrowed money or lease obligations, (ii) amend, modify or otherwise change the terms of any Additional Indebtedness for borrowed money or lease obligations so as to accelerate the scheduled repayment thereof or (iii) repay any notes to officers, directors or shareholders except as expressly provided for in a duly executed subordination agreement in favor of, and approved by Secured Party.

(k) Bridge Loans. Debtor shall not incur any indebtedness for borrowed money or lease obligations (collectively, "***Bridge Loans***") from any of its officers, directors or shareholders (collectively, "***Bridge Loan Lenders***") unless each of the Bridge Loan Lenders have executed and delivered subordination agreements in favor of Secured Party, in form satisfactory to Secured Party, which subordinate all of the Bridge Loans to the Indebtedness, and which permit repayment of the Bridge Loans from the proceeds of new equity investments and loans.

4. INSURANCE.

(a) Risk of Loss. Debtor shall at all times bear the entire risk of any loss, theft, damage to, or destruction of, any of the Collateral from any cause whatsoever.

(b) Insurance Requirements. Debtor agrees to keep the Collateral insured against loss or damage by fire and extended coverage perils, theft, burglary, and for any or all Collateral, which are vehicles, for risk of loss by collision, and if requested by Secured Party, against such other risks as Secured Party may reasonably require. The insurance coverage shall be in an amount no less than the full replacement value of the Collateral, and deductible amounts, insurers and policies shall be acceptable to Secured Party. Debtor shall deliver to Secured Party policies or certificates of insurance evidencing such coverage. Each policy shall name Secured Party as a loss payee, shall provide for coverage to Secured Party regardless of the breach by Debtor of any warranty or representation made therein, shall not be subject to co-insurance, and shall provide that coverage may not be canceled or altered by the insurer without a good faith endeavor by insurer to provide thirty (30) days prior written notice to Secured Party. Debtor appoints Secured Party as its attorney-in-fact to make proof of loss, claim for insurance and

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adjustments with insurers, and to receive payment of and execute or endorse all documents, checks or drafts in connection with insurance payments. Secured Party shall not act as Debtor's attorney-in-fact unless Debtor is in default. Proceeds of insurance shall be applied, at the option of Debtor if there is no default as set forth in Section 7, or at the option of Secured Party if there is a default as set forth in Section 7, to repair or replace the Collateral or to reduce any of the Indebtedness.

5. REPORTS.

(a) Notice of Events. Debtor shall promptly notify Secured Party of (i) any change in the name of Debtor, (ii) any change in the state of its incorporation or registration, (iii) any relocation of its chief executive offices, (iv) any of the Collateral being lost, stolen, missing, destroyed, materially damaged or worn out, (v) any lien, claim or encumbrance other than Permitted Liens attaching to or being made against any of the Collateral, or (vi) any occurrence of any default pursuant to Section 7 herein.

(b) Financial Statements, Reports and Certificates. Debtor will deliver to Secured Party within 120 days of the close of each fiscal year of Debtor, Debtor's complete financial statements including a balance sheet, income statement, statement of shareholders' equity and statement of cash flows, each prepared in accordance with Generally Accepted Accounting Principles consistently applied, certified by a recognized firm of certified public accountants satisfactory to Secured Party. Debtor will deliver to Secured Party copies of Debtor's quarterly financial statements including a balance sheet, income statement, and statement of cash flows, each of which present fairly in all material respects Debtor's financial condition as of the date thereof, and which are certified by Debtor's chief financial officer or president, within forty-five (45) days after the close of each of Debtor's fiscal quarter. Debtor will deliver to Secured Party copies of all Forms 10-K and 10-Q, if any, within 30 days after the dates on which they are filed with the Securities and Exchange Commission. Debtor will deliver to Secured Party copies of Debtor's monthly financial statements including a balance sheet and income statement, and statement of cash flows, each of which present fairly in all material respects Debtor's financial condition as of the date thereof, and which are certified by Debtor's chief financial officer or president, within thirty (30) days after the close of each month. With quarterly and monthly financial statements, Debtor shall also provide to Secured Party a copy of its bank statement(s) for all accounts reflected in such quarterly and monthly financial statements. Concurrently with delivery of the foregoing information, and from time to time promptly upon request of Secured Party, Debtor will deliver to Secured Party a Compliance Certificate substantially consistent with the form of the document attached hereto as Schedule A. Debtor will deliver to Secured Party promptly upon request of Secured Party, in form satisfactory to Secured Party, such other and additional information as Secured Party may reasonably request from time to time.

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6. FURTHER ASSURANCES.

(a) Further Assurances Regarding Security Interests. Debtor shall, upon request of Secured Party, furnish to Secured Party such further information, execute and deliver to Secured Party such documents and instruments (including, without limitation, Uniform Commercial Code financing statements) and shall do such other acts and things as Secured Party may at any time reasonably request relating to the perfection or protection of the security interest created by this Agreement or for the purpose of carrying out the intent of this Agreement. Without limiting the foregoing, Debtor shall cooperate and do all acts deemed necessary or advisable by Secured Party to continue in Secured Party a perfected first security interest in the Collateral, and shall obtain and finish to Secured Party any subordinations, releases, landlord waivers, lessor waivers, mortgagee waivers, or control agreements, and similar documents as may be from time to time requested by, and in form and substance satisfactory to, Secured Party.

(b) Authorization To File Financing Statements. Debtor shall perform any and all acts requested by the Secured Party to establish, maintain and continue the Secured Party's security interest and liens in the Collateral, including but not limited to, executing or authenticating financing statements and such other instruments and documents when and as reasonably requested by the Secured Party. Debtor hereby authorizes Secured Party through any of Secured Party's employees, agents or attorneys to file any and all financing statements, including, without limitation, any original filings, continuations, transfers or amendments thereof required to perfect Secured Party's security interest and liens in the Collateral under the UCC without authentication or execution by Debtor. Debtor hereby irrevocably authorizes the Secured Party at any time and from time to time to file in any filing office in any Uniform Commercial Code jurisdiction any initial financing statements) and amendments thereto that (a) indicate the Collateral (i) is subject to Secured Party's security interest, regardless of whether any particular asset comprised in the Collateral falls within the scope of Article 9 of the Uniform Commercial Code of the State or such jurisdiction, or (ii) as being of an equal or lesser scope or with greater detail, and (b) provide any other information required by part 5 of Article 9 of the Uniform Commercial Code of the State or such other jurisdiction for the sufficiency or filing office acceptance of any financing statement or amendment, including (i) whether the Debtor is an organization, the type of organization and any organization identification number issued to the Debtor, and (ii) in the case of a financing statement filed as a fixture filing, a sufficient description of real property to which the Collateral relates. The Debtor agrees to furnish any such information to the Secured Party promptly upon the Secured Party's request.

(c) Indemnification. Debtor shall indemnify and defend the Secured Party, its successors and assigns, and their respective directors, officers and employees, from and against all claims, actions and suits (including, without limitation, related attorneys' fees) of any kind whatsoever arising, directly or indirectly, in connection with any of the Collateral or the Debt Documents except to the extent resulting from the gross negligence or willful misconduct of the persons so indemnified.

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7. DEFAULT AND REMEDIES.

(a) Defaults. Debtor shall be in default under this Agreement and each of the other Debt Documents if any one of the following should occur:

(i) Debtor breaches its obligation to pay within three (3) business days following the due date thereof any installment or other amount due or coming due under any of the Debt Documents, other than by Secured Party's failure to process a deduction from Debtor's Primary Operating Account pursuant to Section 2(w);

(ii) Debtor, without the prior written consent of Secured Party, attempts to or does sell, rent, lease, license, mortgage, grant a security interest in, or otherwise transfer or encumber, or allow Liens (except for Permitted Liens) upon, any of the Collateral;

(iii) Debtor breaches any of its insurance obligations under Section 4;

(iv) Debtor breaches any of its obligations under Sections 2(m) or 2(y) or Sections 3(i), (j), or (k);

(v) Debtor breaches any of its other non-payment obligations under any of the Debt Documents and fails to cure that breach within thirty (30) days after it has occurred;

(vi) Any warranty, representation or statement made by Debtor in any of the Debt Documents or otherwise in connection with any of the Indebtedness shall be false or misleading in any material respect;

(vii) Any of the Collateral is subjected to attachment, execution, levy, seizure or confiscation in any legal proceeding or otherwise, or if any legal or administrative proceeding is commenced against Debtor or any of the Collateral, which in the good faith judgment of Secured Party subjects any of the Collateral to a material risk of attachment, execution, levy, seizure or confiscation and no bond is posted or protective order obtained to negate such risk;

(viii) Debtor breaches or is in default under any other agreement between Debtor and Secured Party;

(ix) Debtor or any guarantor or other obligor for any of the Indebtedness (collectively "***Guarantor***") dissolves, terminates its existence, becomes insolvent or ceases to do business as a going concern;

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(x) If Debtor or any Guarantor is a natural person, and Debtor or any such Guarantor dies or becomes incompetent;

(xi) A receiver is appointed for all or of any part of the property of Debtor or any Guarantor, or Debtor or any Guarantor makes any assignment for the benefit of creditors;

(xii) Debtor or any Guarantor files a petition under any bankruptcy, insolvency or similar law, or any such petition is filed against Debtor or any Guarantor and is not dismissed within forty-five (45) days;

(xiii) Debtor's improper filing of an amendment or termination statement relating to a filed financing statement describing the Collateral;

(xiv) Debtor shall merge with or consolidate into any other entity or sell all or substantially all of its assets or in any manner terminate its existence;

(xv) If Debtor is a privately held corporation, more than 50% of Debtor's voting capital stock, or effective control of Debtor's voting capital stock, issued and outstanding from time to time, is not retained by the holders of such stock on the date the Agreement is executed;

(xvi) If Debtor is a publicly held corporation, there shall be a change in the ownership of Debtor's stock such that Debtor is no longer subject to the reporting requirements of the Securities Exchange Act of 1934 or no longer has a class of equity securities registered under Section 12 of the Securities Act of 1933;

(xvii) Debtor defaults under any agreement to pay Additional Indebtedness or any other financing arrangement between Debtor and a third party in an amount exceeding $100,000;

(xviii) Secured Party shall have determined in its sole and good faith judgment that (a) it is the clear intention of Debtor's investors to not continue to fund the Debtor in the amounts and timeframe necessary to enable Debtor to satisfy the Indebtedness as it becomes due and payable or (b) there is a material impairment in the perfection or priority of the Secured Party's security interest in the Collateral; or

(xix) [intentionally omitted]

(xx) Without the prior written consent of Secured Party, which consent shall not be unreasonably withheld or delayed, Debtor creates, incurs, assumes or permits to exist any Indebtedness to Maxygen, Inc. ("Maxygen") in excess of One Million, Two Hundred Twenty-Five Thousand Dollars ($1,225,000) in aggregate in any fiscal year, or Debtor makes any payments to Maxygen in any fiscal year in excess of the lower of: (i) the aggregate of the fair market value of services provided by Maxygen to

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Debtor during such fiscal year, or (ii) the aggregate of One Million, Two Hundred Twenty-Five Thousand Dollars ($1,225,000). Notwithstanding the foregoing, Debtor shall be permitted to pay the balance of previously incurred, existing and anticipated Indebtedness to Maxygen up to a total amount of One Million, Five Hundred Thousand Dollars ($1,500,000) for the period January 1, 2005 to December 31, 2005.

(b) Acceleration. If Debtor is in default, the Secured Party, at its option, may declare any or all of the Indebtedness to be immediately due and payable, without demand or notice to Debtor or any Guarantor (provided that if there is a default as a result of a bankruptcy or insolvency all Indebtedness shall become immediately due and payable without any action by Secured Party). The accelerated obligations and liabilities shall bear interest (both before and after any judgment) until paid in full at the Default Rate.

(c) Rights and Remedies. Secured Party shall have all of the rights and remedies of a Secured Party under the Uniform Commercial Code, and under any other applicable law. Without limiting the foregoing, if an event of default exists, Secured Party shall have the right to (i) notify any account debtor of Debtor or any obligor on any instrument which constitutes part of the Collateral to make payment to the Secured Party, (ii) with or without legal process, enter any premises where the Collateral may be and take possession of and remove the Collateral from the premises or store it on the premises, (iii) sell the Collateral at public or private sale, in whole or in part, and have the right to bid and purchase at said sale, or (iv) lease or otherwise dispose of all or part of the Collateral, applying proceeds from such disposition to the obligations then in default. If requested by Secured Party, Debtor shall promptly assemble the Collateral and make it available to Secured Party at a place to be designated by Secured Party, which is reasonably convenient to both parties. Secured Party may also render any or all of the Collateral unusable at the Debtor's premises and may dispose of such Collateral on such premises without liability for rent or costs. Any notice that Secured Party is required to give to Debtor under the Uniform Commercial Code of the time and place of any public sale or the time after which any private sale or other intended disposition of the Collateral is to be made shall be deemed to constitute reasonable notice if such notice is given to the last known address of Debtor at least five (5) days prior to such action. Upon the occurrence and during the continuation of a default, Debtor hereby appoints Secured Party as Debtor's attorney-in-fact, with full authority in Debtor's place and stead and in Debtor's name or otherwise, from time to time in Secured Party's sole and arbitrary discretion, to take any action and to execute any instrument which Secured Party may deem necessary or advisable to accomplish the purpose of this Agreement. If an event of Default exists and is continuing, Secured Party is granted a non-exclusive royalty free license to use Debtor's Intellectual Property in connection with Secured Party's disposition of Collateral in the exercise of Secured Party's rights or remedies hereunder.

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(d) Application of Proceeds. The proceeds and/or avails of the Collateral, or any part thereof, and the proceeds and the avails of any remedy hereunder (as well as any other amounts of any kind held by Secured Party, at the time of or received by Secured Party after the occurrence of a default hereunder) shall be paid to and applied as follows:

a. First, to the payment of out-of-pocket costs and expenses, including all amounts expended to preserve the value of the Collateral, all costs of repossession, storage, and disposition including without limitation attorneys', appraisers', and auctioneers' fees, of foreclosure or suit, if any, and of such sale and the exercise of any other rights or remedies, and of all proper fees, expenses, liability and advances, including reasonable legal expenses and attorneys' fees, incurred or made hereunder by Secured Party, including without limitation, Secured Party's Expenses;

b. Second, to the payment to Secured Party of the amount then owing or unpaid on the Loans for scheduled payments, any accrued and unpaid interest, and all other Indebtedness (provided, however, if such proceeds shall be insufficient to pay in full the whole amount so due, owing or unpaid upon the Loans, then to the unpaid interest thereon, then to the outstanding principal amount of the Loans, and then to the payment of other amounts then payable to Secured Party under any of the Debt Documents or otherwise); and

c. Third, to the payment of the surplus, if any, to Debtor, its successors and assigns, or to whomsoever may be lawfully entitled to receive the same.

(e) Fees and Costs. Debtor agrees to pay all reasonable attorneys' fees and other costs incurred by Secured Party in connection with the enforcement, assertion, defense or preservation of Secured Party's rights and remedies under this Agreement, or if prohibited by law, such lesser sum as may be permitted. Debtor further agrees that such fees and costs shall constitute Indebtedness.

(f) Remedies Cumulative. Secured Party's rights and remedies under this Agreement or otherwise arising are cumulative and may be exercised singularly or concurrently. Neither the failure nor any delay on the part of the Secured Party to exercise any right, power or privilege under this Agreement shall operate as a waiver, nor shall any single or partial exercise of any right, power or privilege preclude any other or further exercise of that or any other right, power or privilege. SECURED PARTY SHALL NOT BE DEEMED TO HAVE WAIVED ANY OF ITS RIGHTS UNDER THIS AGREEMENT OR UNDER ANY OTHER AGREEMENT, INSTRUMENT OR PAPER SIGNED BY DEBTOR UNLESS SUCH WAIVER IS EXPRESSED IN WRITING AND SIGNED BY SECURED PARTY. A waiver on any one occasion shall not be construed as a bar to or waiver of any right or remedy on any future occasion.

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(g) WAIVER OF JURY TRIAL. DEBTOR AND SECURED PARTY UNCONDITIONALLY WAIVE THEIR RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, ANY OF THE OTHER DEBT DOCUMENTS, ANY OF THE INDEBTEDNESS SECURED HEREBY, ANY DEALINGS BETWEEN DEBTOR AND SECURED PARTY RELATING TO THE SUBJECT MATTER OF THIS TRANSACTION OR ANY RELATED TRANSACTIONS, AND/OR THE RELATIONSHIP THAT IS BEING ESTABLISHED BETWEEN DEBTOR AND SECURED PARTY. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT. THIS WAIVER IS IRREVOCABLE. THIS WAIVER MAY NOT BE MODIFIED EITHER ORALLY OR IN WRITING. THE WAIVER ALSO SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS TO THIS AGREEMENT, ANY OTHER DEBT DOCUMENTS, OR TO ANY OTHER DOCUMENTS OR AGREEMENTS RELATING TO THIS TRANSACTION OR ANY RELATED TRANSACTION. THIS AGREEMENT MAY BE FILED AS A WRITTEN CONSENT TO A TRIAL BY THE COURT.

8. MISCELLANEOUS.

(a) Assignment. This Agreement and/or any of the other Debt Documents may be assigned, in whole or in part, by Secured Party without notice to Debtor, and Debtor agrees not to assert against any such assignee, or assignee's assigns, any defense, set-off, recoupment claim or counterclaim which Debtor has or may at any time have against Secured Party for any reason whatsoever. Debtor agrees that if Debtor receives written notice of an assignment from Secured Party, Debtor will pay all amounts payable under any assigned Debt Documents to such assignee or as instructed by Secured Party. Debtor also agrees to confirm in writing receipt of the notice of assignment as may be reasonably requested by Secured Party or assignee.

(b) Notices. All notices to be given in connection with this Agreement shall be in writing, shall be addressed to the parties at their respective addresses set forth in this Agreement (unless and until a different address may be specified in a written notice to the other party), and shall be deemed given (i) on the date of receipt if delivered in hand or by facsimile transmission, (ii) on the next business day after being sent by express mail, and (iii) on the fourth business day after being sent by regular, registered or certified mail. As used herein, the term "business day" shall mean and include any day other than Saturdays, Sundays, or other days on which commercial banks in California or Virginia are required or authorized to be closed.

(c) Correction of Errors. Secured Party may correct patent errors and fill in all blanks in this Agreement, any Collateral Schedule or in any Note consistent with the agreement of the parties.

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(d) Time is of the Essence. Time is of the essence of this Agreement. This Agreement shall be binding, jointly and severally, upon all parties described as the "Debtor" and their respective heirs, executors, representatives, successors and assigns, and shall inure to the benefit of Secured Party, its successors and assigns.

(e) Entire Agreement. This Agreement and the Debt Documents constitute the entire agreement between the parties with respect to the subject matter of this Agreement and supersede all prior understandings (whether written, verbal or implied) with respect to such subject matter. NEITHER THIS AGREEMENT NOR ANY OF THE DEBT DOCUMENTS SHALL BE CHANGED OR TERMINATED ORALLY OR BY COURSE OF CONDUCT, BUT ONLY BY A WRITING SIGNED BY BOTH PARTIES. Section headings contained in this Agreement have been included for convenience only, and shall not affect the construction or interpretation of this Agreement. This Agreement is the result of negotiations between and has been reviewed by each of Debtor and Secured Party executing this Agreement as of the date hereof and their respective counsel; accordingly, this Agreement shall be deemed to be the product of the parties hereto, and no ambiguity shall be construed in favor of or against Debtor or Secured Party.

(f) Termination of Agreement. This Agreement shall continue in full force and effect until all of the Indebtedness has been indefeasibly paid in full to Secured Party or its assignee; provided, that Debtor's indemnity obligations set forth in Section 6(c) shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Secured Party have run. The surrender, upon payment or otherwise, of any Note or any of the other documents evidencing any of the Indebtedness shall not affect the right of Secured Party to retain the Collateral for such other Indebtedness as may then exist or as it may be reasonably contemplated will exist in the future. This Agreement shall automatically be reinstated if Secured Party is ever required to return or restore the payment of all or any portion of the Indebtedness (all as though such payment had never been made). Secured Party shall, at Debtor's sole cost and expense, execute such further documents and take such further actions as may be reasonably necessary to effect the release of its security interests contemplated by this paragraph, including duly executing and delivering termination statements for filing in all relevant jurisdictions under the Code.

(g) CHOICE OF LAW. DEBTOR AGREES THAT SECURED PARTY AND/OR ITS SUCCESSORS AND ASSIGNS SHALL HAVE THE OPTION BY WHICH STATE LAWS THIS AGREEMENT SHALL BE GOVERNED AND CONSTRUED: (A) THE LAWS OF THE COMMONWEALTH OF VIRGINIA; OR (B) IF COLLATERAL HAS BEEN PLEDGED TO SECURE THE LIABILITIES, THEN BY THE LAWS OF THE STATE OR STATES WHERE THE COLLATERAL IS LOCATED, AT SECURED PARTY'S OPTION. THIS CHOICE OF STATE LAWS IS EXCLUSIVE TO THE SECURED PARTY. DEBTOR SHALL NOT HAVE ANY OPTION TO CHOOSE THE LAWS BY WHICH THIS AGREEMENT SHALL BE GOVERNED. DEBTOR

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ACKNOWLEDGES THAT THIS AGREEMENT IS BEING SIGNED BY THE SECURED PARTY IN PARTIAL CONSIDERATION OF SECURED PARTY'S RIGHT TO ENFORCE IN THE JURISDICTION STATED ABOVE. DEBTOR CONSENTS TO JURISDICTION IN THE COMMONWEALTH OF VIRGINIA OR THE STATE IN WHICH ANY COLLATERAL IS LOCATED AND VENUE IN ANY FEDERAL OR STATE COURT IN THE COMMONWEALTH OF VIRGINIA OR THE STATE IN WHICH COLLATERAL IS LOCATED FOR SUCH PURPOSES AND WAIVES ANY AND ALL RIGHTS TO CONTEST SAID JURISDICTION AND VENUE AND ANY OBJECTION THAT SAID COUNTY IS NOT CONVENIENT. DEBTOR WAIVES ANY RIGHTS TO COMMENCE ANY ACTION AGAINST SECURED PARTY IN ANY JURISDICTION EXCEPT VIRGINIA, OR IF SECURED PARTY CHOOSES TO LITIGATE IN A STATE WHERE COLLATERAL IS LOCATED THEN IN SUCH COUNTY AND STATE.

(h) Power of Attorney. To facilitate direct collection, the Debtor hereby appoints the Secured Party and any officer or employee of the Secured Party, as the Secured Party may from time to time designate, as attorney-in-fact for the Debtor to (a) endorse the name of the Debtor in favor of the Secured Party upon any and all checks, drafts, money orders, notes, acceptances or other evidences of payment or Collateral that may come into the Secured Party's possession; (b) do all acts and things necessary to carry out this Agreement and the transactions contemplated hereby, including signing the name of the Debtor on any instruments required by law in connection with the transactions contemplated hereby and on financing statements as permitted by the Virginia Uniform Commercial Code. The Debtor hereby ratifies and approves all acts of such attorneys-in-fact, and neither the Secured Party nor any other such attorney-in-fact shall be liable for any acts of commission or omission, or for any error of judgment or mistake of fact or law of any such attorney-in-fact. This power, being coupled with an interest, is irrevocable so long as the Loan remains unsatisfied, or any Debt Document remains effective, as solely determined by the Secured Party. Secured Party agrees to exercise this power of attorney only during the existence of an event of default.

(i) Loss, Depreciation or Other Damage. The Secured Party shall not be liable for or prejudiced by any loss, depreciation or other damage to Collateral unless caused by the Secured Party's willful and malicious act, and the Secured Party shall have no duty to take any action to preserve or collect any Collateral.

(j) Demand; Protest. Debtor waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees at any time held by Secured Party on which Debtor may in any way be liable.

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9. DEFINITIONS.

As used herein, the following terms, when initial capital letters are used, shall have the respective meanings set forth below. In addition, all terms defined in the Code shall have the meanings given therein unless otherwise defined herein.

Defined Terms. As used in this Agreement, the following terms shall have the following meanings, unless the context otherwise requires:

"***Additional Indebtedness***" means, with respect to Debtor or any of its subsidiaries, the aggregate amount of, without duplication, (a) all obligations of such Person for borrowed money, (b) all obligations of such Person evidenced by bonds, debentures, notes or other similar instruments, (c) all obligations of such Person to pay the deferred purchase price of property or services (excluding trade payables aged less than one hundred eighty (180) days), (d) all capital lease obligations of such Person, (e) all obligations or liabilities of others secured by a Lien on any asset of such Person, whether or not such obligation or liability is assumed, (f) all obligations or liabilities of others guaranteed by such Person, and (g) any other obligations or liabilities which are required by GAAP to be shown as debt on the balance sheet of such Person. A listing of Additional Indebtedness existing on the date hereof is set forth in Schedule B. Unless otherwise indicated, the term "***Additional Indebtedness***" shall include all Indebtedness of Debtor and all of its subsidiaries.

"***Affiliate***" of a Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members.

"***Code***" means the Virginia Uniform Commercial Code (including revised Article 9 thereof).

"***Collateral***" has the meaning given such capitalized term in Section 1.

"***Collateral Schedule***" has the meaning given such capitalized term in Section 1.

"***Debt Documents***" has the meaning given such capitalized term in Section 2(b).

"***Default Rate***" is the lower of thirteen percent (13%) per annum or the maximum rate not prohibited by applicable law.

"***Indebtedness***" has the meaning given such capitalized term in Section 1.

"***Intellectual Property***" shall mean (a) all of the Debtor's right, title and interest, whether now owned or existing or hereafter acquired or arising, in and to all domestic and foreign copyrights, copyright registrations and copyright applications, whether or not registered or filed with any governmental authority, together with (i) all renewals thereof, (ii) all present and future rights of the Debtor under all present and future license agreements relating thereto, whether the Debtor is licensee or licensor thereunder, (iii) all income,

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royalties, damages and payments now or hereafter due and/or payable to the Debtor thereunder or with respect thereto, including, without limitation, damages and payments for past, present or future infringements thereof, (iv) all of the Debtor's present and future claims, causes of action and rights to sue for past, present or future infringements thereof, and (v) all rights corresponding thereto throughout the world (collectively "**Copyright Rights**"); (b) all of the Debtor's right, title and interest, whether now owned or existing or hereafter acquired or arising, in and to all United States and foreign patents, and pending and abandoned United States and foreign patent applications, including, without limitation, the inventions and improvements described or claimed therein, together with(i) any reissues, divisions, continuations, certificates of re-examination, extensions and continuations-in-part thereof, (ii) all present and future rights of the Debtor under all present and future license agreements relating thereto, whether the Debtor is licensee or licensor thereunder, (iii) all income, royalties, damages and payments now or hereafter due and/or payable to the Debtor thereunder or with respect thereto, including, without limitation, damages and payments for past, present or future infringements thereof, (iv) all of the Debtor's present and future claims, causes of action and rights to sue for past, present or future infringements thereof, and (v) all rights corresponding thereto throughout the world (collectively "**Patent Rights**"); (c) all of the Debtor's right, title and interest, whether now owned or existing or hereafter acquired or arising, in and to all domestic and foreign trademarks, trademark registrations, trademark applications and trade names, whether or not registered or filed with any governmental authority, together with (i) all renewals thereof, (ii) all present and future rights of the Debtor under all present and future license agreements relating thereto, whether the Debtor is licensee or licensor thereunder, (iii) all income, royalties, damages and payments now or hereafter due and/or payable to the Debtor thereunder or with respect thereto, including, without limitation, damages and payments for past, present or future infringements thereof, (iv) all of the Debtor's present and future claims, causes of action and rights to sue for past, present or future infringements thereof, and (v) all rights corresponding thereto throughout the world (collectively "**Trademark Rights**"); (d) all present and future licenses and license agreements of the Debtor, and all rights of the Debtor under or in connection therewith, whether the Debtor is licensee or licensor thereunder, including, without limitation, any present or future franchise agreements under which the Debtor is franchisee or franchisor, together with (i) all renewals thereof, (ii) all income, royalties, damages and payments now or hereafter due and/or payable to the Debtor thereunder or with respect thereto, including, without limitation, damages and payments for past, present or future infringements thereof, (iii) all claims, causes of action and rights to sue for past, present or future infringements thereof, and (iv) all rights corresponding thereto throughout the world (collectively "**License Rights**"); (e) all present and future trade secrets of the Debtor; and (f) all other present and future intellectual property of the Debtor.]

"***Lien(s)***" shall mean any voluntary or involuntary mortgage, pledge, deed of trust, assignment, security interest, encumbrance, hypothecation, lien, or charge of any kind (including any conditional sale or other title retention agreement, any financing lease having substantially the same economic effect as any of the foregoing, and the filing of, or agreement to give, any financing statement under the Uniform Commercial Code or comparable law of any jurisdiction).

Codexis Initial Here: _____
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"***Loan***" means an advance of credit by Secured Party to Debtor.

"***Note***" has the meaning given such capitalized term in Section 1.

"***Permitted Liens***" means: (i) liens in favor of Secured Party, (ii) liens for taxes not yet due or for taxes being contested in good faith and which do not involve, in the judgment of Secured Party, any risk of the sale, forfeiture or loss of any of the Collateral, and (iii) inchoate materialmen's, mechanic's, repairmen's and similar liens arising by operation of law in the normal course of business for amounts which are not delinquent.

"***Person***" is any individual, sole proprietorship, partnership, limited liability company, joint venture, company association, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

"***Primary Operating Account***" has the meaning given such capitalized term in Section 2(w).

"***Secured Party's Expenses***" means all reasonable costs or expenses (including reasonable attorneys' fees and expenses) incurred in connection with the preparation, negotiation, documentation, administration and funding of the Debt Documents; and Secured Party's reasonable attorneys' fees, costs and expenses incurred in amending. modifying, enforcing or defending the Debt Documents (including fees and expenses of appeal or review), including the exercise of any rights or remedies afforded hereunder or under applicable law, whether or not suit is brought, whether before or after bankruptcy or insolvency, including without limitation all fees and costs incurred by Secured Party in connection with Secured Party's enforcement of its rights in a bankruptcy or insolvency proceeding filed by or against Debtor or its property.

"***Subordinated Indebtedness***" means Additional Indebtedness subordinated to the Indebtedness of Debtor to Secured Party on terms and conditions acceptable to Secured Party in its sole discretion.

IN WITNESS WHEREOF, Debtor and Secured Party, intending to be legally bound hereby, have duly executed this Agreement in one or more counterparts, each of which shall be deemed to be an original, as of the day and year first aforesaid.

SECURED PARTY:	DEBTOR:
Oxford Finance Corporation	Codexis, Inc.
By: /s/ Michael J. Altenburger	By: /s/ Tassos Gianakakos
Name: Michael J. Altenburger	Name: Tassos Gianakakos
Title: Chief Financial Officer	Title: Senior Vice President

Codexis Initial Here: _____
Oxford Initial Here: _____

SCHEDULE A

FORM OF
COMPLIANCE CERTIFICATE

Oxford Finance Corporation
133 N. Fairfax Street
Alexandria, VA 22314

Re: *Codexis, Inc.*

Gentlemen:

Reference is made to the Master Security Agreement dated as of October 25, 2005, (as the same have been and may be amended from time to time in writing, the "**Loan Agreement**", the capitalized terms used herein as defined therein), between Oxford Finance Corporation and Codexis, Inc. (the "**Company**").

The undersigned authorized representative of the Company hereby certifies that in accordance with the terms and conditions of the Loan Agreement, the Company is in complete compliance for the financial reporting period ending _____ with all required financial reporting under the Loan Agreement, except as noted below. Attached herewith are the required documents supporting the foregoing certification. The undersigned further certifies that the accompanying financial statements present fairly in all material respects the Debtor's financial condition as of the date thereof, that annual audited financial statements have been prepared in accordance with Generally Accepted Accounting Principles, and all such financial statements are consistent from one period to the next, except as explained below.

Indicate compliance status by circling Yes/No under "Complies"

REPORTING REQUIREMENT	REQUIRED	COMPLIES
Interim Financial Statements	Quarterly within 45 days	YES / NO
Monthly Financial Statements	Monthly within 30 days	
Audited Financial Statements	FYE within 120 days	
Date of most recent Board-approved budget/plan _____		
Summary submitted with Borrowing Request		YES / NO
Any material change in budget/plan since prior Borrowing Request		YES / NO

Codexis Initial Here: _____
Oxford Initial Here: _____

EXPLANATIONS

Very truly yours,

CODEXIS, INC.

By: _____
Name:
Title:*

* Must be executed by Debtor's Chief Financial Officer or President.

Codexis Initial Here: _____
Oxford Initial Here: _____

SCHEDULE B

DEBTOR ADDITIONAL INDEBTEDNESS AS OF SEPTEMBER 30, 2005

Current Liabilities		
Accrued vacation		438,019
Other accruals		1,125,685
Equipment loan		993,343
Lease Incentive		62,531
Deferred Revenue		3,618,030
	Subtotal	6,237,608
Long Term Liabilities		
Equipment Loan		2,705,561
Lease Incentive		270,966
Deferred Revenue		1,956,092
	Subtotal	4,932,619
	Total Liabilities	11,170,227

Codexis Initial Here: _____
Oxford Initial Here: _____

COLLATERAL MIX RIDER

TO
MASTER SECURITY AGREEMENT NO. 5081102
DATED OCTOBER 25, 2005
BETWEEN
OXFORD FINANCE CORPORATION (the "SECURED PARTY")
AND
CODEXIS, INC. (the "DEBTOR")

Debtor shall cause the composition and mix of Collateral to conform to and meet the following concentration requirements (hereinafter "Concentration Requirement") for the class of Collateral (hereinafter "Collateral Class") as identified and set forth below. Debtor herein represents and warrants that it shall maintain such Collateral Class and its respective Concentration Requirement at all times from and after December 31, 2006. If on such date the Concentration Requirement is not in compliance (a "Concentration Variance"), Debtor will do one of the following (a "Concentration Correction"):

1. Grant to Secured Party a security interest in additional equipment satisfactory to Secured Party, not previously subject to Secured Party's security interest (collectively, the "Additional Equipment"), in sufficent type and amount so that the Concentration Requirement set forth below is met and the Concentration Variance is eliminated. The Additional Equipment shall be subject to all of the terms and conditions of the Master Security Agreement, including without limitation, Debtor's representations, warranties, and covenants, which shall be deemed remade by Debtor upon its grant of a security interest in the Additional Equipment.

2. Pay Secured Party cash in an amount equal to the Concentration Variance to hold as cash collateral until the Note is fully repaid. Debtor hereby grants Secured Party a security interest in such cash collateral and all proceeds and products thereof. Debtor agrees that such cash collateral held by Secured Party: (a) shall not bear interest, (b) may be commingled with other funds of Secured Party, and (c) may be applied by Secured Party to amounts owing by Debtor upon the occurrence and during the continuance of any Event of Default under the Master Security Agreement or the Note(s) thereunder.

The failure of Debtor to do a Concentration Correction by December 31, 2006, shall constitute a Default under the Master Security Agreement and the Note(s) thereunder.

Collateral Class	Concentration Requirement
New Laboratory Equipment	Minimum of 60%
New Computer and Furniture	Maximum of 10%
Soft Costs	Maximum of 30% of the outstanding principal amount as initially represented by the Promissory Notes from time to time

Codexis Initial Here: _____
Oxford Initial Here: _____

Dated as of October 25, 2005

OXFORD FINANCE CORPORATION	CODEXIS, INC.
By: /s/ Michael J. Altenburger	By: /s/ Tassos Gianakakos
Name: Michael J. Altenburger	Name: Tassos Gianakakos
Title: Chief Financial Officer	Title: Senior Vice President

Codexis Initial Here: _____
Oxford Initial Here: _____

SECRETARY'S CERTIFICATE

Codexis, Inc.

To: Oxford Finance Corporation
133 North Fairfax Street
Alexandria, Virginia 22314

The undersigned hereby certifies as follows:

(i) He is the duly appointed Secretary of Codexis, Inc., a Delaware corporation (the "Corporation").

(ii) Each of the officers designated below is a duly appointed officer of the Corporation, and the signature appearing opposite his name below is his genuine signature:

NAME	OFFICE	SIGNATURE
Alan Shaw	President and Chief Executive Officer	/s/ Alan Shaw
Tassos Gianakakos	Senior Vice President	/s/ Tassos Gianakakos

(iii) Schedule A attached hereto is a true and correct copy of the Corporation's Fourth Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on July 22, 2004, as amended on January 19, 2005, July 26, 2005 and October 20, 2005 (the "Certificate"). The Certificate has not in any way been amended, annulled, rescinded, repealed, revoked or supplemented, and remains in full force and effect as of the date hereof.

(iv) Schedule B attached hereto is a true and correct copy of the Corporation's bylaws as presently in effect.

(v) Schedule C attached hereto is a true and correct copy of resolutions adopted by the board of directors of the Corporation on August 11, 2005 related to Oxford Finance Corporation (the "Resolutions"). Said Resolutions have not been revoked, modified, rescinded, or amended and are in full force and effect.

[Signature Page Follows]

Codexis Initial Here: _____
Oxford Initial Here: _____

SECRETARY'S CERTIFICATE

IN WITNESS WHEREOF, I have hereunto set my hand, this 25th day of October, 2005.

/s/ Alan C. Mendelson

Alan Mendelson
Secretary
Codexis, Inc.

ATTEST:

The undersigned does hereby certify that he is President and Chief Executive Officer of the Corporation and does hereby certify that Alan Mendelson was, at the time he executed the foregoing Certificate, a duly elected, qualified and acting Secretary of the Corporation, and he was duly authorized and empowered to do so, and the signature thereon is genuine.

/s/ Alan Shaw

Signature of Corporate Officer
Attesting to Secretary Signature

Codexis Initial Here: _____
Oxford Initial Here: _____

Exhibit 10.22

CODEXIS, INC.

2002 STOCK PLAN

(as amended through August 28, 2007)

1. Purposes of the Plan. The purposes of this Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Employees, Directors and Consultants and to promote the success of the Company's business. Options granted under the Plan may be Incentive Stock Options or Nonstatutory Stock Options, as determined by the Administrator at the time of grant. Stock Purchase Rights may also be granted under the Plan.

2. Definitions. As used herein, the following definitions shall apply:

(a) "Administrator" means the Board or any of its Committees as shall be administering the Plan in accordance with Section 4 hereof.

(b) "Applicable Laws" means the requirements relating to the administration of stock option plans under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any other country or jurisdiction where Options or Stock Purchase Rights are granted under the Plan.

(c) "Board" means the Board of Directors of the Company.

(d) "Change in Control" means the occurrence of any of the following events:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) The consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or

(iii) The consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

(e) "Code" means the Internal Revenue Code of 1986, as amended.

(f) "Committee" means a committee of Directors or of other individuals satisfying Applicable Laws appointed by the Board in accordance with Section 4 hereof.

(g) "Common Stock" means the Common Stock of the Company.

(h) "Company" means Codexis, Inc., a Delaware corporation.

(i) "Consultant" means any person who is engaged by the Company or any Parent or Subsidiary to render consulting or advisory services to such entity.

(j) "Director" means a member of the Board.

(k) "Disability" means total and permanent disability as defined in Section 22(e)(3) of the Code.

(l) "Employee" means any person, including officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. Neither service as a Director nor payment of a director's fee by the Company shall be sufficient to constitute "employment" by the Company.

(m) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(n) "Fair Market Value" means, as of any date, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, including without limitation the Nasdaq National Market or The Nasdaq SmallCap Market of The Nasdaq Stock Market, its Fair Market Value shall be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system on the day of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, its Fair Market Value shall be the mean between the high bid and low asked prices for the Common Stock on the day of determination; or

(iii) In the absence of an established market for the Common Stock, the Fair Market Value thereof shall be determined in good faith by the Administrator.

(o) "Incentive Stock Option" means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code.

(p) "Nonstatutory Stock Option" means an Option not intended to qualify as an Incentive Stock Option.

(q) "Option" means a stock option granted pursuant to the Plan.

(r) "Option Agreement" means a written or electronic agreement between the Company and an Optionee evidencing the terms and conditions of an individual Option grant. The Option Agreement is subject to the terms and conditions of the Plan.

(s) "Optioned Stock" means the Common Stock subject to an Option or a Stock Purchase Right.

(t) "Optionee" means the holder of an outstanding Option or Stock Purchase Right granted under the Plan.

(u) "Parent" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.

(v) "Plan" means this 2002 Stock Plan.

(w) "Restricted Stock" means Shares issued pursuant to a Stock Purchase Right or Shares of restricted stock issued pursuant to an Option.

(x) "Restricted Stock Purchase Agreement" means a written agreement between the Company and the Optionee evidencing the terms and restrictions applying to Shares purchased under a Stock Purchase Right. The Restricted Stock Purchase Agreement is subject to the terms and conditions of the Plan and the notice of grant.

(y) "Securities Act means the Securities Act of 1933, as amended.

(z) "Service Provider" means an Employee, Director or Consultant.

(aa) "Share" means a share of the Common Stock, as adjusted in accordance with Section 13 below.

(bb) "Stock Purchase Right" means a right to purchase Common Stock pursuant to Section 11 below.

(cc) "Subsidiary" means a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Code.

3. Stock Subject to the Plan. Subject to the provisions of Section 13 of the Plan, the maximum aggregate number of Shares that may be subject to Options and sold under the Plan is 12,457,642 Shares. The Shares may be authorized but unissued, or reacquired Common Stock.

If an Option or Stock Purchase Right expires or becomes unexercisable without having been exercised in full, the unpurchased Shares that were subject thereto shall become available for future grant or sale under the Plan (unless the Plan has terminated). However, Shares that have actually been issued under the Plan, upon exercise of either an Option or Stock Purchase Right, shall not be returned to the Plan and shall not become available for future distribution under the Plan, except that if unvested Shares of Restricted Stock are repurchased by the Company at their original purchase price, such Shares shall become available for future grant under the Plan.

4. Administration of the Plan.

(a) Administrator. The Plan shall be administered by the Board or a Committee appointed by the Board, which Committee shall be constituted to comply with Applicable Laws.

(b) Powers of the Administrator. Subject to the provisions of the Plan and, in the case of a Committee, the specific duties delegated by the Board to such Committee, and subject to the approval of any relevant authorities, the Administrator shall have the authority in its discretion:

(i) to determine the Fair Market Value;

(ii) to select the Service Providers to whom Options and Stock Purchase Rights may from time to time be granted hereunder;

(iii) to determine the number of Shares to be covered by each such award granted hereunder;

(iv) to approve forms of agreement for use under the Plan;

(v) to determine the terms and conditions of any Option or Stock Purchase Right granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Options or Stock Purchase Rights may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Option or Stock Purchase Right or the Common Stock relating thereto, based in each case on such factors as the Administrator, in its sole discretion, shall determine;

(vi) to prescribe, amend and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of satisfying applicable foreign laws;

(vii) to allow Optionees to satisfy withholding tax obligations by electing to have the Company withhold from the Shares to be issued upon exercise of an Option or Stock Purchase Right that number of Shares having a Fair Market Value equal to the minimum amount required to be withheld. The Fair Market Value of the Shares to be withheld shall be determined on the date that the amount of tax to be withheld is to be determined. All elections by Optionees to have Shares withheld for this purpose shall be made in such form and under such conditions as the Administrator may deem necessary or advisable; and

(viii) to construe and interpret the terms of the Plan and Options granted pursuant to the Plan.

(c) Effect of Administrator's Decision. All decisions, determinations and interpretations of the Administrator shall be final and binding on all Optionees.

5. Eligibility. Nonstatutory Stock Options and Stock Purchase Rights may be granted to Service Providers. Incentive Stock Options may be granted only to Employees.

6. Limitations.

(a) Incentive Stock Option Limit. Each Option shall be designated in the Option Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. However, notwithstanding such designation, to the extent that the aggregate Fair Market Value of the Shares with respect to which Incentive Stock Options are exercisable for the first time by the Optionee during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds $100,000, such Options shall be treated as Nonstatutory Stock Options. For purposes of this Section 6(a), Incentive Stock Options shall be taken into account in the order in which they were granted. The Fair Market Value of the Shares shall be determined as of the time the Option with respect to such Shares is granted.

(b) At-Will Employment. Neither the Plan nor any Option or Stock Purchase Right shall confer upon any Optionee any right with respect to continuing the Optionee's relationship as a Service Provider with the Company, nor shall it interfere in any way with his or her right or the Company's right to terminate such relationship at any time, with or without cause, and with or without notice.

7. Term of Plan. Subject to stockholder approval in accordance with Section 19, the Plan shall become effective upon its adoption by the Board. Unless sooner terminated under Section 15, it shall continue in effect for a term of ten (10) years from the later of (i) the effective date of the Plan, or (ii) the earlier of the most recent Board or stockholder approval of an increase in the number of Shares reserved for issuance under the Plan.

8. Term of Option. The term of each Option shall be stated in the Option Agreement; provided, however, that the term shall be no more than ten (10) years from the date of grant thereof. In the case of an Incentive Stock Option granted to an Optionee who, at the time the Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the term of the Option shall be five (5) years from the date of grant or such shorter term as may be provided in the Option Agreement.

9. Option Exercise Price and Consideration.

(a) Exercise Price. The per share exercise price for the Shares to be issued upon exercise of an Option shall be such price as is determined by the Administrator, but shall be subject to the following:

(i) In the case of an Incentive Stock Option

(A) granted to an Employee who, at the time of grant of such Option, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the exercise price shall be no less than 110% of the Fair Market Value per Share on the date of grant.

(B) granted to any other Employee, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.

(ii) In the case of a Nonstatutory Stock Option

(A) granted to a Service Provider who, at the time of grant of such Option, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the exercise price shall be no less than 110% of the Fair Market Value per Share on the date of grant.

(B) granted to any other Service Provider, the per Share exercise price shall be no less than 85% of the Fair Market Value per Share on the date of grant.

(iii) Notwithstanding the foregoing, Options may be granted with a per Share exercise price other than as required above pursuant to a merger or other corporate transaction.

(b) Forms of Consideration. The consideration to be paid for the Shares to be issued upon exercise of an Option, including the method of payment, shall be determined by the Administrator (and, in the case of an Incentive Stock Option, shall be determined at the time of grant). Such consideration may consist of, without limitation, (1) cash, (2) check, (3) promissory note, (4) other Shares, provided Shares acquired directly from the Company (x) have been owned by the Optionee for more than six months on the date of surrender, and (y) have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which such Option shall be exercised, (5) consideration received by the Company under a cashless exercise program implemented by the Company in connection with the Plan, or (6) any combination of the foregoing methods of payment. In making its determination as to the type of consideration to accept, the Administrator shall consider if acceptance of such consideration may be reasonably expected to benefit the Company.

10. Exercise of Option.

(a) Procedure for Exercise; Rights as a Stockholder. Any Option granted hereunder shall be exercisable according to the terms hereof at such times and under such conditions as determined by the Administrator and set forth in the Option Agreement. An Option may not be exercised for a fraction of a Share. Except in the case of Options granted to officers, Directors and Consultants, Options shall become exercisable at a rate of no less than 20% per year over five (5) years from the date the Options are granted.

An Option shall be deemed exercised when the Company receives (i) written or electronic notice of exercise (in accordance with the Option Agreement) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised. Full payment may consist of any consideration and method of payment authorized by the Administrator and permitted by the Option Agreement and the Plan. Shares issued upon exercise of an Option shall be issued in the name of the Optionee or, if requested by the Optionee, in the name of the Optionee and his or her spouse. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Shares, notwithstanding the exercise of the Option. The Company shall issue (or cause to be issued) such

Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 13 of the Plan.

Exercise of an Option in any manner shall result in a decrease in the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(b) Termination of Relationship as a Service Provider. If an Optionee ceases to be a Service Provider, such Optionee may exercise his or her Option within thirty (30) days of termination, or such longer period of time as specified in the Option Agreement, to the extent that the Option is vested on the date of termination (but in no event later than the expiration of the term of the Option as set forth in the Option Agreement). If, on the date of termination, the Optionee is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option shall revert to the Plan. If, after termination, the Optionee does not exercise his or her Option within the time specified by the Administrator, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.

(c) Disability of Optionee. If an Optionee ceases to be a Service Provider as a result of the Optionee's Disability, the Optionee may exercise his or her Option within six (6) months of termination, or such longer period of time as specified in the Option Agreement, to the extent the Option is vested on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Option Agreement). If, on the date of termination, the Optionee is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option shall revert to the Plan. If, after termination, the Optionee does not exercise his or her Option within the time specified herein, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.

(d) Death of Optionee. If an Optionee dies while a Service Provider, the Option may be exercised within six (6) months following Optionee's death, or such longer period of time as specified in the Option Agreement, to the extent that the Option is vested on the date of death (but in no event later than the expiration of the term of such Option as set forth in the Option Agreement) by the Optionee's designated beneficiary, provided such beneficiary has been designated prior to Optionee's death in a form acceptable to the Administrator. If no such beneficiary has been designated by the Optionee, then such Option may be exercised by the personal representative of the Optionee's estate or by the person(s) to whom the Option is transferred pursuant to the Optionee's will or in accordance with the laws of descent and distribution. If, at the time of death, the Optionee is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option shall immediately revert to the Plan. If the Option is not so exercised within the time specified herein, the Option shall terminate, and the Shares covered by such Option shall revert to the Plan.

(e) Leaves of Absence.

(i) A Service Provider shall not cease to be an Employee in the case of (A) any leave of absence approved by the Company or (B) transfers between locations of the Company or between the Company, its Parent, any Subsidiary, or any successor.

(ii) For purposes of Incentive Stock Options, no such leave may exceed ninety (90) days, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, then three (3) months following the 91st day of such leave, any Incentive Stock Option held by the Optionee shall cease to be treated as an Incentive Stock Option and shall be treated for tax purposes as a Nonstatutory Stock Option.

11. Stock Purchase Rights.

(a) Rights to Purchase. Stock Purchase Rights may be issued either alone, in addition to, or in tandem with other awards granted under the Plan and/or cash awards made outside of the Plan. After the Administrator determines that it will offer Stock Purchase Rights under the Plan, it shall advise the offeree in writing or electronically of the terms, conditions and restrictions related to the offer, including the number of Shares that such person shall be entitled to purchase, the price to be paid, and the time within which such person must accept such offer. The terms of the offer shall comply in all respects with Section 260.140.42 of Title 10 of the California Code of Regulations. The offer shall be accepted by execution of a Restricted Stock Purchase Agreement in the form determined by the Administrator.

(b) Repurchase Option. Unless the Administrator determines otherwise, the Restricted Stock Purchase Agreement shall grant the Company a repurchase option exercisable within 90 days of the voluntary or involuntary termination of the purchaser's service with the Company for any reason (including death or disability). The purchase price for Shares repurchased pursuant to the Restricted Stock Purchase Agreement shall be the original price paid by the purchaser and may be paid by cancellation of any indebtedness of the purchaser to the Company. The repurchase option shall lapse at such rate as the Administrator may determine. Except with respect to Shares purchased by officers, Directors and Consultants, the repurchase option shall in no case lapse at a rate of less than 20% per year over five (5) years from the date of purchase.

(c) Other Provisions. The Restricted Stock Purchase Agreement shall contain such other terms, provisions and conditions not inconsistent with the Plan as may be determined by the Administrator in its sole discretion.

(d) Rights as a Stockholder. Once the Stock Purchase Right is exercised, the purchaser shall have rights equivalent to those of a stockholder and shall be a stockholder when his or her purchase is entered upon the records of the duly authorized transfer agent of the Company. No adjustment shall be made for a dividend or other right for which the record date is prior to the date the Stock Purchase Right is exercised, except as provided in Section 13 of the Plan.

12. Limited Transferability of Options and Stock Purchase Rights. Unless determined otherwise by the Administrator, Options and Stock Purchase Rights may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or the laws of descent and distribution, and may be exercised during the lifetime of the Optionee, only by the Optionee. If the Administrator in its sole discretion makes an Option or Stock Purchase Right transferable, such Option or Stock Purchase Right may only be transferred (i) by will, (ii) by the laws of descent and distribution, or (iii) to family members (within the meaning of Rule 701 of the Securities Act) through gifts or domestic relations orders, as permitted by Rule 701 of the Securities Act.

13. Adjustments; Dissolution or Liquidation; Merger or Change in Control

(a) Adjustments. In the event that any dividend or other distribution (whether in the form of cash, Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Shares occurs, the Administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the Plan and in order to comply with Section 25102(o) of the California Corporations Code, shall adjust the number and class of Shares that may be delivered under the Plan and/or the number, class, and price of Shares covered by each outstanding Option or Stock Purchase Right.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Administrator shall notify each Optionee as soon as practicable prior to the effective date of such proposed transaction. The Administrator in its discretion may provide for an Optionee to have the right to exercise his or her Option until ten (10) days prior to such transaction as to all of the Optioned Stock, including Shares as to which the Option would not otherwise be exercisable. In addition, the Administrator may provide that any Company repurchase option applicable to any Shares purchased upon exercise of an Option or Stock Purchase Right shall lapse as to all such Shares, provided the proposed dissolution or liquidation takes place at the time and in the manner contemplated. To the extent it has not been previously exercised, an Option or Stock Purchase Right will terminate immediately prior to the consummation of such proposed action.

(c) Merger or Change in Control. In the event of a merger of the Company with or into another corporation, or a Change in Control, each outstanding Option and Stock Purchase Right shall be assumed or an equivalent option substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation in a merger or Change in Control refuses to assume or substitute for the Option or Stock Purchase Right, then the Optionee shall fully vest in and have the right to exercise the Option or Stock Purchase Right as to all of the Optioned Stock, including Shares as to which it would not otherwise be vested or exercisable. If an Option or Stock Purchase Right becomes fully vested and exercisable in lieu of assumption or substitution in the event of a merger or Change in Control, the Administrator shall notify the Optionee in writing or electronically that this Option or Stock Purchase Right shall be fully exercisable for a period of fifteen (15) days from the date of such notice, and the Option or Stock Purchase Right shall terminate upon expiration of such period. For the purposes of this paragraph, the Option or Stock Purchase Right shall be considered assumed if, following the merger or Change in Control, the option or right confers the right to purchase or receive, for each Share of Optioned Stock subject to the Option or Stock Purchase Right immediately prior to the merger or Change in Control, the consideration (whether stock, cash, or other securities or property) received in the merger or Change in Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided, however, that if such consideration received in the merger or Change in Control is not solely common stock of the successor corporation or its Parent, the Administrator may, with the consent of the successor

corporation, provide for the consideration to be received upon the exercise of the Option or Stock Purchase Right, for each Share of Optioned Stock subject to the Option or Stock Purchase Right, to be solely common stock of the successor corporation or its Parent equal in fair market value to the per share consideration received by holders of common stock in the merger or Change in Control.

14. Time of Granting Options and Stock Purchase Rights. The date of grant of an Option or Stock Purchase Right shall, for all purposes, be the date on which the Administrator makes the determination granting such Option or Stock Purchase Right, or such later date as is determined by the Administrator. Notice of the determination shall be given to each Service Provider to whom an Option or Stock Purchase Right is so granted within a reasonable time after the date of such grant.

15. Amendment and Termination of the Plan.

(a) Amendment and Termination. The Board may at any time amend, alter, suspend or terminate the Plan.

(b) Stockholder Approval. The Board shall obtain stockholder approval of any Plan amendment to the extent necessary and desirable to comply with Applicable Laws.

(c) Effect of Amendment or Termination. No amendment, alteration, suspension or termination of the Plan shall impair the rights of any Optionee, unless mutually agreed otherwise between the Optionee and the Administrator, which agreement must be in writing and signed by the Optionee and the Company. Termination of the Plan shall not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Options granted under the Plan prior to the date of such termination.

16. Conditions Upon Issuance of Shares.

(a) Legal Compliance. Shares shall not be issued pursuant to the exercise of an Option unless the exercise of such Option and the issuance and delivery of such Shares shall comply with Applicable Laws and shall be further subject to the approval of counsel for the Company with respect to such compliance.

(b) Investment Representations. As a condition to the exercise of an Option, the Administrator may require the person exercising such Option to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required.

17. Inability to Obtain Authority. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained.

18. Reservation of Shares. The Company, during the term of this Plan, shall at all times reserve and keep available such number of Shares as shall be sufficient to satisfy the requirements of the Plan.

19. Stockholder Approval. The Plan shall be subject to approval by the stockholders of the Company within twelve (12) months after the date the Plan is adopted. Such stockholder approval shall be obtained in the degree and manner required under Applicable Laws.

20. Information to Optionees. The Company shall provide to each Optionee and to each individual who acquires Shares pursuant to the Plan, not less frequently than annually during the period such Optionee has one or more Options or Stock Purchase Rights outstanding, and, in the case of an individual who acquires Shares pursuant to the Plan, during the period such individual owns such Shares, copies of annual financial statements. The Company shall not be required to provide such statements to key employees whose duties in connection with the Company assure their access to equivalent information.

21. Rules Particular to Specific Countries. Notwithstanding anything herein to the contrary, the terms and conditions of the Plan with respect to Optionees who are tax residents of a particular country may be subject to an addendum to the Plan in the form of an Appendix. To the extent that the terms and conditions set forth in an Appendix conflict with any provisions of the Plan, the provisions of the Appendix shall govern. The adoption of any such Appendix shall be pursuant to Section 15 above.

CODEXIS, INC.

2002 STOCK PLAN

APPENDIX

FOR GERMANY

1. General

Each of the provisions of the Codexis, Inc. 2002 Stock Plan shall apply to this Appendix subject to the alterations below. This Appendix shall apply in relation to Options and Stock Purchase Rights granted to Service Providers residing and providing services in Germany.

2. Exercise of Discretion

The Administrator's discretion with respect to the Plan, including, but not limited to, Section 4 (b), will be exercised in a way complying with German law, in particular with the labour law principle of equal treatment (*arbeitsrechtlicher Gleichbehandlungsgrundsatz*) and with the prohibition of discrimination (*Diskriminierungsverbot*).

3. Disability

Section 2(k) shall read as follows: "Disability" means total and permanent disability to perform work if it results in termination of employment by the Service Provider or, if valid under German law, by the Company or the Subsidiary.

4. Vesting Requirement

The last sentence of the first paragraph of Section 10(a) and the last sentence of Section 11(b) shall not apply.

5. Leaves of Absence

Section 10(e)(i) is amended to read in its entirety as follows: "(i) A Service Provider shall not cease to be an Employee: (A) in the case of any leave of absence approved by the Company; (B) in the case of transfers between locations of the Company or between the Company, its Parent, any Subsidiary, or any successor; or (C) if required by German law."

6. *Ex-gratia* benefit

The grant of an Option or a Stock Purchase Right is an *ex-gratia* benefit (*freiwillige Leistung*). It does not create a legal claim; and even repeated granting will not create such a legal claim.

The Option or Stock Purchase Right granted shall not form, or be considered, part of any normal or expected compensation that is or may be subject to severance, resignation, redundancy or similar pay nor does it affect or change in any way the terms and conditions of employment.

7. Adjustments upon Changes in Capitalization, Merger or Asset Sale

The Administrator's discretion with respect to any Adjustments pursuant to Section 13 and to any Investment Representation pursuant to Section 16(b) will be exercised taking into fair consideration the circumstances why such adjustment or representation is deemed appropriate.

8. Taxes/Withholding

The following summary of certain German income tax considerations for German Employees is based on the tax law effective at the date of this Appendix which may be changed, even with retroactive effect. The summary does not describe all tax considerations that may be relevant to a German Employee's decision to accept or exercise any of the rights under the Plan. It is not a substitute for tax advice.

Capital gains realized upon exercise of an Option or a Stock Purchase Right is deemed to be a benefit in kind subject to income tax. Such gain is subject to the personal income tax rate (as of 2008 between 15.8 % and 47.5 % including solidarity surcharge). The capital gain realized upon exercise of an Option or a Stock Purchase Right is determined by the difference between the fair market value of the Shares at the date the Shares are booked out (*Ausbuchung*) of the account of the Company or of any transfer agent of the Company and the purchase price. The fair market value is defined on the basis of the prices quoted on the respective stock exchange or, if the Shares are not listed, according to an appropriate appraisal method available for unlisted shares of corporations. A reduced tax rate may apply if the grant of the option qualifies as salary for several years.

The employer company is obligated to deduct wage tax from the gross salary of the Employee. Additionally, the usual social security contributions, up to the relevant maximum amount, have to be paid on the difference between the exercise price and the market value at the time the Option or Stock Purchase Right is exercised. – If the regular salary of the Employee is not sufficient for the employer company to deduct wage tax and pay such tax to the competent tax office, the company will request the Employee to make a payment to the company in order to enable it to pay the wage tax. The employer company will inform the tax office if the Employee fails to fulfill such request.

If the Employee is obliged to retransfer the Shares to the Company under the Repurchase Option, such retransfer should be considered as negative income for the Employee thereby reducing the Employee's overall income for the respective calendar year. The amount of the negative income is determined by the difference between the fair market value of the Shares at the date the Shares are retransferred and the purchase price. The fair market value is defined as described above.

Capital gains from the sale of Shares are only subject to taxation, (i) if the sale takes place within one year from the purchase as a so-called private transaction (privates Veräußerungsgeschäft) or – after this period has lapsed – (ii) if the Optionee (or the

predecessor in the case of a transfer of Shares without consideration), at any time during the five years preceding the sale, directly or indirectly held or holds a participation of 1% or more. Capital gains deriving from a disposal of Shares as private transactions are tax exempt for Employees if the total gains from private transactions in the respective calendar year amounts to less than € 512 p.a. and per person. To the extent that capital gains upon sale of Shares are subject to German income tax, 50% of such capital gains are subject to the progressive income tax rate plus a solidarity surcharge of 5.5% thereon. According to the newly enacted Corporate Tax Reform Act 2008 (*Unternehmensteuerreform 2008*) capital gains will generally be subject to a uniform 25% tax (plus solidarity surcharge and, if applicable, church tax) as of 2009 if the respective Shares have been acquired after 31 December 2008 unless a shareholder holds, or held at any time during the five years preceding the sale, directly or indirectly, an interest of 1% or more in the company, in which case 60% from any such sale will be subject to tax at personal rates (instead of currently only 50%). Generally, the bank will levy the 25% tax on the capital gain by way of withholding if the Shares are held through a domestic bank or a domestic branch of a foreign bank (a "Bank"). However, since the purchase price of the Shares cannot be verified for withholding purposes , the Bank will be obliged to levy the 25% tax (plus solidarity surcharge and, if applicable, church tax) on 30% of the sales price of the Shares from which parts may possibly be recovered later by the shareholder by way of filing an income tax return. Capital gains stemming from Shares acquired before 1 January 2009 will continue to be taxed pursuant to the current tax regime (see above).

In principle, 50% of the gross dividends received by Employees until 31 December 2008 will be subject to income tax at the progressive tax rate plus solidarity surcharge. Investment income received by the Employee, including dividends, after deduction of half the income-related expenses in economic connection with the dividends or the standard amount for income-related expenses of € 51 (€ 102 for married couples filing jointly), are tax-free up to the maximum amount of tax-free savings allowances of € 750 (or € 1,500 for married couples filing jointly) until 31 December 2008. Dividends received thereafter will be subject to the 25% tax rate as described above which will be collected by way of withholding provided the Shares are held through a Bank. The current tax allowances and deductions will be replaced from 2009 onward by a joint lump-sum deduction for capital income (i.e., interest and

dividend income as well as capital gains) of €801 (€1,602 for married couples filing tax returns jointly) per annum, whereby higher expenses directly attributable to a capital investment will not be deductible as expenses any more.

Please note that a taxpayer will be able to apply for a tax assessment if his or her personal tax rate is lower than the 25% flat-rate (*Günstigerprüfung*) or if the taxpayer can claim a tax credit for tax imposed by foreign Tax Authorities that has not been recognized yet by way of withholding.

9. Insider Dealings

Please note that Germany has adopted the EC-Directive on Insider Dealings. Insiders are, among others, persons who by virtue of their position as members of managing or supervisory boards of the issuing company or its subsidiaries or by their profession or work, have knowledge of not publicly known facts which may influence the market value of the securities issued. Insiders are subject to certain restrictions in selling or purchasing such securities or otherwise making use of their insider knowledge. Anyone in breach of those provisions will be liable to imprisonment or fine.

10. Administrator's decisions

The decisions of the Administrator in connection with any interpretation of the Plan or in any dispute relating to an Option or a Stock Purchase Right or other matters relating to the Plan shall be final and conclusive and binding on the relevant parties. It may only be revised by competent courts.

11. Governing Law

The Plan shall be governed by and construed in accordance with the laws of the State of Delaware but mandatory provisions of German law may be applied.

CODEXIS, INC.

2002 STOCK PLAN

STOCK OPTION AGREEMENT

Unless otherwise defined herein, the terms defined in the 2002 Stock Plan shall have the same defined meanings in this Stock Option Agreement.

I. NOTICE OF STOCK OPTION GRANT

Name:

Address:

The undersigned Optionee has been granted an Option to purchase Common Stock of the Company, subject to the terms and conditions of the Plan and this Option Agreement, as follows:

Date of Grant	_____
Vesting Commencement Date	_____
Exercise Price per Share	$_____
Total Number of Shares Granted	_____
Total Exercise Price	$_____
Type of Option:	— Incentive Stock Option
	— Nonstatutory Stock Option
Term/Expiration Date:	_____

Vesting Schedule:

This Option shall be exercisable, in whole or in part, according to the following vesting schedule:

25% of the Shares subject to the Option shall vest on the one (1) year anniversary of the Vesting Commencement Date, and 1/48 of the Option shall vest each month thereafter, subject to Optionee continuing to be a Service Provider on such dates.

Termination Period:

This Option shall be exercisable for three (3) months after Optionee ceases to be a Service Provider. Upon Optionee's death or Disability, this Option may be exercised for one (1) year after Optionee ceases to be a Service Provider. In no event may Optionee exercise this Option after the Term/Expiration Date as provided above.

II. AGREEMENT

1. Grant of Option. The Plan Administrator of the Company hereby grants to the Optionee named in the Notice of Grant (the "Optionee"), an option (the "Option") to purchase the number of Shares set forth in the Notice of Grant, at the exercise price per Share set forth in the Notice of Grant (the "Exercise Price"), and subject to the terms and conditions of the Plan, which is incorporated herein by reference. Subject to Section 15(c) of the Plan, in the event of a conflict between the terms and conditions of the Plan and this Option Agreement, the terms and conditions of the Plan shall prevail.

If designated in the Notice of Grant as an Incentive Stock Option ("ISO"), this Option is intended to qualify as an Incentive Stock Option as defined in Section 422 of the Code. Nevertheless, to the extent that it exceeds the $100,000 rule of Code Section 422(d), this Option shall be treated as a Nonstatutory Stock Option ("NSO").

2. Exercise of Option.

(a) Right to Exercise. This Option shall be exercisable during its term in accordance with the Vesting Schedule set out in the Notice of Grant and with the applicable provisions of the Plan and this Option Agreement.

(b) Method of Exercise. This Option shall be exercisable by delivery of an exercise notice in the form attached as Exhibit A (the "Exercise Notice") which shall state the election to exercise the Option, the number of Shares with respect to which the Option is being exercised, and such other representations and agreements as may be required by the Company. The Exercise Notice shall be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares. This Option shall be deemed to be exercised upon receipt by the Company of such fully executed Exercise Notice accompanied by the aggregate Exercise Price.

No Shares shall be issued pursuant to the exercise of an Option unless such issuance and such exercise complies with Applicable Laws. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to the Optionee on the date on which the Option is exercised with respect to such Shares.

3. Optionee's Representations. In the event the Shares have not been registered under the Securities Act of 1933, as amended, at the time this Option is exercised, the Optionee shall, if required by the Company, concurrently with the exercise of all or any portion of this Option, deliver to the Company his or her Investment Representation Statement in the form attached hereto as Exhibit B.

4. Lock-Up Period. Optionee hereby agrees that Optionee shall not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Common Stock (or other securities) of the Company or enter into any swap, hedging or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any Common Stock (or other securities) of the Company held by Optionee (other than those included in the registration) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Company not to exceed one hundred eighty (180) days following the effective date of any registration statement of the Company filed under the Securities Act.

Optionee agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common Stock (or other securities) of the Company, Optionee shall provide, within ten (10) days of such request, such information as may be required by the Company or such representative in connection with the completion of any public offering of the Company's securities pursuant to a registration statement filed under the Securities Act. The obligations described in this Section shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of said one hundred eighty (180) day period. Optionee agrees that any transferee of the Option or Shares acquired pursuant to the Option shall be bound by this Section.

5. Method of Payment. Payment of the aggregate Exercise Price shall be by any of the following, or a combination thereof, at the election of the Optionee:

(a) cash or check;

(b) consideration received by the Company under a formal cashless exercise program adopted by the Company in connection with the Plan; or

(c) surrender of other Shares which, (i) in the case of Shares acquired from the Company, either directly or indirectly, have been owned by the Optionee for more than six (6) months on the date of surrender, and (ii) have a Fair Market Value on the date of surrender equal to the aggregate Exercise Price of the Exercised Shares.

6. Restrictions on Exercise. This Option may not be exercised until such time as the Plan has been approved by the stockholders of the Company, or if the issuance of such Shares upon such exercise or the method of payment of consideration for such Shares would constitute a violation of any Applicable Law.

7. Non-Transferability of Option. This Option may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Optionee only by Optionee. The terms of the Plan and this Option Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of the Optionee.

8. Term of Option. This Option may be exercised only within the term set out in the Notice of Grant, and may be exercised during such term only in accordance with the Plan and the terms of this Option.

9. Tax Obligations.

(a) Withholding Taxes. Optionee agrees to make appropriate arrangements with the Company (or the Parent or Subsidiary employing or retaining Optionee) for the satisfaction of all Federal, state, local and foreign income and employment tax withholding requirements applicable to the Option exercise. Optionee acknowledges and agrees that the Company may refuse to honor the exercise and refuse to deliver Shares if such withholding amounts are not delivered at the time of exercise.

(b) Notice of Disqualifying Disposition of ISO Shares. If the Option granted to Optionee herein is an ISO, and if Optionee sells or otherwise disposes of any of the Shares acquired pursuant to the ISO on or before the later of (1) the date two years after the Date of Grant, or (2) the date one year after the date of exercise, the Optionee shall immediately notify the Company in writing of such disposition. Optionee agrees that Optionee may be subject to income tax withholding by the Company on the compensation income recognized by the Optionee.

10. Entire Agreement; Governing Law. The Plan is incorporated herein by reference. The Plan and this Option Agreement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Optionee with respect to the subject matter hereof, and may not be modified adversely to the Optionee's interest except by means of a writing signed by the Company and Optionee. This agreement is governed by the internal substantive laws but not the choice of law rules of California.

11. No Guarantee of Continued Service. OPTIONEE ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING AS A SERVICE PROVIDER AT THE WILL OF THE COMPANY (NOT THROUGH THE ACT OF BEING HIRED, BEING GRANTED THIS OPTION OR ACQUIRING SHARES HEREUNDER). OPTIONEE FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL, AND SHALL NOT INTERFERE IN ANY WAY WITH OPTIONEE'S RIGHT OR THE COMPANY'S RIGHT TO TERMINATE OPTIONEE'S RELATIONSHIP AS A SERVICE PROVIDER AT ANY TIME, WITH OR WITHOUT CAUSE.

Optionee acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof, and hereby accepts this Option subject to all of the terms and provisions thereof. Optionee has reviewed the Plan and this Option in their entirety, has had an

opportunity to obtain the advice of counsel prior to executing this Option and fully understands all provisions of the Option. Optionee hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan or this Option. Optionee further agrees to notify the Company upon any change in the residence address indicated below.

OPTIONEE	CODEXIS, INC.
Signature	By
Print Name	Title
Residence Address	

EXHIBIT A

2002 STOCK PLAN

EXERCISE NOTICE

CODEXIS, INC.

Address:_____

Attention:_____

1. Exercise of Option. Effective as of today, _____, ____, the undersigned ("Optionee") hereby elects to exercise Optionee's option to purchase_____ shares of the Common Stock (the "Shares") of Codexis, Inc. (the "Company") under and pursuant to the 2002 Stock Plan (the "Plan") and the Stock Option Agreement dated _____, ____ (the "Option Agreement").

2. Delivery of Payment. Purchaser herewith delivers to the Company the full purchase price of the Shares, as set forth in the Option Agreement, and any and all withholding taxes due in connection with the exercise of the Option.

3. Representations of Optionee. Optionee acknowledges that Optionee has received, read and understood the Plan and the Option Agreement and agrees to abide by and be bound by their terms and conditions.

4. Rights as Stockholder. Until the issuance of the Shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Optioned Stock, notwithstanding the exercise of the Option. The Shares shall be issued to the Optionee as soon as practicable after the Option is exercised in accordance with the Option Agreement. No adjustment shall be made for a dividend or other right for which the record date is prior to the date of issuance except as provided in Section 13 of the Plan.

5. Company's Right of First Refusal Before any Shares held by Optionee or any transferee (either being sometimes referred to herein as the "Holder") may be sold or otherwise transferred (including transfer by gift or operation of law), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section (the "Right of First Refusal").

(a) Notice of Proposed Transfer. The Holder of the Shares shall deliver to the Company a written notice (the "Notice") stating: (i) the Holder's bona fide intention to sell or otherwise transfer such Shares; (ii) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (iii) the number of Shares to be transferred to each Proposed Transferee; and (iv) the bona fide cash price or other consideration for which the Holder proposes to transfer the Shares (the "Offered Price"), and the Holder shall offer the Shares at the Offered Price to the Company or its assignee(s).

(b) Exercise of Right of First Refusal. At any time within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the purchase price determined in accordance with subsection (c) below.

(c) Purchase Price. The purchase price ("Purchase Price") for the Shares purchased by the Company or its assignee(s) under this Section shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board of Directors of the Company in good faith.

(d) Payment. Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(e) Holder's Right to Transfer. If all of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Company and/or its assignee(s) as provided in this Section, then the Holder may sell or otherwise transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, provided that such sale or other transfer is consummated within 60 days after the date of the Notice, that any such sale or other transfer is effected in accordance with any applicable securities laws and that the Proposed Transferee agrees in writing that the provisions of this Section shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(f) Exception for Certain Family Transfers. Anything to the contrary contained in this Section notwithstanding, the transfer of any or all of the Shares during the Optionee's lifetime or on the Optionee's death by will or intestacy to the Optionee's immediate family or a trust for the benefit of the Optionee's immediate family shall be exempt from the provisions of this Section. "Immediate Family" as used herein shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister. In such case, the transferee or other recipient shall receive and hold the Shares so transferred subject to the provisions of this Section, and there shall be no further transfer of such Shares except in accordance with the terms of this Section.

(g) Termination of Right of First Refusal. The Right of First Refusal shall terminate as to any Shares upon the earlier of (i) the first sale of Common Stock of the Company to the general public, or (ii) a Change in Control in which the successor corporation has equity securities that are publicly traded.

6. Tax Consultation. Optionee understands that Optionee may suffer adverse tax consequences as a result of Optionee's purchase or disposition of the Shares. Optionee represents that Optionee has consulted with any tax consultants Optionee deems advisable in connection with the purchase or disposition of the Shares and that Optionee is not relying on the Company for any tax advice.

7. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Optionee understands and agrees that the Company shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by the Company or by state or federal securities laws:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT COVERING THE SECURITIES OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER AND A RIGHT OF FIRST REFUSAL HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE EXERCISE NOTICE BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS AND RIGHT OF FIRST REFUSAL ARE BINDING ON TRANSFEREES OF THESE SHARES.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFER FOR A PERIOD NOT TO EXCEED 180 DAYS FOLLOWING THE EFFECTIVE DATE OF THE UNDERWRITTEN PUBLIC OFFERING OF THE COMPANY'S SECURITIES AND MAY NOT BE SOLD OR OTHERWISE DISPOSED OF BY THE HOLDER WITHOUT THE CONSENT OF THE COMPANY OR THE MANAGING UNDERWRITER.

(b) Stop-Transfer Notices. Optionee agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Exercise Notice or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

8. Successors and Assigns. The Company may assign any of its rights under this Exercise Notice to single or multiple assignees, and this Exercise Notice shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Exercise Notice shall be binding upon Optionee and his or her heirs, executors, administrators, successors and assigns.

9. Interpretation. Any dispute regarding the interpretation of this Exercise Notice shall be submitted by Optionee or by the Company forthwith to the Administrator, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on all parties.

10. Governing Law; Severability. This Exercise Notice is governed by the internal substantive laws, but not the choice of law rules, of California. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Exercise Notice will continue in full force and effect.

11. Entire Agreement. The Plan and Option Agreement are incorporated herein by reference. This Exercise Notice, the Plan, the Option Agreement and the Investment Representation Statement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Optionee with respect to the subject matter hereof, and may not be modified adversely to the Optionee's interest except by means of a writing signed by the Company and Optionee.

Submitted by: OPTIONEE	Accepted by: CODEXIS, INC.
_____	_____
Signature	By
_____	_____
Print Name	Title
Address:	Address:
_____	_____
_____	_____
_____	
	_____
	Date Received

EXHIBIT B

INVESTMENT REPRESENTATION STATEMENT

OPTIONEE:

COMPANY: CODEXIS, INC.

SECURITY: COMMON STOCK

AMOUNT:

DATE:

In connection with the purchase of the above-listed Securities, the undersigned Optionee represents to the Company the following:

(a) Optionee is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Optionee is acquiring these Securities for investment for Optionee's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

(b) Optionee acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Optionee's investment intent as expressed herein. In this connection, Optionee understands that, in the view of the Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Optionee's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future. Optionee further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Optionee further acknowledges and understands that the Company is under no obligation to register the Securities. Optionee understands that the certificate evidencing the Securities will be imprinted with any legend required under applicable state securities laws.

(c) Optionee is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. Rule 701 provides that if the issuer qualifies under Rule 701 at the time of the grant of the Option to the Optionee, the exercise will be exempt from registration under the Securities Act. In the event the Company becomes subject to the reporting requirements of

Section 13 or 15(d) of the Securities Exchange Act of 1934, ninety (90) days thereafter (or such longer period as any market stand-off agreement may require) the Securities exempt under Rule 701 may be resold, subject to the satisfaction of certain of the conditions specified by Rule 144, including: (1) the resale being made through a broker in an unsolicited "broker's transaction" or in transactions directly with a market maker (as said term is defined under the Securities Exchange Act of 1934); and, in the case of an affiliate, (2) the availability of certain public information about the Company, (3) the amount of Securities being sold during any three month period not exceeding the limitations specified in Rule 144(e), and (4) the timely filing of a Form 144, if applicable.

In the event that the Company does not qualify under Rule 701 at the time of grant of the Option, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires the resale to occur not less than one year after the later of the date the Securities were sold by the Company or the date the Securities were sold by an affiliate of the Company, within the meaning of Rule 144; and, in the case of acquisition of the Securities by an affiliate, or by a non-affiliate who subsequently holds the Securities less than two years, the satisfaction of the conditions set forth in sections (1), (2), (3) and (4) of the paragraph immediately above.

(d) Optionee further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Optionee understands that no assurances can be given that any such other registration exemption will be available in such event.

Signature of Optionee:

_____

Date: _____, ____

CODEXIS, INC.

2002 STOCK PLAN, AS AMENDED

STOCK OPTION AGREEMENT

Early Exercise Permitted

Codexis, Inc., a Delaware corporation (the "Company"), pursuant to its 2002 Stock Plan, as amended from time to time (the "Plan"), hereby grants to the Optionee listed below ("Optionee"), an option to purchase the number of shares of the Company's Common Stock set forth below (the "Option"), subject to the terms and conditions of the Plan and this Stock Option Agreement (this "Option Agreement"). Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Option Agreement.

I. NOTICE OF STOCK OPTION GRANT

Optionee: _____

Date of Grant: _____

Vesting Commencement Date: _____

Exercise Price per Share: _____

Total Number of Shares Granted: _____

Total Exercise Price: _____

Term/Expiration Date: _____

Type of Option: Nonstatutory Stock Option

Exercise Schedule: ☐ Same as Vesting Schedule ☒ Early Exercise Permitted

Vesting Schedule: This Option is exercisable immediately, in whole or in part, at such times as are established by the Administrator, conditioned upon Optionee entering into a Restricted Stock Purchase Agreement with respect to any unvested Shares (as defined below). The Shares subject to this Option shall vest and/or be released from the Company's Repurchase Option, as set forth in the Restricted Stock Purchase Agreement attached hereto as Exhibit C-1, according to the following schedule:

Twenty-five percent (25%) of the Shares subject to the Option (rounded down to the next whole number of shares) shall vest on the first anniversary of the Date of Grant and 1/48th of the Shares subject to the Option shall vest monthly thereafter so that one hundred percent (100%) of the Shares subject to the Option are vested on the fourth anniversary of the Date of Grant.

Termination Period: This Option may be exercised, to the extent vested, for three (3) months after Optionee ceases to be a Service Provider, or such longer period as may be applicable upon the death or disability of Optionee as provided herein (or, if not provided herein, then as provided in the Plan), but in no event later than the Term/Expiration Date as set forth above.

II. AGREEMENT

1. Grant of Option. The Company hereby grants to Optionee an Option to purchase the number of shares of Common Stock (the "Shares") set forth in the Notice of Grant, at the exercise price per share set forth in the Notice of Grant (the "Exercise Price"). Notwithstanding anything to the contrary anywhere else in this Option Agreement, this grant of an Option is subject to the terms, definitions and provisions of the Plan, which is incorporated herein by reference.

2. Exercise of Option. This Option is exercisable as follows:

(a) Right to Exercise.

(i) This Option shall be exercisable cumulatively according to the vesting schedule set out in the Notice of Grant. Alternatively, at the election of Optionee, this Option may be exercised in whole or in part at such times as are established by the Administrator as to Shares which have not yet vested. For purposes of this Option Agreement, Shares subject to this Option shall vest based on Optionee's continued status as a Service Provider. Vested Shares shall not be subject to the Company's Repurchase Option (as set forth in the Restricted Stock Purchase Agreement).

(ii) As a condition to exercising this Option for unvested Shares, Optionee shall execute the Restricted Stock Purchase Agreement.

(iii) This Option may not be exercised for a fraction of a Share.

(iv) In the event of Optionee's death, disability or other termination of Optionee's status as a Service Provider, the exercisability of the Option shall be governed by Sections 7, 8 and 9 hereof.

(v) In no event may this Option be exercised after the Expiration Date of this Option as set forth in the Notice of Grant.

(b) Method of Exercise. This Option shall be exercisable by written notice to the Company (in the form attached as Exhibit A) (the "Exercise Notice"). The Exercise Notice shall state the number of Shares for which the Option is being exercised, and such other representations and agreements with respect to such Shares of Common Stock as may be required by the Company pursuant to the provisions of the Plan. The Exercise Notice shall be signed by Optionee and, together with an executed copy of the Restricted Stock Purchase Agreement, if applicable, shall be delivered in person or by certified mail to the Secretary of the Company. The Exercise Notice and Restricted Stock Purchase Agreement shall be accompanied by payment of the Exercise Price, including payment of any applicable withholding tax.

No Shares shall be issued pursuant to the exercise of an Option unless such issuance and such exercise comply with all relevant provisions of law and the requirements of any stock exchange upon which the Shares may then be listed. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to Optionee on the date on which the Option is exercised with respect to such Shares.

3. Optionee's Representations. If the Shares purchasable pursuant to the exercise of this Option have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), at the time this Option is exercised, Optionee shall, if required by the Company, concurrently with the exercise of all or any portion of this Option, deliver to the Company his or her Investment Representation Statement in the form attached hereto as Exhibit B.

4. Lock-Up Period. Optionee hereby agrees that if so requested by the Company or any representative of the underwriters (the "Managing Underwriter") in connection with any registration of the offering of any securities of the Company under the Securities Act, Optionee shall not sell or otherwise transfer any Shares or other securities of the Company during the 180-day period (or such longer period as may be requested in writing by the Managing Underwriter and agreed to in writing by the Company) (the "Market Standoff Period") following the effective date of a registration statement of the Company filed under the Securities Act; provided, however, that such restriction shall apply only to the first registration statement of the Company to become effective under the Securities Act that includes securities to be sold on behalf of the Company to the public in an underwritten public offering under the Securities Act. The Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such Market Standoff Period and these restrictions shall be binding on any transferee of such Shares. Notwithstanding the foregoing, the 180-day period may be extended for up to such number of additional days as is deemed necessary by the Company or the Managing Underwriter to continue coverage by research analysts in accordance with NASD Rule 2711 or any successor rule.

5. Method of Payment. Payment of the Exercise Price shall be by any of the following, or a combination thereof, at the election of Optionee:

(a) cash;

(b) check;

(c) with the consent of the Administrator, a full recourse promissory note bearing interest (at no less than such rate as is a market rate of interest and which then precludes the imputation of interest under the Code), payable upon such terms as may be prescribed by the Administrator and structured to comply with Applicable Laws;

(d) with the consent of the Administrator, surrender of other Shares of Common Stock of the Company which (A) in the case of Shares acquired from the Company, have been owned by Optionee for more than six (6) months on the date of surrender, and (B) have a Fair Market Value on the date of surrender equal to the Exercise Price of the Shares as to which the Option is being exercised;

(e) with the consent of the Administrator, surrendered Shares issuable upon the exercise of the Option having an aggregate Fair Market Value on the date of exercise equal to the aggregate Exercise Price of the Option or exercised portion thereof;

(f) with the consent of the Administrator, property of any kind which constitutes good and valuable consideration;

(g) following the consummation of the initial public offering of the Company's Common Stock pursuant to a registration statement on Form S-1 under the Securities Act, with the consent of the Administrator, delivery of a notice that Optionee has placed a market sell order with a broker with respect to Shares then issuable upon exercise of the Option and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the aggregate Exercise Price; provided, that payment of such proceeds is then made to the Company upon settlement of such sale; or

(h) with the consent of the Administrator, any combination of the foregoing methods of payment.

6. Restrictions on Exercise. This Option may not be exercised until the Plan has been approved by the stockholders of the Company. If the issuance of Shares upon such exercise or if the method of payment for such Shares would constitute a violation of any applicable federal or state securities or other law or regulation, then the Option may also not be exercised. The Company may require Optionee to make any representation and warranty to the Company as may be required by any applicable law or regulation before allowing the Option to be exercised.

7. Termination of Relationship. If Optionee ceases to be a Service Provider (other than by reason of Optionee's death or the total and permanent disability of Optionee within the meaning of Internal Revenue Code Section 22(e)(3)), Optionee may exercise this Option during the Termination Period set out in the Notice of Grant, to the extent the Option was vested on the date on which Optionee ceases to be a Service Provider. To the extent that the Option is not vested on the date on which Optionee ceases to be a Service Provider, or if Optionee does not exercise this Option within the time specified herein, the Option shall terminate.

8. Disability of Optionee. If Optionee ceases to be a Service Provider as a result of his or her total and permanent disability within the meaning of Internal Revenue Code Section 22(e)(3), Optionee may exercise the Option to the extent the Option was vested at the date on which Optionee ceases to be a Service Provider, but only within twelve (12) months from such date (and in no event later than the expiration date of the term of this Option as set forth in the Notice of Grant). To the extent that the Option is not vested at the date on which Optionee ceases to be a Service Provider, or if Optionee does not exercise such Option within the time specified herein, the Option shall terminate.

9. Death of Optionee. If Optionee ceases to be a Service Provider as a result of the death of Optionee, the vested portion of the Option may be exercised at any time within twelve (12) months following the date of death (and in no event later than the expiration date of

the term of this Option as set forth in the Notice of Grant) by Optionee's estate or by a person who acquires the right to exercise the Option by bequest or inheritance. To the extent that the Option is not vested on the date of death, or if the Option is not exercised within the time specified herein, the Option shall terminate.

10. Non-Transferability of Option. This Option may not be transferred in any manner except by will or by the laws of descent or distribution. It may be exercised during the lifetime of Optionee only by Optionee. The terms of this Option shall be binding upon the executors, administrators, heirs, successors and assigns of Optionee.

11. Term of Option. This Option may be exercised only within the term set out in the Notice of Grant.

12. Restrictions on Shares. Optionee hereby agrees that Shares purchased upon the exercise of the Option shall be subject to such terms and conditions as the Administrator shall determine in its sole discretion, including, without limitation, restrictions on the transferability of Shares, the right of the Company to repurchase Shares, and a right of first refusal in favor of the Company with respect to permitted transfers of Shares. Such terms and conditions may, in the Administrator's sole discretion, be contained in the Exercise Notice with respect to the Option or in such other agreement as the Administrator shall determine and which Optionee hereby agrees to enter into at the request of the Company.

(Signature Page Follows)

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which shall constitute one document.

CODEXIS, INC.

By: _____
Name: _____
Title: _____

OPTIONEE ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THE OPTION HEREOF IS EARNED ONLY BY CONTINUING SERVICE AS A SERVICE PROVIDER (INCLUDING AS AN EMPLOYEE, DIRECTOR OR CONSULTANT) AT THE WILL OF THE COMPANY (NOT THROUGH THE ACT OF BEGINNING SERVICE, BEING GRANTED THIS OPTION OR ACQUIRING SHARES HEREUNDER). OPTIONEE FURTHER ACKNOWLEDGES AND AGREES THAT NOTHING IN THIS AGREEMENT, NOR IN THE COMPANY'S 2002 STOCK PLAN, AS AMENDED FROM TIME TO TIME, WHICH IS INCORPORATED HEREIN BY REFERENCE, SHALL CONFER UPON OPTIONEE ANY RIGHT WITH RESPECT TO CONTINUATION OF SERVICE AS A SERVICE PROVIDER TO THE COMPANY, NOR SHALL IT INTERFERE IN ANY WAY WITH OPTIONEE'S RIGHT OR THE COMPANY'S RIGHT TO TERMINATE SERVICE AS A SERVICE PROVIDER AT ANY TIME, WITH OR WITHOUT CAUSE AND WITH OR WITHOUT PRIOR NOTICE.

Optionee acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof. Optionee hereby accepts this Option subject to all of the terms and provisions hereof. Optionee has reviewed the Plan and this Option in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Option and fully understands all provisions of the Option. Optionee hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan or this Option. Optionee further agrees to notify the Company upon any change in the residence address indicated below.

Dated: _____

_____
OPTIONEE

Residence Address:

[Signature Page to Stock Option Agreement]

EXHIBIT A

CODEXIS, INC.

2002 STOCK PLAN, AS AMENDED

EXERCISE NOTICE

Codexis, Inc.
Attention: Stock Administration

1. Exercise of Option. Effective as of today, _____, ____, the undersigned ("Optionee") hereby elects to exercise Optionee's option to purchase_____ shares of the Common Stock (the "Shares") of Codexis, Inc., a Delaware corporation (the "Company"), under and pursuant to the Codexis, Inc. 2002 Stock Plan, as amended from time to time (the "Plan") and the Stock Option Agreement dated _____ (the "Option Agreement"). Capitalized terms used herein without definition shall have the meanings given in the Option Agreement.

Date of Grant:	_____
Number of Shares as to which Option is Exercised:	_____
Exercise Price per Share:	$_____
Total Exercise Price:	$_____
Certificate to be issued in name of:	_____
Cash Payment delivered herewith:	$_____
Other form of consideration delivered herewith:	Form of Consideration: $_____

Type of Option: Nonstatutory Stock Option

2. Representations of Optionee. Optionee acknowledges that Optionee has received, read and understood the Plan and the Option Agreement. Optionee agrees to abide by and be bound by their terms and conditions.

3. Rights as Stockholder. Until the stock certificate evidencing Shares purchased pursuant to the exercise of the Option is issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to Shares subject to the Option, notwithstanding the exercise of the Option. The Company shall issue (or cause to be issued) such stock certificate promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the stock certificate is issued, except as provided in Section 13 of the Plan.

Optionee shall enjoy rights as a stockholder until such time as Optionee disposes of the Shares or the Company and/or its assignee(s) exercises the Right of First Refusal (as defined below) hereunder. Upon such exercise, Optionee shall have no further rights as a holder of the Shares so purchased except the right to receive payment for the Shares so purchased in accordance with the provisions of this Agreement, and Optionee shall forthwith cause the certificate(s) evidencing the Shares so purchased to be surrendered to the Company for transfer or cancellation.

4. Optionee's Rights to Transfer Shares

(a) Company's Right of First Refusal. Before any Shares held by Optionee or any permitted transferee (each, a "Holder") may be sold, pledged, assigned, hypothecated, transferred, or otherwise disposed of (each, a "Transfer"), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares proposed to be Transferred on the terms and conditions set forth in this Section 4 (the "Right of First Refusal").

(i) Notice of Proposed Transfer. In the event any Holder desires to Transfer any Shares, the Holder shall deliver to the Company a written notice (the "Notice") stating: (w) the Holder's bona fide intention to sell or otherwise Transfer such Shares; (x) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (y) the number of Shares to be Transferred to each Proposed Transferee; and (z) the bona fide cash price or other consideration for which the Holder proposes to Transfer the Shares (the "Offered Price"), and the Holder shall offer such Shares at the Offered Price to the Company or its assignee(s).

(ii) Exercise of Right of First Refusal. Within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may elect in writing to purchase all, but not less than all, of the Shares proposed to be Transferred to any one or more of the Proposed Transferees. The purchase price shall be determined in accordance with Section 4(iii) hereof.

(iii) Purchase Price. The purchase price ("Purchase Price") for the Shares repurchased under this Section 4 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board in good faith.

(iv) Payment. Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of purchase by an assignee, of the assignee to the Company), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times mutually agreed to by the Company and the Holder.

(v) Holder's Right to Transfer. If all of the Shares proposed in the Notice to be Transferred are not purchased by the Company and/or its assignee(s) as provided in this Section 4, then the Holder may sell or otherwise Transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, provided that such sale or other Transfer is consummated within one hundred twenty (120) days after the date of the Notice and provided further that any such sale or other Transfer is effected in accordance with any applicable

securities laws and the Proposed Transferee agrees in writing that the provisions of this Section 4 and the Restricted Stock Purchase Agreement, if applicable, shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not Transferred to the Proposed Transferee within such 120-day period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal as provided herein before any Shares held by the Holder may be sold or otherwise Transferred.

(b) Exception for Certain Family Transfers. Anything to the contrary contained in this Section 4 notwithstanding, the Transfer of any or all of the Shares during Optionee's lifetime or upon Optionee's death by will or intestacy to Optionee's Immediate Family or a trust for the benefit of Optionee's Immediate Family shall be exempt from the Right of First Refusal. As used herein, "Immediate Family" shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister or stepchild (whether or not adopted). In such case, the transferee or other recipient shall receive and hold the Shares so Transferred subject to the provisions of this Section 4 (including the Right of First Refusal) and the Restricted Stock Purchase Agreement, if applicable, and there shall be no further Transfer of such Shares except in accordance with the terms of this Section 4.

(c) Termination of Right of First Refusal. The Right of First Refusal shall terminate as to all Shares upon a sale of Common Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended (a "Public Offering").

5. Transfer Restrictions. Any transfer or sale of the Shares is subject to restrictions on transfer imposed by any applicable state and federal securities laws. Any Transfer or attempted Transfer of any of the Shares not in accordance with the terms of this Agreement, including the Right of First Refusal provided in this Agreement, shall be void and the Company may enforce the terms of this Agreement by stop transfer instructions or similar actions by the Company and its agents or designees.

6. Tax Consultation. Optionee understands that Optionee may suffer adverse tax consequences as a result of Optionee's purchase or disposition of the Shares. Optionee represents that Optionee has consulted with any tax consultants Optionee deems advisable in connection with the purchase or disposition of the Shares and that Optionee is not relying on the Company for any tax advice.

7. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Optionee understands and agrees that the Company shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by state or federal securities laws:

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), AND MAY NOT BE

OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR, IN THE OPINION OF COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER OF THESE SECURITIES, SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION IS IN COMPLIANCE THEREWITH.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER AND RIGHT OF FIRST REFUSAL OPTIONS HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE EXERCISE NOTICE BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS AND RIGHT OF FIRST REFUSAL ARE BINDING ON TRANSFEREES OF THESE SHARES.

(b) Stop-Transfer Notices. Optionee agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

8. Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Optionee and his or her heirs, executors, administrators, successors and assigns.

9. Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by Optionee or by the Company forthwith to the Company's Board of Directors or committee thereof that is responsible for the administration of the Plan (the "Administrator"), which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on the Company and on Optionee.

10. Governing Law; Severability. The laws of the State of California shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

11. Notices. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States mail by certified mail, with postage and fees prepaid, addressed to the other party at its address as shown below beneath its signature, or to such other address as such party may designate in writing from time to time to the other party.

12. Further Instruments. Optionee hereby agrees to execute such further instruments and to take such further action as may be reasonably necessary to carry out the purposes and intent of this Agreement, including, without limitation, the Investment Representation Statement in the form attached to the Option Agreement as Exhibit B.

13. Delivery of Payment. Optionee herewith delivers to the Company the full Exercise Price for the Shares, as well as any applicable withholding tax.

14. Entire Agreement. The Plan and Option Agreement are incorporated herein by reference. This Agreement, the Plan, the Option Agreement, the Investment Representation Statement and the Restricted Stock Purchase Agreement, if applicable, constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Optionee with respect to the subject matter hereof.

(Signature Page Follows)

Accepted by:

CODEXIS, INC.

By: _____

Name: _____

Title: _____

Submitted by:

OPTIONEE

_____

Optionee

Address:

[Signature Page to Exercise Notice]

EXHIBIT B

INVESTMENT REPRESENTATION STATEMENT

OPTIONEE :

COMPANY : Codexis, Inc.

SECURITY : Common Stock

AMOUNT :

DATE :

In connection with the purchase of the above-listed shares of Common Stock (the "Securities") of Codexis, Inc., a Delaware corporation (the "Company"), the undersigned ("Optionee") represents to the Company the following:

(a) Optionee is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Optionee is acquiring these Securities for investment for Optionee's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

(b) Optionee acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Optionee's investment intent as expressed herein. Optionee understands that, in the view of the Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Optionee's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future. Optionee further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Optionee further acknowledges and understands that the Company is under no obligation to register the Securities. Optionee understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required in the opinion of counsel satisfactory to the Company and any other legend required under applicable state securities laws.

(c) Optionee is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to

the satisfaction of certain conditions. Rule 701 provides that if the issuer qualifies under Rule 701 at the time of the grant of the Option to Optionee, the exercise will be exempt from registration under the Securities Act. In the event the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), ninety (90) days thereafter (or such longer period as any market stand-off agreement may require) the Securities exempt under Rule 701 may be resold, subject to the satisfaction of certain of the conditions specified by Rule 144, including: (1) the resale being made through a broker in an unsolicited "broker's transaction" or in transactions directly with a market maker (as said term is defined under the Exchange Act); and, in the case of an affiliate, (2) the availability of certain public information about the Company, (3) the amount of Securities being sold during any three (3) month period not exceeding the limitations specified in Rule 144(e) and (4) the timely filing of a Form 144, if applicable.

In the event that the Company does not qualify under Rule 701 at the time of grant of the Option, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires the resale to occur not less than one year after the later of the date the Securities were sold by the Company or the date the Securities were sold by an affiliate of the Company, within the meaning of Rule 144; and, in the case of acquisition of the Securities by an affiliate, or by a non-affiliate who subsequently holds the Securities less than two (2) years, the satisfaction of the conditions set forth in sections (1), (2), (3) and (4) of the paragraph immediately above.

(d) Optionee further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Optionee understands that no assurances can be given that any such other registration exemption will be available in such event.

Signature of Optionee:

_____

Optionee

Date: _____, ____

EXHIBIT C-1

CODEXIS, INC.

2002 STOCK PLAN, AS AMENDED

RESTRICTED STOCK PURCHASE AGREEMENT

THIS RESTRICTED STOCK PURCHASE AGREEMENT (this "Agreement") is made between _____ (the "Purchaser") and Codexis, Inc. (the "Company"), as of _____, ____.

RECITALS

(1) Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Agreement. Pursuant to the exercise of the Option granted to Purchaser under the Company's 2002 Stock Plan, as amended, and pursuant to the Stock Option Agreement (the "Option Agreement") dated _____, by and between the Company and Purchaser with respect to such grant, which Option Agreement is hereby incorporated by reference, Purchaser has elected to purchase _____ of those shares which have not become vested under the vesting schedule set forth in the Option Agreement ("Unvested Shares"). The Unvested Shares and the shares subject to the Option Agreement which have become vested are sometimes collectively referred to herein as the "Shares".

(2) As required by the Option Agreement, as a condition to Purchaser's election to exercise the option, Purchaser must execute this Agreement, which sets forth the rights and obligations of the parties with respect to Shares acquired upon exercise of the Option.

1. Repurchase Option.

(a) If Purchaser ceases to be a Service Provider for any reason, including for cause, death and disability, the Company or its assignee shall have the right and option to purchase from Purchaser, or Purchaser's personal representative, as the case may be, all of Purchaser's Unvested Shares as of the date on which Purchaser ceases to be a Service Provider at the exercise price paid by Purchaser for such Shares in connection with the exercise of the Option (the "Repurchase Option").

(b) The Company may exercise its Repurchase Option by delivering, personally or by registered mail, to Purchaser (or his or her transferee or legal representative, as the case may be), within ninety (90) days of the date on which Purchaser ceases to be a Service Provider, a notice in writing indicating the Company's intention to exercise the Repurchase Option and setting forth a date for closing not later than thirty (30) days from the mailing of such notice. The closing shall take place at the Company's office. At the closing, the holder of the certificates for the Unvested Shares being transferred shall deliver the stock certificate or certificates evidencing the Unvested Shares, and the Company shall deliver the purchase price therefor.

(c) At its option, the Company may elect to make payment for the Unvested Shares to a bank selected by the Company. The Company shall avail itself of this option by a notice in writing to Purchaser stating the name and address of the bank, date of closing, and waiving the closing at the Company's office.

(d) If the Company does not elect to exercise the Repurchase Option conferred above by giving the requisite notice within ninety (90) days following the date on which Purchaser ceases to be a Service Provider, the Repurchase Option shall terminate.

(e) One hundred percent (100%) of the Unvested Shares shall initially be subject to the Repurchase Option. The Unvested Shares shall be released from the Repurchase Option in accordance with the Vesting Schedule set forth in the Notice of Grant until all Shares are released from the Repurchase Option. Fractional Shares shall be rounded to the nearest whole share.

2. Transferability of the Shares; Escrow.

(a) Purchaser hereby authorizes and directs the secretary of the Company, or such other person designated by the Company from time to time, to transfer the Unvested Shares as to which the Repurchase Option has been exercised from Purchaser to the Company.

(b) To insure the availability for delivery of Purchaser's Unvested Shares upon repurchase by the Company pursuant to the Repurchase Option under Section 1, Purchaser hereby appoints the Secretary, or any other person designated by the Company from time to time as escrow agent, as its attorney-in-fact to sell, assign and transfer unto the Company, such Unvested Shares, if any, repurchased by the Company pursuant to the Repurchase Option and shall, upon execution of this Agreement, deliver and deposit with the Secretary of the Company, or such other person designated by the Company from time to time, the share certificate(s) representing the Unvested Shares, together with the stock assignment duly endorsed in blank, attached hereto as Exhibit C-2. The Unvested Shares and stock assignment shall be held by the Secretary in escrow, pursuant to the Joint Escrow Instructions of the Company and Purchaser attached as Exhibit C-3 hereto, until the Company exercises its Repurchase Option as provided in Section 1, until such Unvested Shares are vested, or until such time as this Agreement no longer is in effect. As a further condition to the Company's obligations under this Agreement, the spouse of Purchaser, if any, shall execute and deliver to the Company the Consent of Spouse attached hereto as Exhibit C-4. Upon vesting of the Unvested Shares, the escrow agent shall promptly deliver to Purchaser the certificate or certificates representing such Shares in the escrow agent's possession belonging to Purchaser, and the escrow agent shall be discharged of all further obligations hereunder; provided, however, that the escrow agent shall nevertheless retain such certificate or certificates as escrow agent if so required pursuant to other restrictions imposed pursuant to this Agreement.

(c) The Company, or its designee, shall not be liable for any act it may do or omit to do with respect to holding the Shares in escrow and while acting in good faith and in the exercise of its judgment.

(d) Transfer or sale of the Shares is subject to restrictions on transfer imposed by any applicable state and federal securities laws. Any transferee shall hold such Shares subject to all of the provisions hereof and the Exercise Notice executed by Purchaser with respect to any Unvested Shares purchased by Purchaser and shall acknowledge the same by signing a copy of this Agreement. Any transfer or attempted transfer of any of the Shares not in accordance with the terms of this Agreement shall be void and the Company may enforce the terms of this Agreement by stop transfer instructions or similar actions by the Company and its agents or designees.

3. Ownership, Voting Rights, Duties. This Agreement shall not affect in any way the ownership, voting rights or other rights or duties of Purchaser, except as specifically provided herein.

4. Adjustment for Stock Split. All references to the number of Shares and the purchase price of the Shares in this Agreement shall be appropriately adjusted to reflect any stock split, stock dividend or other change in the Shares which may be made by the Company after the date of this Agreement.

5. Notices. Notices required hereunder shall be given in person or by registered mail to the address of Purchaser shown on the records of the Company, and to the Company at its principal executive office.

6. Survival of Terms. This Agreement shall apply to and bind Purchaser and the Company and their respective permitted assignees and transferees, heirs, legatees, executors, administrators and legal successors.

7. Section 83(b) Election for Unvested Shares Purchased Pursuant to a Nonstatutory Stock Option Purchaser hereby acknowledges that he or she has been informed that, with respect to the exercise of a Nonstatutory Stock Option for Unvested Shares, that unless an election, as set forth on Exhibit C-5, is filed by Purchaser with the Internal Revenue Service and, if necessary, the proper state taxing authorities, within thirty (30) days of the purchase of the Shares, electing pursuant to Section 83(b) of the Internal Revenue Code (and similar state tax provisions if applicable) to be taxed currently on any difference between the purchase price of the Shares and their Fair Market Value on the date of purchase, there will be a recognition of taxable income to the Purchaser, measured by the excess, if any, of the fair market value of the Shares, at the time the Company's Repurchase Option lapses over the purchase price for the Shares. Purchaser represents that Purchaser has consulted any tax consultant(s) Purchaser deems advisable in connection with the purchase of the Shares or the filing of the Election under Section 83(b) and similar tax provisions.

PURCHASER ACKNOWLEDGES THAT IT IS PURCHASER'S SOLE RESPONSIBILITY AND NOT THE COMPANY'S TO FILE TIMELY THE ELECTION UNDER SECTION 83(b), EVEN IF PURCHASER REQUESTS THE COMPANY OR ITS REPRESENTATIVE TO MAKE THIS FILING ON PURCHASER'S BEHALF.

8. Representations. Purchaser has reviewed with his or her own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by

this Agreement. Purchaser is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Purchaser understands that Purchaser (and not the Company) shall be responsible for his or her own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

9. Governing Law; Severability. The laws of the State of California shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

(Signature Page Follows)

Purchaser represents that he or she has read this Agreement and is familiar with its terms and provisions. Purchaser hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Board upon any questions arising under this Agreement.

IN WITNESS WHEREOF, this Agreement is deemed made as of the date first set forth above.

CODEXIS, INC.

By: _____
Name: _____
Title: _____

PURCHASER

By: _____
Name: _____
Address:

[Signature Page to Restricted Stock Purchase Agreement]

EXHIBIT C-2

ASSIGNMENT SEPARATE FROM CERTIFICATE

FOR VALUE RECEIVED I, _____, hereby sell, assign and transfer unto _____ (_____) shares of the Common Stock of Codexis, Inc. registered in my name on the books of said corporation represented by Certificate No. ____ herewith and do hereby irrevocably constitute and appoint _____ to transfer the said stock on the books of the within named corporation with full power of substitution in the premises.

This Assignment Separate from Certificate may be used only in accordance with the Restricted Stock Purchase Agreement between Codexis, Inc. and the undersigned dated _____, ____.

Dated: _____, ____

Signature: _____

INSTRUCTIONS: Please do not fill in any blanks other than the signature line. The purpose of this assignment is to enable the Company to exercise the Repurchase Option, as set forth in the Restricted Stock Purchase Agreement, without requiring additional signatures on the part of Purchaser.

EXHIBIT C-3

JOINT ESCROW INSTRUCTIONS

_____, ____

Secretary
Codexis, Inc.

As Escrow Agent for both Codexis, Inc. (the "Company") and the undersigned purchaser of stock of the Company (the "Purchaser"), you are hereby authorized and directed to hold the documents delivered to you pursuant to the terms of that certain Restricted Stock Purchase Agreement ("Agreement") between the Company and the undersigned, in accordance with the following instructions:

1. In the event the Company and/or any assignee of the Company (referred to collectively for convenience herein as the "Company") exercises the Company's Repurchase Option set forth in the Agreement, the Company shall give to Purchaser and you a written notice specifying the number of shares of stock to be purchased, the purchase price, and the time for a closing hereunder at the principal office of the Company. Purchaser and the Company hereby irrevocably authorize and direct you to close the transaction contemplated by such notice in accordance with the terms of said notice.

2. At the closing, you are directed (a) to date the stock assignments necessary for the transfer in question, (b) to fill in the number of shares being transferred, and (c) to deliver the same, together with the certificate evidencing the shares of stock to be transferred, to the Company or its assignee, against the simultaneous delivery to you of the purchase price (by cash, a check, or a combination thereof) for the number of shares of stock being purchased pursuant to the exercise of the Company's Repurchase Option.

3. Purchaser irrevocably authorizes the Company to deposit with you any certificates evidencing shares of stock to be held by you hereunder and any additions and substitutions to said shares as defined in the Agreement. Purchaser does hereby irrevocably constitute and appoint you as Purchaser's attorney-in-fact and agent for the term of this escrow to execute, with respect to such securities, all documents necessary or appropriate to make such securities negotiable and to complete any transaction herein contemplated, including but not limited to the filing with any applicable state blue sky authority of any required applications for consent to, or notice of transfer of, the securities. Subject to the provisions of this paragraph 3, Purchaser shall exercise all rights and privileges of a stockholder of the Company while the stock is held by you.

4. Upon written request of Purchaser, but no more than once per calendar year, unless the Company's Repurchase Option has been exercised, you will deliver to Purchaser a certificate or certificates representing the number of shares of stock as are not then subject to the Company's Repurchase Option. Within one hundred twenty (120) days after Purchaser ceases to be a Service

Provider, you will deliver to Purchaser a certificate or certificates representing the aggregate number of shares held or issued pursuant to the Agreement and not purchased by the Company or its assignees pursuant to exercise of the Company's Repurchase Option.

5. If at the time of termination of this escrow you should have in your possession any documents, securities, or other property belonging to Purchaser, you shall deliver all of the same to Purchaser and shall be discharged of all further obligations hereunder.

6. Your duties hereunder may be altered, amended, modified or revoked only by a writing signed by all of the parties hereto.

7. You shall be obligated only for the performance of such duties as are specifically set forth herein and may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed by you to be genuine and to have been signed or presented by the proper party or parties. You shall not be personally liable for any act you may do or omit to do hereunder as Escrow Agent or as attorney-in-fact for Purchaser while acting in good faith, and any act done or omitted by you pursuant to the advice of your own attorneys shall be conclusive evidence of such good faith.

8. You are hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person or corporation, excepting only orders or process of courts of law and are hereby expressly authorized to comply with and obey orders, judgments or decrees of any court. In case you obey or comply with any such order, judgment or decree, you shall not be liable to any of the parties hereto or to any other person, firm or corporation by reason of such compliance, notwithstanding any such order, judgment or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

9. You shall not be liable in any respect on account of the identity, authorities or rights of the parties executing or delivering or purporting to execute or deliver the Agreement or any documents or papers deposited or called for hereunder.

10. You shall not be liable for the expiration of any rights under any applicable state, federal or local statute of limitations or similar statute or regulation with respect to these Joint Escrow Instructions or any documents deposited with you.

11. You shall be entitled to employ such legal counsel and other experts as you may deem necessary properly to advise you in connection with your obligations hereunder, may rely upon the advice of such counsel, and may pay such counsel reasonable compensation therefor.

12. Your responsibilities as Escrow Agent hereunder shall terminate if you shall cease to be an officer or agent of the Company or if you shall resign by written notice to each party. In the event of any such termination, the Company shall appoint a successor Escrow Agent.

13. If you reasonably require other or further instruments in connection with these Joint Escrow Instructions or obligations in respect hereto, the necessary parties hereto shall join in furnishing such instruments.

14. It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the securities held by you hereunder, you are authorized and directed to retain in your possession without liability to anyone all or any part of said securities until such disputes shall have been settled either by mutual written agreement of the parties concerned or by a final order, decree or judgment of a court of competent jurisdiction after the time for appeal has expired and no appeal has been perfected, but you shall be under no duty whatsoever to institute or defend any such proceedings.

15. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States Post Office, by registered or certified mail with postage and fees prepaid, addressed to each of the other parties thereunto entitled at such addresses as a party may designate by written notice to each of the other parties hereto.

16. By signing these Joint Escrow Instructions, you become a party hereto only for the purpose of said Joint Escrow Instructions; you do not become a party to the Agreement.

17. This instrument shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns.

18. These Joint Escrow Instructions shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding that body of law pertaining to conflicts of law.

(Signature Page Follows)

IN WITNESS WHEREOF, these Joint Escrow Instructions shall be effective as of the date first set forth above.

CODEXIS, INC.

By: _____
Name: _____
Title: _____

PURCHASER:

By: _____
Name: _____
Address:

ESCROW AGENT:

By: _____
Name: _____
Title: _____

EXHIBIT C-4

CONSENT OF SPOUSE

I, _____, spouse of _____, have read and approve the Restricted Stock Purchase Agreement dated _____, ____, between my spouse and Codexis, Inc. In consideration of granting the right to my spouse to purchase shares of Codexis, Inc. set forth in the Restricted Stock Purchase Agreement, I hereby appoint my spouse as my attorney-in-fact in respect to the exercise of any rights under the Agreement and agree to be bound by the provisions of the Restricted Stock Purchase Agreement insofar as I may have any rights in said Restricted Stock Purchase Agreement or any shares issued pursuant thereto under the community property laws or similar laws relating to marital property in effect in the state of our residence as of the date of the signing of the foregoing Restricted Stock Purchase Agreement.

Dated: _____, ____

_____

Signature of Spouse

EXHIBIT C-5

INFORMATION CONCERNING THE FILING OF SECTION 83(b) ELECTION

This information is supplied to you in connection with your recent purchase of shares of Common Stock of Codexis, Inc. (the "Company"), at a purchase price equal to the current fair market value of the stock and subject to an Agreement for purchase of shares that gives the Company the right to repurchase the shares under the terms stated in the Agreement in the event that you terminate your continuous status as an employee, consultant or director of the Company prior to the full vesting.

Section 83 of the Internal Revenue Code taxes as ordinary income the difference between the amount paid for the stock and its fair market value as of the date any restrictions on that stock lapse. In this context, "restriction" means the right of the Company to buy back the stock at less than its fair market value, in connection with the termination of your continuous status as an employee, consultant or director of the Company, which right expires as your stock vests pursuant to the Agreement. Thus, if the shares are worth $12.50 a share at the time the first 25% of the shares becomes fully vested (no longer subject to repurchase) and if you purchased such shares for $0.10 per share, then you would be required to report ordinary income in the amount of $12.40 for each such share in the first year that such shares are first vested (no longer subject to repurchase). Upon the vesting of the final portion of the shares and if the fair market value of the shares at that time is $15.00 per share, then you would be required to report ordinary income in the amount of $14.90 per share for the tax year in which such final portion of the shares is no longer subject to repurchase.

To avoid the assessment of ordinary income tax at the time the restrictions end, there is an election that can be filed under Section 83(b). This is an election to include in income in the year the stock is purchased the difference between what is paid for the stock and its then fair market value. Even though in your case the fair market value of the stock may equal the amount paid and therefore there may be no income at this time, the Internal Revenue Service nonetheless requires that the election be filed in order to avoid adverse tax consequences in the future.

You must file one executed copy of the 83(b) election form with the Internal Revenue Service within 30 days of the purchase of the shares. The steps outlined below should be followed to ensure the election is filed correctly and timely:

1) Complete 83(b) election form;

2) Prepare cover letter to the IRS (sample letter attached);

3) Send cover letter with originally executed 83(b) election form and one (1) additional copy via certified mail or Federal Express to the IRS within 30 days of the date of purchase, with a self-addressed stamped envelope and retain receipt of mailing;

4) Retain IRS file stamped copy for your records when returned; and

5) One copy should be returned to the Company for its records and one copy should be filed along with your federal income tax return for the tax year.

For your information, the address of the IRS (if you live in Northern California, except for the Central Valley) is as follows:

Internal Revenue Service
5045 East Butler Avenue
Fresno, California 93888

SECTION 83(b) ELECTION

This statement is being made under Section 83(b) of the Internal Revenue Code, pursuant to Treas. Reg. Section 1.83-2.

The taxpayer who performed the service is:

Name:
Address:
Taxpayer Ident. No.

The property with respect to which the election is being made is_____ shares of common stock of Codexis, Inc.

The property was issued on_____, 200_.

The taxable year in which the election is being made in the calendar year 200_.

The property is subject to a repurchase right pursuant to which the issuer has the right to acquire the property at the original purchase price if for any reason the taxpayer's service provider relationship with the issuer is terminated. The issuer's repurchase right lapses in a series of annual and monthly installments over a _____-year period ending on _____, 200_.

The fair market value at the time of transfer (determined without regard to any restriction other than a restriction which by its terms will never lapse) is $_____ per share.

The amount paid for such property is $_____ per share.

A copy of this statement was furnished to Codexis, Inc. for whom taxpayer rendered the services underlying the transfer of property.

This statement is executed on _____, 200_.

Spouse (if any)

Taxpayer

This election must be filed with the Internal Revenue Service Center with which taxpayer files his or her Federal income tax returns and must be made within thirty (30) days after the execution date of the Stock Purchase Agreement. This filing should be made by registered or certified mail, return receipt requested. Optionee must retain two (2) copies of the completed form for filing with his or her Federal and state tax returns for the current tax year and an additional copy for his or her records.

IMPORTANT: READ THIS —

IF YOU WISH TO MAKE A SECTION 83(B) ELECTION, THE FILING OF SUCH ELECTION IS YOUR RESPONSIBILITY.

THE FORM FOR MAKING THIS SECTION 83(B) ELECTION IS ATTACHED TO THIS AGREEMENT AS PART OF EXHIBIT C-5.

YOU MUST FILE THIS FORM WITHIN 30 DAYS OF PURCHASING THE SHARES.

YOU (AND NOT THE COMPANY OR ANY OF ITS AGENTS) SHALL BE SOLELY RESPONSIBLE FOR FILING SUCH FORM WITH THE IRS, EVEN IF YOU REQUEST THE COMPANY OR ITS AGENTS TO MAKE THIS FILING ON YOUR BEHALF AND EVEN IF THE COMPANY OR ITS AGENTS HAVE PREVIOUSLY MADE THIS FILING ON YOUR BEHALF.

The election should be filed by mailing a signed election form by certified mail, return receipt requested to the IRS Service Center where you file your tax returns. See www.irs.gov

_____, ____

Internal Revenue Service
5045 East Butler Avenue
Fresno, California 93888

Re: 83(b) Election for Purchase of Codexis, Inc. Common Stock

Ladies and Gentlemen:

Enclosed is a completed form of election under Section 83(b) of the Internal Revenue Code of 1986 (the "83(b) Election") relating to my recent purchase of _____ shares of Common Stock of Codexis, Inc.

Please acknowledge receipt of the 83(b) Election by stamping as filed the enclosed copy and returning it to me in the self-addressed stamped envelope provided.

Sincerely,

_____

Enclosures

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated April 10, 2008, in the Registration Statement (Form S-1) and related Prospectus of Codexis, Inc. for the registration of shares of its common stock.

/s/ Ernst & Young LLP

Palo Alto, California
April 11, 2008