As filed with the Securities and Exchange Commission on August 4, 2008

Registration No. 333-150224

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

AMENDMENT NO. 1
TO
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)

Patrick A. Pohlen	*Copies to:* Douglas T. Sheehy	John A. Fore
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		Facsimile: (650) 493-6811

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(2)

(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.
(2) Previously paid.

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 AUGUST 4, 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 have applied 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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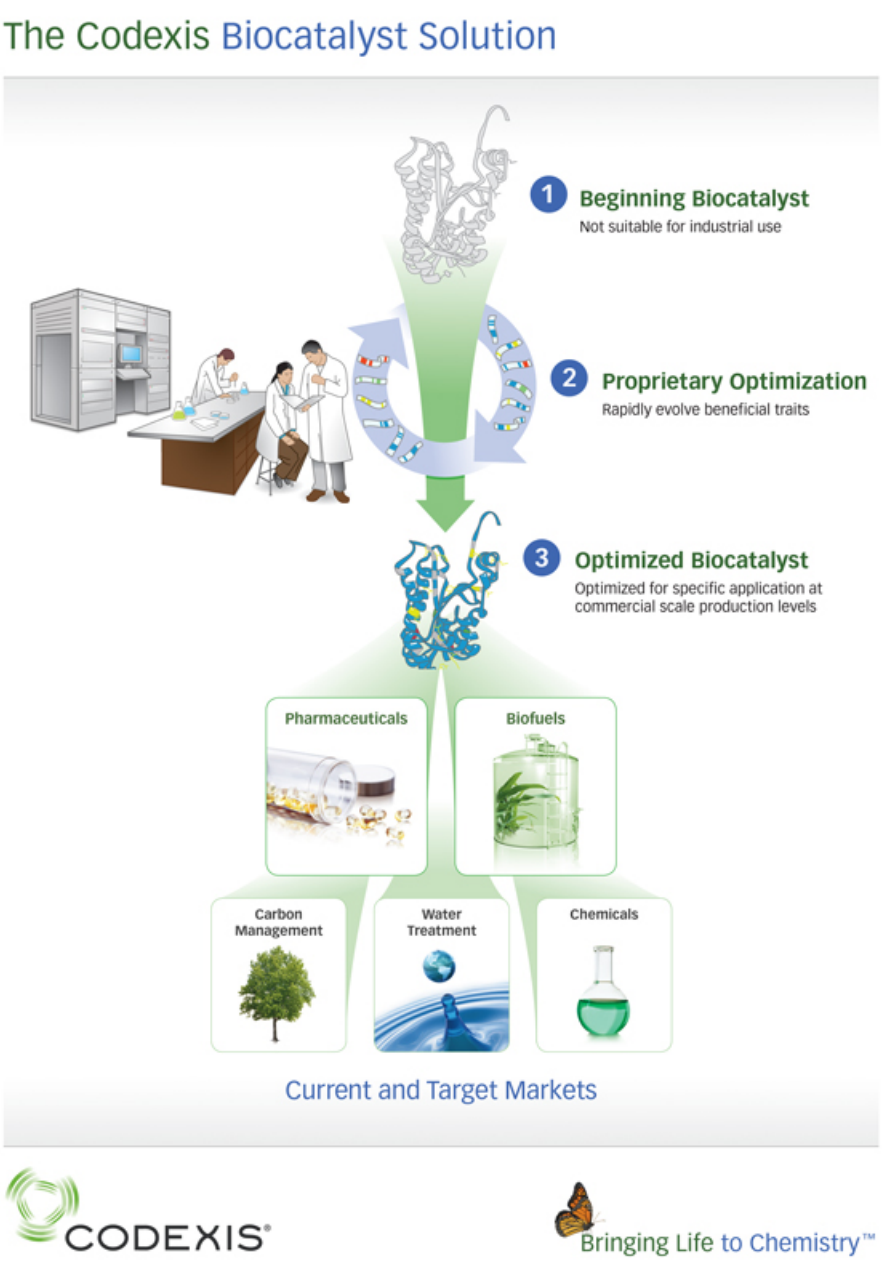

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You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of common 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. Our proprietary biocatalysts include existing biocatalysts that we have optimized and new biocatalysts that we have developed using our technology platform. 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. The commercialization of any products that may be developed through the collaborative research agreement will be at Shell's discretion. We are also pursuing funded collaborations in several other bioindustrial markets, including carbon management, water treatment and chemicals.

Biocatalysts are enzymes or microbes that initiate or accelerate chemical reactions. This process, known as biocatalysis, 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 targets related to enzyme performance 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 which is hazardous to health or the environment, that must be treated, contained and disposed.

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, before expanding our focus to include biofuels and other bioindustrial opportunities. 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, and that we believe can enable products currently impossible to produce economically at commercial scale.
- *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 targets related to enzyme performance, 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. During the years ended 2005, 2006 and 2007, we incurred net losses of $11.6 million, $18.7 million and $39.0 million, respectively. We believe that, without our capital-efficient business model, these losses would have been greater.
- *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 late 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 from Maxygen our core enabling technology, which comprises advanced biotechnology methods, bioinformatics and years of accumulated know-how which we use to significantly expedite the process of developing customized enzymes and microbes. In March 2002, we also commenced operations, and in September 2002, we raised our first outside funding from venture capital investors. As of March 31, 2008, Maxygen held approximately 25% of our outstanding common stock, calculated on an as-converted basis. 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, including the costs associated with being a public company and improving our internal control over financial reporting. We may also use a portion of the net proceeds to acquire other businesses, products or technologies, including those that would enable us to seek new markets for our existing products, develop new products or increase our ability to manufacture and produce our biocatalysts. 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 35,805,720 shares outstanding as of March 31, 2008 and excludes:

- 9,820,074 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2008 at a weighted average exercise price of $2.49 per share;
- 491,513 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2008 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 1,569,360 shares of common stock reserved for future grant or issuance under our 2002 Stock Plan as of March 31, 2008, 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 of our outstanding shares of preferred stock into 32,330,100 shares of common stock in connection with the consummation of this offering and the related conversion of all outstanding preferred stock warrants to common stock warrants;
- 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,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
	(in thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenues:					
Product	$ 2,265	$ 2,544	$ 11,418	$ 1,456	$ 3,545
Related party collaborative research and development	—	863	8,481	1,289	3,881
Collaborative research and development	9,363	8,403	4,733	1,882	865
Government grants	156	317	701	77	83
Total revenues	11,784	12,127	25,333	4,704	8,374
Cost and operating expenses:					
Cost of product revenues	2,233	1,806	8,319	1,351	2,887
Research and development	12,839	17,257	35,644	4,763	9,855
Selling, general and administrative	7,891	11,880	19,713	4,036	8,738
Total cost and operating expenses	22,963	30,943	63,676	10,150	21,480
Loss from operations	(11,179)	(18,816)	(38,343)	(5,446)	(13,106)
Interest income	245	742	1,491	368	761
Interest expense and other	(413)	(724)	(2,533)	32	(1,466)
Loss before provision (benefit) for income taxes	(11,347)	(18,798)	(39,385)	(5,046)	(13,811)
Provision (benefit) for income taxes	243	(127)	(408)	50	98
Net loss	$ (11,590)	$ (18,671)	$ (38,977)	$ (5,096)	$ (13,909)
Net loss per share of common stock, basic and diluted(1)	$ (7.69)	$ (10.99)	$ (15.53)	$ (2.72)	$ (4.10)
Shares used in computing net loss per share of common stock, basic and diluted(1)	1,508	1,699	2,510	1,873	3,395
Pro forma net loss per share of common stock, basic and diluted (unaudited)(1)			$ (1.29)		$ (0.37)
Shares used in computing the pro forma net loss per share of common stock, basic and diluted (unaudited)(1)			29,116		35,725

(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.

	March 31, 2008		
	Actual	Pro Forma(1) (unaudited)	Pro Forma As Adjusted(2) (3) (unaudited)
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash, cash equivalents and marketable securities	$ 64,912	$ 64,912	
Working capital	42,404	44,664	
Total assets	95,197	95,197	
Preferred stock warrant liability	2,260	—	
Current and long-term financing obligations	16,889	16,889	
Redeemable convertible preferred stock	132,746	—	
Stockholders' (deficit) equity	(100,139)	34,867	

(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 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 March 31, 2008, we had an accumulated deficit of $108.1 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. If we are unable to extend our existing agreements or enter into new agreements upon the expiration or termination of our existing agreements, our revenues could be adversely affected. 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.

If our existing collaboration agreements expire or are terminated, our revenues could be adversely affected.

Our existing collaboration 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. Our ability to do so will, in turn, be largely dependent on our ability to address the needs of current and potential future collaborators.

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 253 employees as of March 31, 2008. 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 and the three-month period ended March 31, 2008.

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, which comprises advanced biotechnology methods, bioinformatics and years of accumulated know-how, 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. For the three months ended March 31, 2008, our top five customers accounted for approximately 70% of our revenues, with Shell accounting for 46% of our revenues. 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 have historically relied 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. We are in the process of qualifying other contract manufacturers, but we do not have agreements or commitments with such contract manufacturers at this time. 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 or any other contract manufacturers, who are 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, as of July 31, 2008, we owned or had licensed rights to approximately 230 issued patents and approximately 150 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. As of July 31, 2008, we owned 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 has recently announced a joint venture with Genecor to develop and commercialize a low-cost solution for the production of cellulosic ethanol from non-food sources. In addition, 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 March 31, 2008, 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 35,805,720 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 March 31, 2008, 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 currently intend to use the net proceeds of this offering, together with existing cash and cash equivalents, to fund working capital and other general corporate expenditures, including the costs associated with being a public company and improving our internal control over financial reporting. We estimate that we will use approximately $1 million to $3 million to purchase and implement an enterprise resource planning software system and to hire additional personnel to improve our internal control over financial reporting. We may also use a portion of the net proceeds to acquire other businesses, products or technologies, including those that would enable us to seek new markets for our existing products, develop new products or increase our ability to manufacture and produce our biocatalysts. 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 March 31, 2008:

- 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 of our outstanding shares of preferred stock into 32,330,100 shares of common stock and the related conversion of all outstanding preferred stock warrants to common stock warrants;
  - 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	Pro Forma As Adjusted
		(unaudited)	
		(in thousands, except share data)	
Cash, cash equivalents and marketable securities	$ 64,912	$ 64,912	$
Long-term debt, net of current portion	$ 11,726	$ 11,726	$
Redeemable convertible preferred stock warrant liabilities	2,260	—	
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; 3,475,620 issued and outstanding, actual; 35,805,720 shares issued and outstanding, pro forma shares issued and outstanding, pro forma as adjusted	—	4	
Additional paid-in-capital	7,025	142,027	
Accumulated other comprehensive income	937	937	
Accumulated deficit	(108,101)	(108,101)	
Total stockholders' equity deficit	(100,139)	34,867	
Total capitalization	$ 46,593	$ 46,593	$

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 March 31, 2008 and excludes:

- 9,820,074 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2008 at a weighted average exercise price of $2.49 per share;
- 491,513 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2008 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 1,569,360 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 March 31, 2008 was $28.5 million, or $0.75 per share of common stock. Pro forma net tangible book value per share represents total tangible assets less total liabilities (which includes the reclassification of preferred stock warrant liability into additional paid-in capital upon the conversion to common stock of preferred stock underlying warrants), divided by the number of outstanding shares of common stock on March 31, 2008, after giving effect to the conversion of all outstanding shares of preferred stock into shares of common stock as if the conversion occurred on March 31, 2008, and assuming the exercise of options to purchase up to 1,840,845 shares of common stock which our officers, directors and beneficial owners of more than 5% of our outstanding common stock have a right to acquire within 60 days of March 31, 2008, at a weighted average exercise price of $1.13. Our pro forma as adjusted net tangible book value at March 31, 2008, 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 March 31, 2008	$ 0.75	
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 March 31, 2008, 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 discussion and tables in this section regarding dilution are based on 37,646,565 shares of common stock issued and outstanding as of March 31, 2008 which reflects (i) the automatic conversion of all of our preferred stock into an aggregate of 32,330,100 shares of our common stock, (ii) includes the 1,840,845 shares of common stock which our officers, directors and beneficial owners of more than 5% of our outstanding common stock have a right to acquire within 60 days of March 31, 2008 and (iii) excludes:

- shares of common stock issuable upon the exercise of 7,979,229 options outstanding at a weighted average exercise price of $2.80 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 1,569,360 shares of common stock reserved for future grant or issuance under our 2002 Stock Plan as of March 31, 2008, 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 March 31, 2008 would have been $52.8 million, or $1.14 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. The statements of operations data for the three months ended March 31, 2007 and 2008 and the balance sheet data as of March 31, 2008 is derived from our unaudited consolidated financial statements appearing elsewhere in this prospectus.

	Years Ended December 31,					Three Months Ended March 31,	
	2003	2004	2005	2006	2007	2007	2008
						(unaudited)	
	(in thousands, except per share data)						
Consolidated Statements of Operations Data:							
Revenues:							
Product	$ —	$ —	$ 2,265	$ 2,544	$ 11,418	$ 1,456	$ 3,545
Related party collaborative research and development	—	—	—	863	8,481	1,289	3,881
Collaborative research and development	8,442	4,873	9,363	8,403	4,733	1,882	865
Government grants	—	—	156	317	701	77	83
Total revenues	8,442	4,873	11,784	12,127	25,333	4,704	8,374
Cost and operating expenses:							
Cost of product revenues	—	—	2,233	1,806	8,319	1,351	2,887
Research and development	12,658	12,891	12,839	17,257	35,644	4,763	9,855
Selling, general and administrative	3,053	5,187	7,891	11,880	19,713	4,036	8,738
Total cost and operating expenses	15,711	18,078	22,963	30,943	63,676	10,150	21,480
Loss from operations	(7,269)	(13,205)	(11,179)	(18,816)	(38,343)	(5,446)	(13,106)
Interest income	301	240	245	742	1,491	368	761
Interest expense and other	—	(128)	(413)	(724)	(2,533)	32	(1,466)
Loss before provision (benefit) for income taxes	(6,968)	(13,093)	(11,347)	(18,798)	(39,385)	(5,046)	(13,811)
Provision (benefit) for income taxes	—	—	243	(127)	(408)	50	98
Net loss	(6,968)	(13,093)	(11,590)	(18,671)	(38,977)	(5,096)	(13,909)
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)	$ (5,096)	$ (13,909)
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)	$ (2.72)	$ (4.10)
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	1,873	3,395
Pro forma net loss per share of common stock, basic and diluted (unaudited)(2)					$ (1.29)		$ (0.37)
Shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)(2)					29,116		35,725

(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,					March 31,
	2003	2004	2005	2006	2007	2008
	(in thousands)					
Consolidated Balance Sheet Data:						
Cash, cash equivalents and marketable securities	$ 11,380	$ 16,734	$ 7,005	$ 32,246	$ 84,070	$ 64,912
Working capital	10,682	12,837	2,781	22,722	58,919	42,404
Total assets	20,298	23,276	21,380	46,659	113,541	95,197
Current and long-term financing obligations	—	2,306	4,017	4,073	17,407	16,889
Redeemable convertible preferred stock	26,529	27,779	37,750	77,513	132,746	132,746
Total stockholders' deficit	(8,665)	(12,984)	(34,774)	(52,766)	(87,468)	(100,139)

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. Our proprietary biocatalysts include existing biocatalysts that we have optimized and new biocatalysts that we have developed using our technology platform. Biocatalysts are enzymes or microbes that initiate or accelerate chemical reactions. This process, known as biocatalysis, 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.

We were incorporated in Delaware in January 2002 as a wholly-owned subsidiary of Maxygen, Inc. In March 2002, we licensed from Maxygen our core enabling technology, which comprises advanced biotechnology methods, bioinformatics and years of accumulated know-how which we use to significantly expedite the process of developing customized enzymes and microbes. In March 2002, we also commenced operations, and 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 AG, 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. In the three months ended March 31, 2008, our total revenue grew to $8.4 million from $4.7 million for the comparable period in 2007, which represents a 78% increase. 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, and 67% and 57% of our revenues in the three months ended March 31, 2007 and 2008, 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 March 31, 2008, we had

an accumulated deficit of $108.1 million. We incurred net losses of $11.6 million, $18.7 million and $39.0 million in 2005, 2006 and 2007, respectively, and net losses of $5.1 million and $13.9 million in the three months ended March 31, 2007 and 2008, respectively. In light of the growth in market acceptance of our products and services to date, we currently intend to increase our investment in research and development and the related expense, such that we do not expect to achieve profitability prior to 2010.

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. In connection with all consideration received from Shell relating to our biofuels research collaboration, we were obligated to pay Maxygen $0.6 million and $7.8 million in 2006 and 2007, respectively, and $0.1 million in the three months ended March 31, 2008. 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. Historically, we have relied upon CPC Biotech, srl, or CPC, of Naples, Italy to provide 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 are in the process of qualifying other contract manufacturers, but we do not have agreements or commitments with such contract manufacturers at this time. 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, and for the three months ended March 31, 2008.

- 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. Fully burdened research and development costs include all costs noted above as research and development expenses plus an allocation of certain overhead expenses that were incurred to support the research and development project, such as project accounting and administration. We do not believe that measurement of fully burdened research and development costs would provide meaningful data to our management that would affect operational decisions, so the cost of tracking such data would outweigh any potential benefit.

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 do not have any obligation to repay research and development funds provided by our collaborative partners under any circumstances, including

in connection with failures to meet milestones or occurrences of negative research outcomes. 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,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
Collaborative research and development(1)	$ 5,610	$ 4,150	$ 10,920	$ 740	$ 1,749
Grants	88	25	384	32	4
Internal projects	7,141	13,082	24,340	3,991	8,102
Total research and development expenses	$ 12,839	$ 17,257	$ 35,644	$ 4,763	$ 9,855

(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.

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 Securities and Exchange Commission, or 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 Statement of Financial Accounting Standard, or 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 non-employees are accounted for at their estimated fair value determined using the Black-Scholes option-pricing model. The fair value of the options granted to non-employees 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 the Financial Accounting Standards Board, or FASB, Staff Position FAS No. 150-5, *Issuer's Accounting under Statement No. 150 forFreestanding 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	1,095,550	7.00	6.25	(0.75)
May 22, 2008	250,000	7.90	7.90	—
	6,632,375			

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,		Three months ended March 31,	
	2006	2007	2007	2008
Weighted average expected term (years)	6.1	6.0	N/A	6.0
Weighted average expected volatility	65.0%	48.0%	N/A	57.0%
Range of risk-free rates	4.2%	4.3%	N/A	3.1%
Expected dividend yields	0.0%	0.0%	N/A	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. In the three months ended March 31, 2007, we recognized a total of $35,000 in stock-based compensation expense, of which $10,000 was attributable to employee stock options and $25,000 was attributable to non-employee stock options. Of this total amount, $32,000 was recorded as a selling, general and administrative expense, while $3,000 was recorded as a research and development expense. In the three months ended March 31, 2008, we recognized a total of $0.7 million in stock-based compensation expense, of which $0.6 million was attributable to employee stock options and $0.1 million was attributable to non-employee stock options. Of this total amount, $0.4 million was recorded as a selling, general and administrative expense, while $0.3 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, and the three months ended March 31, 2008 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 109% from 2006 to 2007. However, operating expenses also increased significantly by approximately 90% 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.

April 2008 to May 2008: In April 2008, we filed a registration statement on Form S-1 with the SEC for a potential initial public offering of our common stock. As a result, on May 22, 2008, the estimated fair value of our common stock increased to $7.90 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 $156,000 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, respectively, and ($0.1) million and $0.8 million during the three months ended March 31, 2007 and 2008, respectively. 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

Three Months Ended March 31, 2007 and 2008

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, except for percentages).

	Three months ended March 31,		Increase/ (Decrease)	% Increase/ Decrease
	2007	2008		
Revenues:				
Product	$ 1,456	$ 3,545	$ 2,089	143%
Related party collaborative research and development	1,289	3,881	2,592	201%
Collaborative research and development	1,882	865	(1,017)	(54)%
Grants	77	83	6	8%
Total revenues	4,704	8,374	3,670	78%
Cost and operating expenses:				
Cost of product revenues	1,351	2,887	1,536	114%
Research and development	4,763	9,855	5,092	107%
Selling, general and administrative	4,036	8,738	4,702	117%
Total cost and operating expenses	10,150	21,480	11,330	112%
Loss from operations	(5,446)	(13,106)	(7,660)	141%
Interest income	368	761	393	107%
Interest expense and other	32	(1,466)	(1,498)	NM
Loss before provision (benefit) for income taxes	(5,046)	(13,811)	(8,765)	174%
Provision for income taxes	50	98	48	96%
Net loss	$ (5,096)	$(13,909)	$ (8,813)	173%

Revenues. Revenues increased $3.7 million, or 78%, from $4.7 million in the three months ended March 31, 2007 to $8.4 million in the three months ended March 31, 2008, due primarily to increases in revenues from related party collaborative research and development projects and product sales.

Product revenues increased $2.1 million, or 143%, from $1.5 million in the three months ended March 31, 2007 to $3.6 million in the three months ended March 31, 2008. This increase was primarily due to a $1.2 million increase in sales of our ATS-8 intermediate product to Indian manufacturers of generic atorvastatin, a $0.9 million increase in sales of our enzyme products, and a $0.4 million increase in sales of our other biocatalyst and intermediate products.

Related party collaborative research and development revenues increased $2.6 million, or 201%, from $1.3 million in the three months ended March 31, 2007 to $3.9 million in the three months ended March 31, 2008. This increase was due to the expanded research collaboration with Shell.

Collaborative research and development revenues decreased $1.0 million, or 54%, from $1.9 million in the three months ended March 31, 2007 to $0.9 million in the three months ended March 31, 2008. This decrease was primarily due to the reallocation of our research resources to related party collaborative research and development projects.

Government grant revenues increased $6,000, or 8%, from $77,000 in the three months ended March 31, 2007 to $83,000 in the three months ended March 31, 2008.

Our top five customers accounted for 79% and 70% of our revenues in the three months ended March 31, 2007 and 2008, respectively. In the three months ended March 31, 2007, Shell accounted for 27% of our revenues and Pfizer accounted for 26% of our revenues. In the three months ended March 31, 2008, Shell accounted for 46% of our revenues and Pfizer accounted for 1% of our revenues.

Customers in the Americas accounted for 69% and 60% of our revenues, and customers outside the Americas accounted for 31% and 40% of our revenues, in the three months ended March 31, 2007 and 2008, respectively. Revenues for the three months ended March 31, 2007 and 2008 by geography were as follows (in thousands, except percentages):

	Three months ended March 31,		Increase/ (Decrease)	% Increase/ Decrease
	2007	2008		
Americas	$ 3,225	$ 5,056	$ 1,831	57%
Europe	804	1,677	873	109%
Asia	675	1,641	966	143%
International	1,479	3,318	1,839	124%
Total	$ 4,704	$ 8,374	$ 3,670	78%

Cost of Product Revenues. Cost of product revenues was $1.4 million for the three months ended March 31, 2007, compared to $2.9 million in the three months ended March 31, 2008, an increase of $1.5 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 acquisition of BioCatalytics, Inc. Cost of product revenues as a percentage of product revenues decreased 11% from 93% in the three months ended March 31, 2007 to 81% in the three months ended March 31, 2008 due to higher margin product sales to former customers of BioCatalytics following the July 2007 acquisition of BioCatalytics and the introduction of Codex Biocatalyst Panels during 2007.

Research and Development. Research and development expenses were $4.8 million in the three months ended March 31, 2007, compared to $9.9 million in the three months ended March 31, 2008, an increase of $5.1 million. The increase was primarily due to increased compensation (including stock-based compensation) and benefits of $3.0 million attributable to an increase in employee headcount in our research and development functions. Also reflecting increased research and development expenses were higher expenses incurred for lab supplies, outside services and consultants of $0.8 million, plus higher occupancy related costs of $0.5 million and depreciation and amortization expense of $0.3 million. Travel and training expenses also increased by $0.1 million as our research functions expanded in Europe and Asia. Royalty expense increased by $0.1 million attributable to an increase in fees payable to Maxygen in connection with the research collaboration with Shell. Research and development expenses included stock-based compensation expense of $3,000 and $0.3 million during the three months ended March 31, 2007 and 2008, respectively.

Selling, General and Administrative. Selling, general and administrative expenses were $4.0 million for the three months ended March 31, 2007, compared to $8.7 million for the three months ended March 31, 2008, an increase of $4.7 million or 117%. The increase was primarily due to increased compensation (including stock-based compensation) of $1.4 million, attributable to higher employee headcount and higher fair value of the options granted in late 2007. 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 compliance with the Sarbanes-Oxley Act of 2002. We also incurred higher professional fees of $1.2 million primarily for legal fees of $0.6 million connected with securing our patents and intellectual property and $0.6 million for accounting and audit fees connected with finalizing our audited financial statements for 2007 and earlier periods. Expenses related to travel and recruiting increased by $0.3 million. Selling, general and administrative expenses included

stock-based compensation expense of $32,000 and $0.4 million during the three months ended March 31, 2007 and 2008, respectively.

Interest Income. Interest income was $0.4 million in the three months ended March 31, 2007 compared to $0.8 million in the three months ended March 31, 2008, an increase of $0.4 million, or 107%. The increase resulted from higher average cash and investment balances on hand during the first quarter of 2008 compared to the first quarter of 2007. These higher cash and investment balances resulted from cash received in November 2007, following the issuance of our Series E preferred stock, as well as from the $20.0 million up-front payment received from Shell when we entered into our new five-year research collaboration.

Interest Expense and Other. Interest expense and other was $32,000 in the three months ended March 31, 2007, compared to $1.5 million in the three months ended March 31, 2008. Interest expense and other in the three months ended March 31, 2008 included the increase in the fair value of our preferred stock warrants of $0.8 million, and higher interest expense due to the debt obligation with General Electric Capital Corporation and Oxford Finance Corporation undertaken in late 2007. Interest expense and other in the three months ended March 31, 2007 included the decrease in the fair value of the preferred stock warrants of $0.1 million.

Provision (benefit) for Income Taxes. The tax provision for the three months ended March 31, 2007 and 2008 primarily consisted of foreign taxes withheld at source on royalties earned overseas and other taxes attributable to foreign 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, except percentages).

	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	361%
Research and development	17,257	35,644	18,387	107%
Selling, general and administrative	11,880	19,713	7,833	66%
Total cost and operating expenses	30,943	63,676	32,733	106%
Loss from operations	(18,816)	(38,343)	(19,527)	104%
Interest income	742	1,491	749	101%
Interest expense and other	(724)	(2,533)	(1,809)	250%
Loss before provision (benefit) for income taxes	(18,798)	(39,385)	(20,587)	110%
Provision (benefit) for income taxes	(127)	(408)	(281)	221%
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 Americas accounted for 65% and 59% of revenues, and customers outside the Americas accounted for 35% and 41% of revenues, in 2006 and 2007, respectively. Revenues for 2006 and 2007 by geography were as follows (in thousands, except for percentages):

	2006	2007	Increase/ (Decrease)	% Increase/ Decrease
Americas	$ 7,933	$15,010	$ 7,077	89%
Europe	2,491	4,005	1,514	61%
Asia	1,703	6,318	4,615	271%
International	4,194	10,323	6,129	146%
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 of $6.0 million, an increase in amortization of intangible assets of $0.1 million and an inventory fair value adjustment related to our BioCatalytics acquisition of $0.2 million. 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 $17.3 million in 2006 compared to $35.6 million in 2007, an increase of $18.3 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. Professional and advisory fees also increased by $0.6 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 $11.9 million for 2006, compared to $19.7 million for 2007, an increase of $7.8 million or 66%. 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	12,839	17,257	4,418	34%
Selling, general and administrative	7,891	11,880	3,989	51%
Total cost and operating expenses	22,963	30,943	7,980	35%
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)	66%
Provision (benefit) for income taxes	243	(127)	(370)	(152)%
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 Americas accounted for 56% and 65% of revenues, and customers outside the Americas accounted for 44% and 35% of revenues, in 2005 and 2006, respectively. Revenues for 2005 and 2006 by geography were as follows (in thousands, except for percentages):

	2005	2006	Increase/ (Decrease)	% Increase/ Decrease
Americas	6,547	7,933	1,386	21%
Europe	3,268	2,491	(777)	(24)%
Asia	1,969	1,703	(266)	(14)%
International	5,237	4,194	(1,043)	(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 $12.8 million for 2005, compared to $17.3 million in 2006, an increase of $4.4 million or 34%. 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 $7.9 million in 2005, compared to $11.9 million in 2006, an increase of $4.0 million or 51%. 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 higher interest expense incurred in 2006 reflecting the increased debt carried in 2006 compared to 2005.

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 March 31, 2008, our cash, cash equivalents and marketable securities totaled $64.9 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 $17.8 million in the three months ended March 31, 2008, primarily due to net loss of $13.9 million, a decrease in accrued royalty payable of $7.6 million, an increase in our inventories of $0.8 million, an increase in our prepaid expenses and other assets of $1.5 million, partially offset by a decrease in accounts receivable of $2.1 million and an increase in accrued liabilities of $2.6 million. These changes resulted primarily from the significant growth in our business, the timing of shipments and payments in connection with the preparation for our initial public offering, the payment of a royalty amount due to Maxygen in connection with the Shell agreements signed in November 2007, and efforts to manage and monitor the balances of trade receivables. We also had non-cash charges of $2.6 million, comprised primarily of $0.8 million in depreciation and amortization on property and equipment, $0.8 million related to the increase in the fair value of the preferred stock warrants during the period, $0.7 million in stock-based compensation expense and $0.2 million in amortization of intangible assets and deferred costs.

Our operating activities used cash in the amount of $7.4 million in the three months ended March 31, 2007, primarily due to our net loss of $5.1 million and an increase in accounts receivable of $1.3 million, partially offset by an increase in accrued liabilities of $1.0 million. We also had non-cash charges of $0.5 million, comprised primarily of $0.4 million in depreciation and amortization on property and equipment, $0.2 million in amortization of intangible assets and deferred costs and a credit of $0.1 million related to the decrease in the fair value of the preferred stock warrants during the period.

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 $14.2 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

In the three months ended March 31, 2008, our investing activities used cash of $8.7 million, primarily for the purchase of $11.4 million of marketable securities, $1.1 million of capital expenditures and a $0.1 million increase in restricted cash, partially offset by the proceeds received from the sale of $3.8 million of marketable securities. These capital expenditures consisted primarily of computer and test equipment purchases.

In the three months ended March 31, 2007, our investing activities used cash of $12.3 million, primarily for the purchase of marketable securities of $11.5 million and the purchase of $0.7 million of property and equipment. These capital expenditures consisted primarily of lab equipment and leasehold improvements.

Our investing activities used cash of $39.2 million in 2007, primarily from net purchases of marketable securities of $28.5 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

In the three months ended March 31, 2008, our financing activities used $0.6 million in cash, primarily for the $0.7 million in principal payments on our financing obligations, partially offset by $0.1 million in receipts from the exercise of employee stock options.

In the three months ended March 31, 2007, our financing activities used $0.2 million in cash, primarily for the $0.3 million in principal payments on our financing obligations, partially offset by $83,000 received from the exercise of employee stock options.

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. During the three months ended March 31, 2008, we obtained from the lenders a waiver of default for our failure to timely deliver monthly financials, compliance certificates and capitalization tables which we had been obligated to provide to the lender in January, February and March 2008.

Through our subsidiary, Jülich Fine Chemicals GmbH, we have two lines of credit denominated in euros with a German bank for purchases of equipment and working capital. The two lines of credit provide a maximum facility of $359,000, of which $217,000 was outstanding as of December 31, 2007. During the three months ended March 31, 2008, we repaid the amounts outstanding under these credit lines.

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(1)	$ 21,316	$ 6,098	$ 6,255	$ 5,980	$ 2,983	$ —
Lines of credit	217	217	—	—	—	—
Capital leases(1)	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

(1) Amounts include interest on obligations

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 March 31, 2008, 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 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. 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 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. 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.

During the three months ended March 31, 2008, we adopted the following accounting standards:

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. We adopted EITF 07-3 effective January 1, 2008 and are required to report the effects of applying EITF 07-3 prospectively for new contracts entered into after that effective date of EITF 07-3. The adoption of Issue No. 07-03 did not have an impact on our results of operations or financial position.

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, except that under FASB Staff Position 157-2, "Effective Date of FASB Statement No. 157", companies are allowed to

delay the effective dates of SFAS 157 for non-financial assets and non-financial liabilities that are not recognized or disclosed at fair value on a recurring basis until fiscal years beginning after November 15, 2008. Effective January 1, 2008, we adopted the provisions of SFAS 157 for all financial assets and liabilities and measures its required financial assets and liabilities at fair value. We elected to delay the adoption of SFAS 157 for such non-financial assets and non-financial liabilities. (See also Note 6 of the Notes to our Consolidated Financial Statements).

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Sensitivity

We had unrestricted cash, cash equivalents and marketable securities totaling $32.2 million, $84.1 million and $64.9 million at December 31, 2006, December 31, 2007, and March 31, 2008, 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

Our operations include manufacturing and sales activities in the United States, Germany and India, as well as research activities in countries outside the United States, including Singapore and Europe. 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.

We identified the following issues during the audit, which 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. Our proprietary biocatalysts include existing biocatalysts that we have optimized and new biocatalysts that we have developed using our technology platform. 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 initiate or accelerate chemical reactions. This process, known as biocatalysis, 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 targets related to enzyme performance 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.

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. As of March 31, 2008, Maxygen held approximately 25% of our outstanding common stock, calculated on an as-converted basis.

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- 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 produce economically 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 believe our technology platform has significantly improved commercial scale drug manufacturing processes. We have produced and delivered 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 targets related to enzyme performance 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, and that we believe can enable products currently impossible to produce economically at commercial scale, 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 targets related to enzyme performance, 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, which are separately identified in our consolidated statements of operations. 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 late 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 targets related to enzyme performance 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 targets related to enzyme performance under that agreement, we entered into a new collaboration under a five year 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 on November 1, 2007. Under the terms of the amended and restated license agreement, we granted to Shell, 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 covered by our patents or which utilizes our technology for use in the field of converting biomass into biofuels and related products. The patents and technology licensed included our then existing patent rights and technology and patent rights and technology developed or acquired during performance of the research agreement, in each case related to converting biomass into biofuels and related products. We additionally granted Shell royalty-free licenses which allow Shell to manufacture or have manufactured biocatalysts developed under the research agreement solely for the purposes of using such biocatalysts in the manufacture of products for use in the field of converting biomass into biofuels and related products, such licenses to be used only in accordance with the royalty-bearing license described above. These royalty-free licenses are (I) an exclusive license under the patents and technology related to converting biomass into biofuels and related products and developed or acquired by during performance of the research agreement and (II) a non-exclusive license to patents and technology controlled by us that are necessary or useful for converting biomass into biofuels and related products.

Shell will pay us a royalty per gallon with respect to certain fuel products. The applicable fuel products are those products which are covered by patents or utilize technology related to converting biomass into biofuels and related products that were either developed or acquired during performance of the research agreement or are controlled by us and necessary or useful for such purpose. 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 separate royalty per gallon of fuel product. The amounts of such royalties depend on whether the product is an intermediate in conversion of biomass into liquid fuel or fuel additive or a lubricant, or is a liquid fuel or fuel additive or a lubricant.

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. The duration of the license agreement differs for each of the fields of use covered by the license agreement, but for each field of use it continues until the later of (i) twenty (20) years after the first sale of product licensed under the agreement in the field of use or (ii) expiration of the last to expire patents covering products licensed under the agreement in the field of use that were either developed or acquired during performance of the research agreement or are controlled by us and necessary or useful for such purpose.

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 from Maxygen our core enabling technology, which comprises advanced biotechnology methods, bioinformatics and years of accumulated know-how, which we use to significantly expedite the process of developing customized enzymes and microbes. 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 Maxygen license extends for the lifetime of the patents included in the Maxygen intellectual property plus an additional 50 years for any know-how or materials included in the license agreement, unless earlier terminated.

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 consideration we receive in connection with the development and commercialization of energy products using the licensed technology. Specifically, we will owe Maxygen fees in connection with consideration we receive in the form of (1) upfront option and/or license fees, (2) milestone payments, (3) payments from the sale of our equity securities and (4) payments in connection with the commercialization of energy products made with a biocatalyst developed using the licensed technology. The actual fees payable to Maxygen will depend on the amount, timing and type of consideration we receive. 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 reimburse up to 20% of the costs incurred by 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.

Maxygen granted Novo Nordisk A/S certain rights under its intellectual property on September 17, 1997. This grant was later amended and these rights were later assigned by Novo Nordisk to Novozymes A/S and by Maxygen to us. Under this license, Maxygen granted exclusive rights to Novozymes that are outside the field of use licensed to us by Maxygen. Maxygen also granted certain rights to Novozymes co-exclusively in other fields that could overlap with certain fields we are pursuing under our license, including biofuels. At a minimum, we enjoy co-exclusive rights in such fields and have sufficient rights for our collaborations and partnerships. Novozymes did not receive a license to all of the rights we are using in biofuels applications and which we believe are critical to pursuing such applications.

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 March 31, 2008, Maxygen owned approximately 25% of our outstanding common stock calculated on an as-converted basis.

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. Protection of our technologies is important for us to offer our customers and partners proprietary services and products unavailable from our competitors, and to exclude our competitors from practicing technology that we have developed or exclusively in-licensed. For example, in the generic pharmaceutical area, proprietary protection, through patent, trade secret or other protection of our enzymes and methods of producing a pharmaceutical product is important for us and our customers to maintain a lower cost production advantage over competitors. Likewise, our ability to supply innovator pharmaceutical manufacturers depends on our ability to supply proprietary enzymes or methods for making pharmaceutical intermediates or APIs that are not available from our competitors. If competitors in our industry have access to the same technology, our competitive position may be adversely affected. As of July 31, 2008, we owned or had licensed rights to approximately 230 issued patents and approximately 150 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. These in-licensed patents and patent

applications cover both enabling technologies, as well as patents covering products or methods of producing products, and our licenses to such patents allow us to freely practice the licensed inventions, subject only to the terms of those licenses. The issued patents covering the fundamental shuffling technologies have terms ending as late as 2019. As of July 31, 2008, we owned approximately 15 issued patents and approximately 60 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. Our U.S. issued patents directed to our enabling technologies have terms that expire from year 2021 to 2024. We continue to file new patent applications, for which terms generally extend 20 years from the filing date in the United States, as provided under 35 U.S.C. § 154.

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. In addition, academic institutions are also working in this field. Technological developments by others may result in our products and technologies, as well as products developed by our customers using our biocatalysts, becoming obsolete. 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.

Many of our competitors have substantially greater manufacturing, 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.

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. Additionally, Genencor recently announced a joint venture with DuPont to develop and commercialize a low-cost solution for the production of cellulosic ethanol from non-food sources. 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 conduct substantial operations outside of the United States. Please see Note 14 of our consolidated financial statements appearing elsewhere in this prospectus for a description of our revenues and long-lived assets outside of the United States. We have facilities located throughout the world, including in Redwood

City, California; Pasadena, California; Jülich, Germany; Singapore; and Hungary. As of March 31, 2008, we employed 253 people worldwide, with 173 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. For more information on our research and development expenses, including expenses funded by our collaborative partners, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Revenue, Cost of Product Revenues—Research and Development Expenses” included elsewhere in this prospectus.

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.

Historically, we have relied upon an Italian contract manufacturer, CPC Biotech srl, or CPC, to manufacture substantially all of the commercial enzymes used in our pharmaceutical business. We are in the process of qualifying other contract manufacturers, but we do not have agreements or commitments with such contract manufacturers at this time. 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, 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 March 31, 2008, we employed 253 full-time employees. Of the full-time employees, 146 were engaged in research and development, 52 were engaged in manufacturing and operations, and 55 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 or other material legal proceedings.

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).

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.

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.

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 Avanex Corporation and 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 January 29, 2008, 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 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 January 29, 2008, we granted Mr. Pasternack 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.

On January 29, 2008, we granted Mr. Wolf 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."

In 2007, we analyzed the employee benefit programs we offer, including medical, prescription, dental, vision, employee assistance, life and accident insurance and disability programs using a report provided to us by ABD Insurance and Financial Services which acts as our broker for employee benefit programs. The report examined the employee benefit programs offered by technology and biotechnology companies having between 200 and 749 employees that participated in a survey, which, working with our broker, we determined represents our peer group. The majority of companies (52%) are located in Northern California and 11% in Southern California. The remaining companies are distributed geographically as follows: Pacific Northwest, 6%, Mountain States, 2%, Southwest, 7%, Central/Midwest, 2%, Northeast, 10%, Mid-Atlantic, 5%, and Southeast, 5%. For 2007, the "Benefits Peer Group" consisted of the following companies:

- Actel Corporation
- Adaptec, Inc.
- Advanced Energy Industries, Inc.
- Advent Software, Inc.
- Aeroflex Colorado Springs, Inc.
- Akrion, Inc.
- Alphatec Spine, Inc.
- Anritsu Corporation
- Applied Signal Technology, Inc,.
- ArcSight, Inc.
- Arris Group, Inc.
- ArthroCare Corporation
- ASM America, Inc.
- Atheros Communications, Inc.
- ATMI, Inc.
- Blue Coat Systems, Inc.
- Bookham Technology, Inc.
- Borland Software Corporation
- Caliper Life Sciences, Inc.
- Calix Corporation
- Cascade Microtech, Inc.
- Cholestech Corporation
- Cirrus Logic, Inc.
- Clinimetrics Research Associates, Inc.
- Cognex Corporation
- Corbis Corporation
- CV Therapeutics, Inc.
- CyberSource Corporation
- Data Exchange Corporation
- Datalogic, Inc. (formerly PSC)
- Delta Products Corporation
- Digene, Inc.
- Digimarc Corporation
- Dionex Corporation
- Diversa, Inc.

- Dolby Laboratories, Inc.
- Dot Hill Systems Corporation
- Echelon Corporation
- Electro Scientific Industries, Inc.
- EMD Serono, Inc.
- Emulex Corporation
- Enterasys Networks, Inc.
- Enzon, Inc.
- Epri, Inc.
- Equinix, Inc.
- Exelixis, Inc.
- Exponent, Inc.
- Extreme Networks, Inc.
- Foundry Networks, Inc.
- FP International, Inc.
- GSI Group, Inc.
- Harmonic, Inc.
- Hitachi Computer Prod-Ok, Inc.
- Hitachi High Technologies America, Inc.
- Hospira, Inc.
- Impac Medical Systems, Inc.
- Intermune, Inc.
- Intervoice, Inc.
- Intevac, Inc.
- ISIS Pharmaceuticals, Inc.
- LeapFrog Enterprises, Inc.
- Lexicon Pharmaceuticals, Inc.
- Lightbridge, Inc.
- Mannkind Corporation
- Monogram Biosciences, Inc.
- Monster Cable Products, Inc.
- Monterey Bay Aquarium Research
- MSC Software Corporation
- Nabi Biopharmaceuticals, Inc.
- Nastech Pharmaceutical, Inc.
- Nektar Therapeutics Corporation
- Network General, Inc.
- Neurocrine Biosciences, Inc.
- Nikon Precision, Inc.
- Noblis, Inc.
- Novo Nordisk Delivery Technologies, Inc.
- Oki Data, Inc.
- Omnicell, Inc.
- Open Text Corporation
- Openwave, Inc.
- Opsware, Inc.
- Pay By Touch (dba Solidus Networks, Inc.)
- Pharmion Corporation
- Pillar Data Systems, Inc.
- Planar Systems, Inc.
- Plantronics, Inc.
- Power Integrations, Inc.
- Promega Corporation
- Radisys Corporation
- Renesas Technology America Corporation
- Risk Management Solutions, Inc.
- Samsung Information Systems, Inc.
- Samsung Telecom America, Inc.
- Serena Software, Inc.
- Shutterfly, Inc.
- Silicon Image, Inc.
- Silicon Laboratories, Inc.
- SiRF Technology, Inc.
- Skillsoft Corporation
- Standard Microsystems Corporation
- Stratus Technologies, Inc.
- Sumtotal Systems, Inc.
- Symmetricom, Inc.
- Symyx Technologies, Inc.
- Toppan Photomasks, Inc.
- Toshiba America Business Solutions, Inc.
- Ubisoft, Inc.
- Ultratech, Inc.
- Ventana Medical Systems, Inc.
- Vishay - Siliconix, Inc.
- Watchguard Technologies, Inc.
- Webtrends, Inc.
- Xoma Corporation
- Xyratex International, Inc.
- Zantaz, Inc.
- Zoran Corporation
- Zymogenetics, Inc.

We believe that the practices of the companies in the Radford Biotechnology Peer Group, the Radford Global Life Sciences Peer Group, the Benefits 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 table below sets forth the threshold and target levels related to the corporate performance component for 2007.

Metric	Threshold	Target
Net Revenue	$ 22.5 million	$ 25 million
Contribution Margin	$ 15.3 million	$ 17 million
Year-End Cash	$ 20.7 million	$ 23 million

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%)

For example, for fiscal year 2007, Mr. Walshaw's base salary was $220,000, his bonus target was set at 30% of his base salary, his individual performance level was determined to be 150% and our corporate performance was determined to be 120%. To calculate Mr. Walshaw's 2007 bonus we apply the above formula as follows:

$89,100 = ($220,000 x 30% x 120% x 50%) +
($220,000 x 30% x 150% 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, such as the experience of individual members of our compensation committee in setting bonus targets at other companies and the bonus targets requested by potential executives as part of negotiations over salary and other 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. In keeping with our market-competitive philosophy, our compensation committee established the foregoing vesting schedules for 2007 because it determined such vesting represents market practice in our industry based on the experience of the members of our compensation committee.

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	$ 172,523	$ 259,875	$ 1,326	$ 818,724
Robert S. Breuil, Senior Vice President, Finance and Chief Financial Officer	2007	288,750	99,311	133,908	1,469	523,438
John Grate, Ph.D., Chief Technical Officer and Senior Vice President, Technology and Innovation	2007	252,000	33,484	114,660	3,643	403,787
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	31,193	89,100	1,098	341,391

(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." The valuation assumptions used in determining such amounts are described in Note 12 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 March 31, 2008, options to purchase 9,755,074 shares of our common stock at a weighted average exercise price per share of $2.50 remained outstanding under the 2002 Stock Plan. No stock purchase rights have been granted under the 2002 Stock Plan. As of March 31, 2008, options to purchase 1,569,360 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 March 31, 2008, 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 March 31, 2008 (based on the number of shares of common stock outstanding on March 31, 2008, 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 March 31, 2008. 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 35,805,720 shares of common stock outstanding on March 31, 2008 (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		25.05%	
Biomedical Sciences Investment Fund Pte Ltd(2)	5,037,783		14.07%	
Equilon Enterprises LLC dba Shell Oil Products US	4,768,667		13.32%	
Entities affiliated with CMEA Ventures(3)	4,515,397		12.56%	
Entities affiliated with Pequot Capital Management(4)	4,009,411		11.17%	
CTTV Investments LLC(5)	2,510,348		7.00%	
Executive Officers and Directors:				
Alan Shaw(6)	1,133,823		3.08%	
Robert S. Breuil(7)	232,060		*	
John Grate(8)	355,870		*	
Douglas T. Sheehy(9)	40,624		*	
David Walshaw(10)	133,468		*	
Thomas R. Baruch(11)	4,515,397		12.56%	
Russell J. Howard(12)	8,981,888		25.05%	
Bernard J. Kelley(13)	120,000		*	
Bruce Pasternack(14)	50,000		*	
William Rothwell	—		*	
Dennis P. Wolf(15)	50,000		*	
All executive officers and directors as a group (11 persons)	15,613,130		41.27%	

* 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 996,323 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2008.

(7) Includes 232,060 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2008.

(8) Includes 255,870 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2008.

(9) Includes 40,624 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2008.

(10) Includes 133,468 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2008.

(11) 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.

(12) 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.

(13) Includes 82,500 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2008, and 50,522 shares of which are subject to a right of repurchase within 60 days of March 31, 2008, 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 $7.00 per share.

(14) Includes 50,000 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2008, all of which are subject to a right of repurchase within 60 days of March 31, 2008, at the original option exercise price, in the event the holder ceases to provide services to us. The option exercise prices range from $4.47 to $7.00 per share.

(15) Includes 50,000 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2008, all of which are subject to a right of repurchase within 60 days of March 31, 2008, at the original option exercise price, in the event the holder ceases to provide services to us. The option exercise prices range from $5.79 to $7.00 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 March 31, 2008, there were outstanding:

- 35,805,720 shares of our common stock held by approximately 87 stockholders; and
- 9,820,074 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. 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 March 31, 2008. 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 have applied 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 March 31, 2008, 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 35,805,720 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. 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 have applied 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. 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,		March 31,	Pro Forma as of March 31, 2008
	2006	2007	2008 (unaudited)	(Note 2) (unaudited)
Assets				
Current assets:				
Cash and cash equivalents	$ 32,246	$ 55,075	$ 27,934	$ 27,934
Marketable securities	—	28,995	36,978	36,978
Accounts receivable, net of allowances of $250 at December 31, 2006 and 2007 and March 31, 2008 (unaudited), respectively	2,653	4,752	3,558	3,558
Related party accounts receivable	101	1,680	840	840
Inventories	970	1,635	2,519	2,519
Prepaid expenses and other current assets	674	1,209	1,327	1,327
Total current assets	36,644	93,346	73,156	73,156
Restricted cash	894	2,195	2,247	2,247
Property and equipment, net	4,501	11,099	11,365	11,365
Intangible assets, net	2,324	2,783	2,673	2,673
Goodwill	1,926	3,099	3,260	3,260
Other non-current assets	370	1,019	2,496	2,496
Total assets	$ 46,659	$113,541	$ 95,197	$ 95,197
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)				
Current liabilities:				
Accounts payable	$ 2,491	$ 4,225	$ 4,442	$ 4,442
Accrued compensation	1,518	3,182	2,195	2,195
Related party payable	560	7,788	150	150
Other accrued liabilities	2,593	7,480	10,074	10,074
Preferred stock warrant liability	623	1,485	2,260	—
Deferred revenues	1,306	654	955	955
Related party deferred revenues	3,021	4,856	5,513	5,513
Financing obligations	1,560	4,507	5,163	5,163
Total current liabilities	13,672	34,177	30,752	28,492
Deferred revenues, net of current portion	2,989	2,233	2,288	2,288
Related party deferred revenues, net of current portion	156	16,632	15,453	15,453
Financing obligations, net of current portion	2,513	12,900	11,726	11,726
Other long-term liabilities	2,582	2,321	2,371	2,371
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 and 33,204,886 shares authorized at December 31, 2006 and 2007 and March 31, 2008 (unaudited) respectively; 25,684,148 and 32,269,494 and 32,269,494 shares issued and outstanding at December 31, 2006 and 2007 and March 31, 2008 (unaudited), respectively; aggregate liquidation value of $104,972 and $160,305 and $160,305 at December 31, 2006 and 2007 and March 31, 2008 (unaudited) respectively; no shares authorized, issued or outstanding pro forma (unaudited)	77,513	132,746	132,746	—
Stockholders' equity (deficit):				
Common stock, $0.0001 par value per share; 40,000,000 and 62,000,000 and 62,000,000 shares authorized at December 31, 2006 and 2007 and March 31, 2008 (unaudited), respectively; 1,797,682 and 3,386,789 and 3,475,620 shares issued and outstanding at December 31, 2006 and 2007 and March 31, 2008 (unaudited), respectively; shares authorized, 35,805,720 shares issued and outstanding pro forma (unaudited)	—	—	—	4
Additional paid-in capital	2,501	6,187	7,025	142,027
Accumulated other comprehensive income (loss)	(52)	537	937	937
Accumulated deficit	(55,215)	(94,192)	(108,101)	(108,101)
Total stockholders' equity (deficit)	(52,766)	(87,468)	(100,139)	34,867
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	$ 46,659	$113,541	$ 95,197	$ 95,197

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,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
Revenues:					
Product	$ 2,265	$ 2,544	$ 11,418	$ 1,456	$ 3,545
Related party collaborative research and development	—	863	8,481	1,289	3,881
Collaborative research and development	9,363	8,403	4,733	1,882	865
Government grants	156	317	701	77	83
Total revenues	11,784	12,127	25,333	4,704	8,374
Cost and operating expenses:					
Cost of product revenues	2,233	1,806	8,319	1,351	2,887
Research and development	12,839	17,257	35,644	4,763	9,855
Selling, general and administrative	7,891	11,880	19,713	4,036	8,738
Total cost and operating expenses	22,963	30,943	63,676	10,150	21,480
Loss from operations	(11,179)	(18,816)	(38,343)	(5,446)	(13,106)
Interest income	245	742	1,491	368	761
Interest expense and other	(413)	(724)	(2,533)	32	(1,466)
Loss before provision (benefit) for income taxes	(11,347)	(18,798)	(39,385)	(5,046)	(13,811)
Provision (benefit) for income taxes	243	(127)	(408)	50	98
Net loss	$ (11,590)	$ (18,671)	$ (38,977)	$ (5,096)	$ (13,909)
Net loss per share of common stock, basic and diluted	$ (7.69)	$ (10.99)	$ (15.53)	$ (2.72)	$ (4.10)
Shares used in computing net loss per share of common stock, basic and diluted	1,508	1,699	2,510	1,873	3,395
Pro forma net loss per share of common stock, basic and diluted (unaudited)			$ (1.29)		$ (0.37)
Shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)			29,116		35,725

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 and the Three Months Ended March 31, 2008 (unaudited)
(In thousands)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive 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
Non-employee 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
Non-employee 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
Non-employee 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)
Exercise of stock options (unaudited)	—	—	89	—	72	—	—	72
Vesting of shares exercised early (unaudited)	—	—	—	—	18	—	—	18
Employee stock-based compensation (unaudited)	—	—	—	—	647	—	—	647
Non-employee stock-based compensation (unaudited)	—	—	—	—	101	—	—	101
Comprehensive loss:								
Net loss (unaudited)	—	—	—	—	—	—	(13,909)	(13,909)
Currency translation adjustments (unaudited)	—	—	—	—	—	328	—	328
Unrealized gain on marketable securities (unaudited)	—	—	—	—	—	72	—	72
Total comprehensive loss (unaudited)								(13,509)
March 31, 2008 (unaudited)	32,270	$132,746	3,476	$ —	$ 7,025	$ 937	$ (108,101)	$ (100,139)

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,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
Operating activities					
Net loss	$ (11,590)	$ (18,671)	$ (38,977)	$ (5,096)	$ (13,909)
Adjustments to reconcile net loss to net cash used in operating activities:					
Amortization of purchased intangible assets	744	633	781	162	238
Depreciation and amortization	1,712	1,754	2,103	404	806
Revaluation of preferred stock warrant liability	—	156	1,328	(146)	775
Loss on disposal of property and equipment	6	6	86	—	—
Stock-based compensation	70	64	1,256	35	748
Amortization of debt discount	—	5	67	—	70
Accretion/(amortization) of premium/discount on marketable securities	207	—	(368)	(71)	(300)
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)	(1,296)	2,050
Inventories	(10)	(354)	(283)	(685)	(815)
Prepaid expenses and other current assets	(88)	(211)	(285)	(214)	(102)
Other assets	183	(191)	(590)	8	(1,448)
Accounts payable	(593)	1,409	1,169	(800)	211
Accrued compensation	251	552	1,664	(434)	(987)
Accrued related party payable	—	560	7,228	43	(7,638)
Deferred revenues	4,050	775	16,385	(314)	(166)
Other accrued liabilities	2,841	(210)	4,098	978	2,633
Net cash used in operating activities	(4,674)	(13,287)	(6,470)	(7,426)	(17,834)
Investing activities					
Increase in restricted cash	(239)	(193)	(1,301)	(48)	(53)
Purchase of property and equipment	(2,013)	(1,102)	(8,245)	(704)	(1,055)
Purchase of marketable securities	(1,262)	—	(42,267)	(11,509)	(11,372)
Proceeds from maturities and sales of marketable securities	11,316	1,500	13,772	—	3,760
Acquisitions, net of cash acquired	(4,090)	—	(1,168)	—	—
Net cash provided by (used in) investing activities	3,712	205	(39,209)	(12,261)	(8,720)
Financing activities					
Proceeds from financing obligations	1,786	1,067	14,805	38	—
Principal payments on financing obligations	(886)	(1,090)	(1,485)	(290)	(652)
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	83	72
Net cash provided by (used in) financing activities	963	39,714	68,376	(169)	(580)
Effect of exchange rate changes on cash and cash equivalents	7	109	132	39	(7)
Net increase in cash and cash equivalents	8	26,741	22,829	(19,817)	(27,141)
Cash and cash equivalents at beginning of period	5,497	5,505	32,246	32,246	55,075
Cash and cash equivalents at end of period	$ 5,505	$ 32,246	$ 55,075	$ 12,429	$ 27,934
Supplemental disclosures of cash flow information:					
Cash paid for interest	$ 339	$ 383	$ 686	$ 95	$ 418
Cash paid for income taxes	$ 222	$ 132	$ 99	$ 2	$ 6
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.

Reclassification

In the current period, we reclassified certain amounts between inventory and accrued liabilities in the consolidated balance sheets and legal expenses from research and development expenses to selling, general and administrative expenses in the consolidated statements of operations. We also reclassified amounts relating to the amortization of discount on marketable securities from investing activities to a reconciling adjustment to net loss for cash used in operating activities in the consolidated statements of cash flows. For comparative purposes, amounts in the prior periods have been reclassified to conform to the current presentation.

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.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Unaudited Interim Financial Information

The accompanying consolidated balance sheet as of March 31, 2008, the consolidated statements of operations and cash flows for the three months ended March 31, 2007 and 2008, and the consolidated statement of redeemable convertible preferred stock and stockholder's deficit for the three months ended March 31, 2008 are unaudited. The unaudited interim financial statements have been prepared on the same basis as the annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to state fairly our financial position as of March 31, 2008 and results of operations and cash flows for the three months ended March 31, 2007 and 2008. The financial data and other information disclosed in these notes to financial statements as of March 31, 2008 and for the three months ended March 31, 2007 and 2008 are unaudited. The results for the three months ended March 31, 2008 are not necessarily indicative of the results to be expected for the year ending December 31, 2008 or for any other interim period or for any future year.

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 11, 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 March 31, 2008. In addition, all preferred stock warrants will automatically convert to common stock warrants and the related redeemable convertible preferred stock warrant liability of $2.3 million at March 31, 2008 would be reclassified to additional paid-in capital. The unaudited pro forma balance sheet information at March 31, 2008 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

We have incurred net losses of $39.0 and $13.9 million for the year ended December 31, 2007 and for the three months ended March 31, 2008, respectively and used $6.5 million and $17.8 million of cash in operating activities for the year ended December 31, 2007 and for the three months ended March 31, 2008, respectively. At March 31, 2008, we had an accumulated deficit of $108.1 million and unrestricted cash and cash equivalents and marketable securities of $64.9 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 values of redeemable convertible preferred stock, common

stock, redeemable convertible preferred stock warrants, and 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 and $22,000 and $19,000 for the three months ended March 31, 2007 and 2008, respectively.

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%, 47% and 14% of accounts receivable at December 31, 2006 and 2007 and March 31, 2008, respectively. At December 31, 2007 and March 31, 2008, a second customer accounted for 26% and 19% of accounts receivable, respectively. 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.

SFAS No. 157, *Fair Value Measurement* ("SFAS 157"), clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly

transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. Effective January 1, 2008, we adopted the provisions of SFAS No. 157 for financial assets and liabilities measured at fair value. See Note 6.

Fair value is defined as the price at which an asset could be exchanged or a liability transferred (an exit price) in an orderly transaction between knowledgeable, willing parties in the principal or most advantageous market for the asset or liability. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models are applied. These valuation techniques involve some level of management estimation and judgment, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity.

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. 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. There was no activity in the reserve during the three months ended March 31, 2007 and 2008, 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.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

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 and for the three months ended March 31, 2008, 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 and the three months ended March 31, 2008, no impairment charges have been recorded.

Restricted Cash

Restricted cash was $894,000, $2.2 million and $2.2 million at December 31, 2006 and 2007 and March 31, 2008, 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.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

Deferred Offering Costs

In connection with our initial public offering, we have recorded $1.6 million of deferred offering costs included in other non-current assets in the accompanying balance sheet at March 31, 2008.

Redeemable Convertible Preferred Stock Warrant Liability

We apply the provisions of Financial Accounting Standards Board ("FASB") Staff Position ("FSP") FAS 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 years ended December 31, 2006 and 2007 and

for the three months ended March 31, 2007 and 2008 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,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
License, access and exclusivity fees	$ —	$ 373	$ 2,665	$ 558	$ 479
Services	—	365	4,909	546	3,402
Milestones	—	125	907	185	—
Total related party collaborative research and development revenues	$ —	$ 863	$ 8,481	$ 1,289	$ 3,881

Revenues from our other collaborative research and development agreements consist of the following (in thousands):

	For the Years Ended December 31,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
License, access and exclusivity fees	$ 1,633	$ 894	$ 1,340	$ 616	$ 150
Services	6,168	6,084	2,584	1,169	471
Milestones	800	724	300	—	—
Royalties	762	701	509	97	244
Total collaborative research and development revenues	$ 9,363	$ 8,403	$ 4,733	$ 1,882	$ 865

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 period ended.

	Percentage of Total Revenues				
	For the Years Ended December 31,			For the Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
Customers					
A	*	*	33%	27%	46%
B	34%	36%	13%	26%	*
C	*	11%	*	*	*
D	17%	*	*	*	*

* Represents less than 10% of total revenues

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,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
Collaborative research and development(1)	$ 5,610	$ 4,150	$ 10,920	$ 740	$ 1,749
Grants	88	25	384	32	4
Internal projects	7,141	13,082	24,340	3,991	8,102
Total research and development expenses	$ 12,839	$ 17,257	$ 35,644	$ 4,763	$ 9,855

(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 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 the period, 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,			For the Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
Actual:					
Numerator:					
Net loss	$ (11,590)	$ (18,671)	$ (38,977)	$ (5,096)	$ (13,909)
Denominator:					
Weighted-average shares of common stock outstanding	1,508	1,699	2,530	1,873	3,442
Less: Weighted-average shares of common stock subject to repurchase	—	—	(20)	—	(47)
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	1,873	3,395
Net loss per share of common stock, basic and diluted	$ (7.69)	$ (10.99)	$ (15.53)	$ (2.72)	$ (4.10)
Pro Forma:					
Numerator:					
Net loss			$ (38,977)		$ (13,909)
Less: change in fair value of preferred stock warrant liability			1,328		775
Net loss used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)			$ (37,649)		$ (13,134)
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		3,395
Add: Pro forma adjustments to reflect weighted-average effect of assumed conversion of redeemable convertible preferred stock (unaudited)			26,606		32,330
Weighted-average shares of common stock used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)			29,116		35,725
Pro forma net loss per share of common stock, basic and diluted (unaudited)			$ (1.29)		$ (0.37)

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,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
Redeemable convertible preferred stock	15,616	25,745	32,330	25,745	32,330
Common stock subject to repurchase	—	—	58	—	43
Options to purchase common stock	4,573	4,188	9,032	6,062	9,820
Warrants to purchase redeemable convertible preferred stock	—	752	433	752	433
Warrants to purchase common stock	55	55	59	55	59
Total	20,244	30,740	41,912	32,614	42,685

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 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 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* ("EITF 96-18"). In accordance with SFAS 123(R) and EITF 96-18, stock options issued to non-employees are accounted for at their estimated fair value determined using the Black-Scholes option-pricing model. The fair value of the options granted to non-employees 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 March 31, 2008, we had one share-based compensation plan (see Note 12).

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, and $9,000 and $152,000 for the three months ended March 31, 2007 and 2008, 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 a loss of $52,000, and gains of $405,000 and $733,000 of currency translation adjustments at December 31, 2006 and 2007 and March 31, 2008, respectively. Unrealized gains on marketable securities was $0, $132,000 and $204,000 at December 31, 2006 and 2007 and March 31, 2008, respectively.

Recent Accounting Pronouncements

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.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

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 December 2007, the FASB issued SFAS No. 141 (revised 2007),*Business Combinations* ("SFAS 141(R)"). SFAS 141(R) 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.

During the three months ended March 31, 2008, we adopted the following accounting standards:

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. We adopted EITF 07-3 effective January 1, 2008 and are required to report the effects of applying EITF 07-3 prospectively for new contracts entered into after the effective date of EITF 07-3. The adoption of Issue No. 07-3 did not have an impact on our results of operations or financial position; and

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, except that under FASB Staff Position 157-2, "Effective Date of FASB Statement No. 157", companies are allowed to delay the effective date of SFAS 157 for non-financial assets and non-financial liabilities that are not

recognized or disclosed at fair value on a recurring basis until fiscal years beginning after November 15, 2008. Effective January 1, 2008, we adopted the provisions of SFAS 157 for all financial assets and liabilities and measures its required financial assets and liabilities at fair value. We elected to delay the adoption of SFAS 157 for such non-financial assets and non-financial liabilities. See Note 6.

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,			Three Months Ended March 31,	
	2005	2006	2007	2007	2008
				(unaudited)	
Shell	*	*	33%	27%	46%
Pfizer	34%	33%	13%	26%	*
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, and $1.3 million and $3.9 million for the three months ended March 31, 2007 and 2008, respectively. At December 31, 2006 and 2007 and March 31, 2008, we had accounts receivable due from Shell of $101,000, $1.7 million and $840,000. At December 31, 2006 and 2007 and March 31, 2008, we recorded deferred revenue related to the research collaboration with Shell of $3.2 million, $21.5 million and $21.0 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 10).

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 and $1.3 million and $0 for the three months ended March 31, 2007 and 2008, 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. For the three months ended March 31, 2008, $479,000 of the $20.0 million up front payment and $3.4 million of research funding was recognized as related party collaborative research and development revenue under agreement. No milestone payments have been received as of March 31, 2008 under the new and expanded agreement.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

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 March 31, 2008, Pfizer had not exercised this option. Through March 31, 2008, 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, and $1.2 million and $0 for the three months ended March 31, 2007 and 2008, 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. For the three months ended March 31, 2007 and 2008, we recognized revenue of $50,000 and $0, respectively, related to the arrangement.

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, and $1.2 million and $0 for the three months ended March 31, 2007 and 2008, respectively. At December 31, 2006 and 2007, we had accounts receivable due from Pfizer of $162,000 and $91,000, respectively and $97,000 at March 31, 2008. At December 31, 2006 and 2007 and March 31, 2008 we had deferred revenue from Pfizer of $1.1 million, $200,000 and $200,000, respectively, recorded on our consolidated balance sheets.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

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 the years ended December 31, 2006 and 2007 and for the three months ended March 31, 2007, we recorded $1.4 million, $1.3 million and $320,000, respectively, of collaborative research and development revenue 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 under this agreement , respectively. 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 and for the three months ended March 31, 2007 and 2008, we recorded $1.0 million, $151,000, $306,000 and $306,000 and $150,000, 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 March 31, 2008, we had paid Arch $0.5 million for their services under the 2006 Agreements and, as of March 31, 2008, we had a remaining liability of $1.0 million due to Arch. We have recognized expense for these services of $156,000, $375,000,$93,750 and $ 93,750 during the years ended December 31, 2006 and 2007 and the three months ended March 31, 2007 and 2008, 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, $387,000, $0 and $68,000 during the years ended December 31, 2006 and 2007 and for the three months ended March 31, 2007 and 2008, 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.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

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

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.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

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.

The preliminary 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

We continue to accumulate information to assess pre-acquisition contingencies and whether or not an asset or liability can be reasonably estimated. The quantification may result in future adjustments to goodwill.

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)

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 and March 31, 2008, cash equivalents and marketable securities consisted of the following (in thousands):

	December 31, 2007				March 31, 2008			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses (unaudited)	Estimated Fair Value
Money market funds	$ 52,125	$ —	$ —	$ 52,125	$ 27,934	$ —	$ —	$ 27,934
Corporate debt obligations	28,863	133	(1)	28,995	36,774	204	—	36,978
Total	80,988	133	(1)	81,120	64,708	204	—	64,912
Less amounts classified as cash equivalents	(52,125)	—	—	(52,125)	(27,934)	—	—	(27,934)
Total marketable securities	$ 28,863	$ 133	$ (1)	$ 28,995	$ 36,774	$ 204	$ —	$ 36,978

All available-for-sale securities held as of December 31, 2007 and March 31, 2008 had contractual maturities of less than one year.

Inventories

Inventories consisted of the following (in thousands):

	December 31,		March 31,
	2006	2007	2008 (unaudited)
Raw materials	$146	$ 372	$ 892
Work in process	—	43	25
Finished goods	824	1,220	1,602
Total inventories	$970	$1,635	$ 2,519

Property and Equipment

Property and equipment consisted of the following (in thousands):

	December 31,		March 31,
	2006	2007	2008 (unaudited)
Laboratory equipment	$ 7,809	$11,875	$ 13,074
Leaseholds improvements	3,408	6,295	6,467
Computer equipment and software	743	1,105	1,181
Office equipment and furniture	189	429	471
Construction in progress	—	502	109
	12,149	20,206	21,302
Less: Accumulated depreciation and amortization	(7,648)	(9,107)	(9,937)
Property and equipment, net	$ 4,501	$11,099	$ 11,365

Included in property and equipment, net is $81,000, $155,000 and $133,000 of equipment relating to capital lease obligations at December 31, 2006 and 2007 and at March 31, 2008, respectively. Included in

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accumulated depreciation and amortization is $49,000, $121,000 and $150,000 of accumulated amortization relating to capital lease obligations at December 31, 2006 and 2007 and March 31, 2008, respectively. Depreciation and amortization expense for the years ended December 31, 2005, 2006 and 2007 and the three months ended March 31, 2007 and 2008 was $1.7 million, $1.8 million, $2.1 million, $404,000 and $806,000, respectively.

Intangible Assets

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

	March 31, 2008		
	Gross Carrying Amount	Accumulated Amortization (unaudited)	Net Carrying Value
Customer relationships	$ 2,850	$ (1,473)	$ 1,377
Developed and core technology	990	(436)	554
Customer backlog	140	(140)	—
Tradename	90	(69)	21
Purchased technology	440	(62)	378
Non-compete agreements	90	(21)	69
Foreign exchange adjustments	200	74	274
	$ 4,800	$ (2,127)	$ 2,673

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 and for the three months ended March 31, 2007 and 2008 was $744,000, $633,000, $781,000, $162,000 and $238,000, respectively. The estimated amortization expense for the next five years is as follows (in thousands):

Years Ending,	Cost of Product Revenues	Selling, General and Administrative	Total
2008	$ 172	$ 487	$ 659
2009	230	631	861
2010	230	197	427
2011	230	98	328
2012	70	53	123
	$ 932	$ 1,466	$2,398

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Goodwill

The changes in the carrying value of goodwill are as follows (in thousands):

	December 31,		March 31,
	2006	2007	2008
			(unaudited)
Balance at beginning of period	$1,955	$1,926	$ 3,099
Additions due to BioCatalytics acquisition	—	1,012	—
Adjustments to tax valuation allowances established in purchase accounting	—	(51)	—
Foreign exchange adjustments	(29)	212	161
Balance at end of period	$1,926	$3,099	$ 3,260

6. Fair Value

Assets and liabilities recorded at fair value in the Consolidated Financial Statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels, defined by SFAS No. 157 and directly related to the amount of subjectivity associated with the inputs to valuation of these assets or liabilities, are as follows:

Level 1 — Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level 2 — Inputs (other than quoted prices included in Level 1) are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.

Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities and which reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuations technique and the risk inherent in the inputs to the model.

In accordance with SFAS No. 157, the following table represents financial instruments that were measured at fair value on a recurring basis at March 31, 2008 by level within the fair value hierarchy (in thousands):

	March 31, 2008			
	Level 1	Level 2	Level 3	Total
		(unaudited)		
Assets				
Money market funds	$ 19,096	$ —	$ —	$ 19,096
U.S. treasury bills	2,999	—	—	2,999
Commercial paper	—	33,405	—	33,405
Asset backed securities	—	4,573	—	4,573
Total	$ 22,095	$ 37,978	$ —	$ 60,073
Liabilities				
Preferred stock warrant liability	$ —	$ —	$ 2,260	$ 2,260

The changes in the value of the warrant liability is summarized below (in thousands):

Fair value at December 31, 2007	$ 1,485
Change in fair value recorded in interest expense and other (unaudited)	775
Fair value at March 31, 2008 (unaudited)	$ 2,260

The valuation of the preferred stock warrant liability is discussed in Note 10.

7. 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 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.

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Notes to Consolidated Financial Statements — (Continued)

Total fees paid to Maxygen for Facilities and Services under the 2005 Services Agreement during the years ended December 31, 2005, 2006 and 2007 and for the three months ended March 31, 2007 and 2008 were $1.4 million, $652,000, $259,000, $59,000 and $158,000, respectively. At December 31, 2006 and 2007 and March 31, 2008, we owed Maxygen $21,000, $116,000 and $29,000, 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 March 31, 2008.

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, $7.8 million, $0 and $121,000 during the years ended December 31, 2006 and 2007 and for the three months ended March 31, 2007 and 2008, respectively. We had a payable due to Maxygen in the amount of $556,000, $7.6 million and $121,000 at December 31, 2006 and 2007 and at March 31, 2008, respectively, related to the payments received under our collaborative research and license agreements with Shell (see Note 3).

8. Financing Obligations

Financing obligations, net of debt discounts, consisted of the following (in thousands):

	December 31,		March 31,
	2006	2007	2008
			(unaudited)
Loans payable	$ 3,740	$17,035	$ 16,756
Lines of credit	253	217	—
Capital leases	80	155	133
	4,073	17,407	16,889
Less: current portion	(1,560)	(4,507)	(5,163)
Financing obligations, net of current portion	$ 2,513	$12,900	$ 11,726

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 10). During 2007, we drew down the entire $15.0 million, net of issuance costs which remained outstanding at March 31, 2008. 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 the covenants under the loan agreement. During the three months ended March 31, 2008, we obtained from the lenders a waiver of default for our failure to timely deliver monthly financials compliance certificates and capitalization tables for periods which were due to the lender in January, February and March 2008. 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 the year ended December 31, 2007 and the three months ended March 31, 2008, we recorded interest expense of $362,000 and $365,000 under the effective interest rate method and amortization expense of $67,000 and $70,000 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 and March 31, 2008, the principal amount outstanding was $1.3 million, $923,000 and $834,000, 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 10). 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.

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 and March 31, 2008, the principal amount outstanding was $1.8 million, $858,000 and $555,000, 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 10). 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 and March 31, 2008 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 lines

of credit. During the first quarter of 2008 we repaid amounts outstanding under the line of credit. At December 31, 2006 and 2007 and March 31, 2008, we classified $182,000, as restricted cash to fully 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. During the first quarter of 2008 we repaid amounts outstanding under the line of credit. In addition, at December 31, 2006 and 2007 and March 31, 2008, 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. These shares of Series D redeemable convertible preferred stock will automatically convert into common stock on a 1-for-1 basis immediately before the closing of a firmly underwritten public offering (see Note 11). 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 10).

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.

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Notes to Consolidated Financial Statements — (Continued)

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 as of December 31, 2007 (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, and $94,000 and $568,000 for the three months ended March 31, 2007 and 2008, respectively.

9. 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, $78,000, $19,000 and $28,000 during the years ended December 31, 2005, 2006 and 2007 and for the three months ended March 31, 2007 and 2008, 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.

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Notes to Consolidated Financial Statements — (Continued)

Total rent expense under these operating leases was $1.1 million, $1.2 million, $2.1 million, $316,000 and $654,000 during the years ended December 31, 2005, 2006 and 2007 and for the three months ended March 31, 2007 and 2008, respectively. Deferred rent of $140,000, $210,000 and $199,000 at December 31, 2006 and 2007 and March 31, 2008, 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.

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.

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Notes to Consolidated Financial Statements — (Continued)

10. 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 and March 31, 2008 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 and March 31, 2008, 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, $1.5 million and $2.3 million at December 31, 2006 and 2007 and March 31, 2008, respectively. The fair value of the warrants was determined using the Black-Scholes pricing model using the following assumptions:

	Years ended December 31,		March 31,
	2006	2007	2008 (unaudited)
Weighted average expected term in years (equals the remaining contractual term)	1.0 - 6.4	5.4 - 9.8	5.2 - 9.5
Weighted average expected volatility	48% - 49%	44.1%	56.0%
Range of risk-free rates	4.6% - 5.0%	3.8% - 4.8%	2.4% - 3.4%
Expected dividend yields	0.0%	0.0%	0.0%

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 the years ended 2006 and 2007. For the three months ended March 31, 2007 and 2008, $146,000 was recognized as other income and $775,000 was recognized as other expense, respectively.

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Notes to Consolidated Financial Statements — (Continued)

11. 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 and March 31, 2008 (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	33,205	32,270	$ 160,305	$ 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 and for the three months ended March 31, 2007 and 2008, 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.

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

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Notes to Consolidated Financial Statements — (Continued)

issued as a result of the conversion of the bridge loans issued under the bridge financing agreement entered into in May 2006 (See Note 8).

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 and March 31, 2008.

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 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.

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Notes to Consolidated Financial Statements — (Continued)

12. 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, and March 31, 2008, 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 that are subject to repurchase by the Company 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
Vested (unaudited)	(15,000)	1.19
March 31, 2008 (unaudited)	42,603	1.15

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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
Authorized (unaudited)	—	—	—
Grants (unaudited)	(1,095,550)	1,095,550	7.00
Exercises (unaudited)	—	(88,831)	0.76
Forfeited (unaudited)	218,719	(218,719)	3.27
March 31, 2008 (unaudited)	1,569,360	9,755,074	2.50

Options exercised during 2007 include options that are exercised prior to vesting. As of March 31, 2008, there were 65,000 options outstanding outside the Plan with a weighted average exercise price per share of $0.50.

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 Exercise Price per Share
$0.40	1,491,644	5.5	$ 0.40	1,432,207	$ 0.40
0.45	129,500	6.5	0.45	110,144	0.45
0.60	615,963	7.1	0.60	457,938	0.60
0.70	1,528,142	7.9	0.70	880,637	0.70
1.63	2,882,500	9.2	1.63	453,961	1.63
4.47	1,271,175	9.7	4.47	25,500	4.47
4.57	864,550	9.8	4.57	—	0.00
5.79	183,600	9.9	5.79	25,000	5.79
Total	8,967,074	8.3	1.95	3,385,387	0.74

The following table summarizes information about stock options outstanding and exercisable at March 31, 2008 (unaudited):

	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 Exercise Price per Share
$0.40	1,476,331	5.1	$ 0.40	1,425,819	$ 0.40
0.45	129,500	6.3	0.45	117,613	0.45
0.60	598,934	6.7	0.60	479,540	0.60
0.70	1,454,951	7.6	0.70	913,642	0.70
1.63	2,776,958	8.9	1.63	663,226	1.63
4.47	1,249,800	9.4	4.47	35,416	4.47
4.57	864,550	9.6	4.57	—	0.00
5.79	113,600	9.7	5.79	25,000	5.79
7.00	1,090,450	9.8	7.00	105,000	7.00
Total	9,755,074	8.2	2.50	3,765,256	0.97

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

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

The following table summarizes information about stock options that have vested and are expected to vest at March 31, 2008 (unaudited):

	Number of Options Outstanding	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (In Thousands)
Vested	3,582,650	$ 0.74	6.6	$ 24,478
Expected to vest	5,923,248	3.52	9.1	20,613
Total vested and expected to vest	9,505,898	2.50	8.2	$ 45,091

The aggregate grant date fair value of options granted during the years ended 2005, 2006 and 2007 and during the three months ended March 31, 2007 and 2008 was $192,000, $133,000, $7.5 million, $0 and $3.7 million, respectively.

Options exercisable as December 31, 2007 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 as of December 31, 2007 was $34.4 million, of which $17.1 million was related to exercisable options. At March 31, 2008, exercisable options had a weighted average exercise price of $0.97 per share and an intrinsic value of $24.8 million. The aggregate intrinsic value of stock options outstanding at March 31, 2008 was $49.5 million, of which $24.8 million was related to exercisable options. The aggregate intrinsic value of exercised stock options was $49,000, $50,000, $869,000, $168,000 and $472,000 during the years ended December 31, 2005, 2006 and 2007 and the three months ended March 31, 2007 and 2008, 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 and March 31, 2008, respectively.

Stock-based compensation costs capitalized during 2005, 2006 and 2007 and for the three months ended March 31, 2007 and 2008 were insignificant. There were no stock-based compensation tax benefits during 2005, 2006 and 2007 and for the three months ended March 31, 2007 and 2008.

At December 31, 2007 and March 31, 2008, there was $6.2 million and $9.4 million of unrecognized stock-based compensation cost related to stock options granted under the Plan expected to be recognized over an average period of 2.2 years.

Stock Options Granted to Non-employees

During the years ended December 31, 2005, 2006 and 2007 and the three months ended March 31, 2008, we granted options to purchase 260,000, 22,500, 331,000 and 30,000 shares of common stock, respectively, to non-employees. For all options granted to non-employees 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 non-employees in 2005 ranged between $0.60 and $0.70 per share. For all options granted to non-employees 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 non-employees in 2006 was $0.70 per share. For all options granted to non-employees 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 non-employees in 2007

ranged from $1.63 to $4.57 per share. For all options granted to non-employees in the three months ended March 31, 2008, the Black-Scholes option-pricing model was used with the following assumptions: volatility of 57%; a risk-free rate of 3.17%; a remaining contractual life between 9 and 10 years; and no dividend yield. The exercise price of options granted to non-employees for the three months ended March 31, 2008 was $7.00. We recorded stock-based compensation expense related to these options of $69,000, $32,000, $213,000, $25,000 and $101,000 in the years ended December 31, 2005, 2006 and 2007 and for the three months ended March 31, 2007 and 2008, respectively, as the underlying services were rendered. In accordance with SFAS 123(R) and EITF 96-18, options granted to non-employees are periodically revalued as they vest.

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 the period:

	Years Ended December 31,		Three Months Ended March 31,	
	2006	2007	2007	2008
			(unaudited)	
Weighted average expected life (years)	6.1	6.0	N/A	6.0
Weighted average expected volatility	65%	48%	N/A	57%
Weighted average risk-free interest rates	4.2%	4.3%	N/A	3.1%
Expected dividend yield	0%	0%	N/A	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 non-employee 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 non-employee stock options. Furthermore, $788,000 was recorded as a general and administrative expense while $468,000 was recorded as a research and

development expense. For the three months ended March 31, 2007 and 2008, we recognized stock-based compensation expense of $10,000 and $618,000 for employee stock options and $25,000 and $101,000 for non-employee stock options. Of these amounts, $32,000 and $418,000 was recorded as general and administrative expense while $3,000 and $301,000 was recorded as a research and development expense for the three months ended March 31, 2007 and March 31, 2008, respectively.

In January 2008, in connection with a termination agreement with a former employee, we modified the terms of the stock option agreement to extend the vesting period of unvested stock options and the post-termination exercise period for vested options. As a result of the modification of stock options, we recorded a stock-based compensation charge of $29,000 for the three months ended March 31, 2008 as an expense to research and development.

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.

Warrants to Purchase Common Stock

In October 2005, in connection with a loan agreement (see Note 8), 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 March 31, 2008.

In February 2004, in connection with a loan agreement (see Note 8), 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 March 31, 2008.

Shares Reserved

Common stock reserved for future issuance is as follows (in thousands):

	December 31, 2007	March 31, 2008 (unaudited)
Conversion of redeemable convertible preferred stock	32,330	32,330
Warrants to purchase redeemable convertible preferred and common stock	492	492
Stock options:		
Outstanding	9,032	9,820
Reserved for future grants	2,446	1,569
	44,300	44,211

13. 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

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)

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Notes to Consolidated Financial Statements — (Continued)

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)

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.

14. 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.

Codexis, Inc.

Notes to Consolidated Financial Statements — (Continued)

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,			Three Months Ended March, 31	
	2005	2006	2007	2007	2008
				(unaudited)	
Revenues					
Americas	$ 6,547	$ 7,933	$ 15,010	$ 3,225	$ 5,056
Europe	3,268	2,491	4,005	804	1,677
Asia	1,969	1,703	6,318	675	1,641
	$ 11,784	$ 12,127	$ 25,333	$ 4,704	$ 8,374

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,		March 31,
	2006	2007	2008
			(unaudited)
Long-lived assets			
United States	$ 9,562	$ 14,760	$ 16,106
Europe	449	650	669
Asia	4	4,785	5,266
	$ 10,015	$ 20,195	$ 22,041

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 March 31, 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 March 31, 2005 through March 31, 2008, the Registrant granted stock options to purchase 8,487,675 shares of the registrant's common stock at exercise prices ranging from $0.60 to $7.00 per share to employees, consultants and directors of the Registrant under the Registrant's 2002 Stock Plan. Since January 1, 2005 through March 31, 2008, the Registrant had issued and sold an aggregate of 983,236 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.

Exhibit No.	Description
5.1*	Opinion of Latham & Watkins LLP.
10.1†D	Loan and Security Agreement with General Electric Capital Corporation and Oxford Finance Corporation dated September 28, 2007.
10.2†D	First Amendment to Loan and Security Agreement with General Electric Capital Corporation and Oxford Finance Corporation dated November 9, 2007.
10.3†D	License Agreement effective as of March 28, 2002, by and between Maxygen, Inc. and the Company.
10.4†D	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†D	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†D	Side Letter by and between Maxygen, Inc. and the Company re: the Maxygen License dated September 11, 2007.
10.9†D	Side Letter by and between Maxygen, Inc. and the Company re: the Maxygen License dated September 24, 2007.
10.10†D	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†D	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†D	Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.13†D	Supply Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.14†D	Enzyme License and Supply Agreement effective August 1, 2006 by and between the Company and Arch Pharmalabs, Ltd.
10.15†D	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.

Exhibit No.	Description
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.
21	List of Subsidiaries.
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.
\# Previously filed.
† Certain portions have been omitted pursuant to a confidential treatment request. Omitted information has been filed separately with the SEC.
D The Registrant is re-filing this exhibit to the Registrant's Form S-1 originally filed on April 14, 2008 to include certain previously omitted portions in the agreement. The Registrant has made no other changes to the previously filed agreement.

(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.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Amendment No. 1 to the 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 4th day of August, 2008.

CODEXIS, INC

By: /s/ ALAN SHAW
Alan Shaw
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 1 to the Registration Statement has been signed by the following persons in the capacities indicated below on the 4th day of August, 2008.

Signature	Title	Date
/s/ ALAN SHAW Alan Shaw	President and Chief Executive Officer, Director (Principal Executive Officer)	August 4, 2008
/s/ ROBERT BREUIL Robert Breuil	Chief Financial Officer (Principal Financial and Accounting Officer)	August 4, 2008
* Thomas Baruch	Chairman of the Board of Directors	August 4, 2008
* Russell Howard	Director	August 4, 2008
* Bernard J. Kelley	Director	August 4, 2008
* Bruce Pasternack	Director	August 4, 2008
* William Rothwell	Director	August 4, 2008
* Dennis Wolf	Director	August 4, 2008

*By: /s/ ALAN SHAW
Alan Shaw
Attorney-in-Fact

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21	List of Subsidiaries.
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.

\# Previously filed.

† Certain portions have been omitted pursuant to a confidential treatment request. Omitted information has been filed separately with the SEC.

D The Registrant is re-filing this exhibit to the Registrant's Form S-1 originally filed on April 14, 2008 to include certain previously omitted portions in the agreement. The Registrant has made no other changes to the previously filed agreement.

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.

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

[*] 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.

Date commencing on the first day of the eighth calendar month occurring after the month 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) 5% on such principal prepayment amount, if such prepayment is made on or before the one year anniversary of such Term Loan, (B) 4% 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) 2% 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) 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) 5% 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) 5% 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 $65,000).

(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 2% 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.

(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 4% 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).

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,

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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 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;

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(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;

(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 asExhibit 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");

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(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");

(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

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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 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.

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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.

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

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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

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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.

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.

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(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.

(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).

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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;

(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.

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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 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) $10,000,000 and (2) thirty-five percent (35%) 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.

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

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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 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

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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.

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

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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

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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 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.

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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.

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

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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 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.

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 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.

(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

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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.

(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,

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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.

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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 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.

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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

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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.

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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.

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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

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(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: _____

[*] 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 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

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.

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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	**Name of Bank or Financial Institution:**	**Bank Account Number:**		**ABA Routing Number (9-digit number)**	
INFO	**Address of Bank or Financial Institution:**	**City:**		**State:**	**Zip Code:**

	Signatures	**Company**		**Contact**
	Signature of Authorized Signer: Date:	**Company Name:**		**Contact Name:**
BORROWER	**Name of Joint Account Holder: (Please Print)**	**Company Address:**		**Contact Phone Number:**
INFO	**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: ☐

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EXHIBIT 10.2

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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 $1,750,000 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 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 $1,750,000 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

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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) $1,750,000 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)."

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

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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.

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.

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.

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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

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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.

[*] 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.

1.18 **"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.

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.

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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.

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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.

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.

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.

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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

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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.

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

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(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.

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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.

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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.

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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.

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.

[*] 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.

6.2 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

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.

[*] 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.

9.1.2 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.

[*] 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.

9.7 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.

[*] 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.

10.2.2 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 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.

(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.

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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

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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.

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.

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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).

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.

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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.

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 Maieure. 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 twenty percent (20%) 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 for Enabling Technolo[redacted]v
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

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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 anv 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.

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.

10.3.3 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

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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 [*] applications):

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 [*] applications):

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 [*] applications):

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 [*] applications):

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 10.6

[*] 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 one thousand seven hundred sixty (1760) 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

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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.

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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.

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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

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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.

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(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]

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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

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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 [*] applications):

   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 [*] applications):

   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. [*]

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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 [*] applications):

Categories

a. [*]
b. [*]
c. [*]
d. [*]
e. [*]
f. [*]

7. **SubField 7:** Manufacture of the [*] specified below for [*] (excluding any use in, on or for [*] or any other [*] and/or [*] applications):

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

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(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.

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. [*]

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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

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 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).

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 S. 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

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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

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 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).

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 S. 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

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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 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.

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 one thousand seven hundred sixty (1760) 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 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).

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 May 1, 2009;

(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 May 1, 2010;

(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 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 Codexis; provided further, that the scope and goal(s) of such Research Plan, including (A) the annual Milestone(s) for such 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"

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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;

(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 Shell 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 Codexis' 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 four (4) Shell employees at Codexis' facilities in Redwood City, California, for periods of up to six (6) 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 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 eight (8) 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 twelve (12) 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
[*]	November 1, 2007
[*]	April 1, 2008
[*]	August 1, 2008

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.

[*] 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) 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 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 March 1, 2009, 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 March 1, 2010, 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.

(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 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 [*] 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

[*] 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.

2.4(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 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 (4^{th}) or fifth (5^{th}) 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).

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 Thirty Million Seven Hundred Three Thousand Five Hundred Sixty-Four United States Dollars ($30,703,564). 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

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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 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.

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 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 fifty percent (50%) of such costs actually incurred in the United States, Europe, Argentina, Australia, Brazil, China, India, Japan, Singapore, South Korea and Turkey, and one hundred percent (100%) 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.

[*] 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.

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

(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.

[*] 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 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.

[*] 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.

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).

[*] 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 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 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 August 23, 2006, 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 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); (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 Biomass into fermentable sugars, such sugars 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 Biomass to fermentable sugars, where such sugars 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.

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 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 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 fourth (4th) 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 two (2) 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**").

[*] 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 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 third (3rd) anniversary 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.

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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 sixth (6th) 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 nine (9) months 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 sixth (6th) year anniversary of the Effective Date by (B) five (5) years. 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 Eight Million United States Dollars ($8,000,000) 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.

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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.

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.

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.

If to Codexis, addressed to:

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Attention: Chief Executive Officer
Telephone: [*]
Fax: [*]

[*] 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.

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.

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]

[*] 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 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

[Signature Page to Amended and Restated Collaborative Research Agreement]

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EXHIBIT 1.21

Research Plans

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Schedule 1

Research Plan for First Contract Year

Summary

Key technoeconomic parameters for the [*] include:

(i) yield of [*],

(ii) enzyme load,

(iii) cost of enzyme manufacture,

(iv) equipment costs,

(v) residence time of reaction, and

(vi) energy usage.

Enzyme systems improved for activity in [*] process conditions can reduce enzyme load requirements, reduce residence time, and improve volumetric productivity of [*]. Therefore, the goal of the research program is to [*].

For this 12 month research plan, efforts will be focused on:

(i) identifying and obtaining [*] genes and enzymes to assemble a baseline [*] system,

(ii) identifying and obtaining suitable [*], and

(iii) enabling and executing an evolution campaign directed at [*].

Development of an evolution-suitable system will include:

(i) establishment of a genetic expression system, and

(ii) development of screening and assay formats, in each case suitable for high-throughput catalyst production and analysis.

Implementation of the evolution campaign will consist of

(i) generation of initial genetic diversity,

(ii) library design,

(iii) DNA shuffling and library construction, and

(iv) implementation of the screening program to identify enzyme variants possessing improved properties.

The screening process may consist of a series of tiered assays, starting with high-throughput, [*] screens, and gradually shifting to lower throughput, [*] assays. Assay data and mutational analysis will be assessed, and desirable variants and/or mutations will be re-introduced into subsequent “rounds” of evolution and screening, until enzyme variants are identified that meet or exceed the desired performance criteria.

[*] 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.

Ultimately, improved enzyme variants will be assessed under [*] conditions, which may include a determination of their activity in the presence of [*]. This approach would allow for the simultaneous execution of the evolution campaign with assay development.

Introduction

[*].

[*]. Several improvements in the [*] enzymes may be desired, such as:

(i) Decreased product inhibition. Although [*] enzymes from nature vary in their sensitivity to [*] inhibition, most [*] are highly sensitive to [*] inhibition, thereby limiting enzyme activity and overall [*] rate [*].

(ii) Increased substrate tolerance. While some [*] from nature have been described [*], most [*] are inhibited by [*], limiting the potential for the final [*] rates.

(iii) Increased specific activity. Activity improvements with these enzymes have been demonstrated to result in increases in [*].

(iv) Increased activity in process environment [*]. Ideally, all enzymes required for use in a given reaction will possess matching preferences for the environmental aspects of the reaction, such as pH and temperature activity optima. [*].

(v) Altered substrate specificities. Although [*] are known to be most active on [*], some possess activity on [*] with varying efficiencies on [*] substrates. [*]. Changing the substrate orientation towards [*] might be advantageous [*].

(vi) Increased expression, secretion. [*], a commonly used organism for [*] production, does not produce and secrete sufficient [*] to drive commercial [*] demands [*]. These enzymes could be engineered for improved expression [*].

While particular enzymes in nature may possess certain characteristics for industrial use, it is rare that a native enzyme would possess all the preferred traits. The range of activities and properties known for related (homologous) enzymes may give an indication of the “evolvability” for a particular trait, that is, they are permitted by the enzyme [*]. Codexis technology allows for desirable properties from different enzymes to be combined, and improved further. Importantly, multiple properties may be evolved at the same time; such multi-trait evolution has been demonstrated using Codexis technology in other programs.

[*].

Other enzyme targets for improvement will be considered during the course of the program. Possible candidates might include [*].

Process Definition

At the initiation of the program, an extensive review of the scientific, commercial, and patent literature will be conducted. Due to the large amount of prior work in this area, this is anticipated to be a significant task. This review is required to establish a reasonable understanding of relevant technical issues and, importantly, the intellectual property landscape, and the validation of appropriate research targets and materials. Suitable starting enzymes and the genes that encode them will be identified for use in the program. Possible licensing opportunities with third parties may also be identified. This activity will continue throughout the life of the research program in order to stay abreast of new information released during the program term.

Establishing a System for the [*] **Evolution Campaign**

Genetic System Development for [*]

Several [*] sources of [*] have been identified and functionally expressed/secreted in prokaryotic and eukaryotic hosts. The starting gene(s) that will be used in this program will be [*].

Genes will be obtained [*], and their expression in appropriate [*] hosts will be assessed. High-throughput growth and expression formats will be developed to enable the handling of, for example, [*] isolates [*]. Suitable screening formats will result in the detection of the appropriate enzymatic activity in high-throughput, utilizing assay methods also developed under the program.

Assay Development [*]

[*]. If a genetic selection or a visual +/- activity screen utilizing is possible, very large numbers of isolates [*] may be screened to enrich for live isolates and exclude inactive isolates. Such selections and assays are possible for this target, and these will be tested for utility in this program. For example, a shuffled library expressed in a host strain (without [*] activity) may be plated on agar containing [*]; only isolates possessing active enzyme would survive. Alternatively, a colorimetric substrate or assay may be available, allowing for rapid visual identification of active isolates. These techniques are particularly useful when libraries [*]. More analytical methods for the isolation/extraction, separation, and detection of relevant compounds (such as [*]) will be developed and implemented. At least one analytical method should be suitable for use in sufficient throughput (e.g. [*]) to enable characterization of shuffled libraries, even in the absence of a prescreen or selection. The screening process will continue through more refined and more information-rich assays in lower throughput until the desired understanding of activity is obtained.

Appropriate characteristics for the desired enzyme activity will be incorporated into the assay, [*].

Ultimately, more complex assays will be used for screening. [*], and/or [*] enzyme system, are important to the confirmation of the desired activity. However, such complex assays and systems require development. Therefore, the initial screening will proceed [*]; the complex assays will be developed in parallel until they are sufficiently developed for use in the screening program. [*].

[*].

The development of such [*] assays enables the assessment of [*] in systems, as well as supporting the future screening needs for the evolution of additional [*] enzymes, [*].

Evolution Campaign [*]

[*]. Once sufficient genetic diversity is in hand, shuffled libraries will be generated to recombine mutations. Family shuffling, a technique that can recombine related genes (e.g. from different organisms) may also be used to exchange large blocks of genetic sequences. As such libraries are created and screened, the relationships between sequences and activities are assessed using a proprietary statistical method (ProSAR). Beneficial mutations and potentially beneficial mutations are carried through into subsequent library designs and rescreened, while deleterious mutations are discarded. Subsequent libraries may also include error-prone methods should additional diversity be desired in the library. This process of analysis, design, library construction and screening may be repeated many times to achieve desired activities.

It is anticipated that at least [*] rounds of shuffling and screening may be completed for this [*] within the 12 month period.

Establishing a Benchmark [*] **System**

The [*] improvement program entails [*], which can then be used to assess shuffled [*] for improved properties. There are several different paths to enable this analysis. A preferred approach would entail cloning of the necessary [*] genes, production of enzymes separately, and formulation of the [*]. This approach would require functional expression of each of the [*] enzymes, and production of sufficient quantities of each enzyme for the activity studies. Using this approach, evolved enzyme variants may be substituted for unevolved enzymes (e.g. from the “baseline” system), and activities may be compared. Since this format allows for the independent control of each enzyme’s loading, a factorial optimization of the [*] mixture is possible, [*].

There are other approaches to enable a benchmark [*] system for the analysis of evolved enzyme variants. Although these are less desirable than that described above, they may be used as alternatives should difficulties arise. For example, it may be possible to obtain pure enzymes for each of the components from [*], and proceed as above. A challenge to using this approach is that commercial [*] preparations tend to contain mixtures of [*], making deconvolution of the activities difficult.

Alternatively, a [*] mixture such as that produced by a [*] producing organism (e.g. [*]) may be used as a baseline cocktail. The evolved enzyme could be spiked into the mixture, and activity compared to that obtained using the unevolved (parent) enzyme. This approach is similar to some commercial processes in which the activity of the system is "topped up" by the addition of separately made enzymes. However, while this approach may be easier and quicker to achieve, the mixture of enzymes is neither controllable nor quantifiable, so the information derived from the experiment will like be of less value than that obtained by the preferred method above.

Another alternative would be to produce the [*] enzymes from [*]. This would provide stoichiometric control at the level, and perhaps assumed control of enzyme concentrations, although it would not enable independent control of each enzyme's concentration. This may also enable [*].

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EXHIBIT 1.32

Year One Final Milestone

[The Year One Final Milestone will consist of achievement of the [*] Performance Criteria and the Model [*] System Criteria set forth below:

[*] Performance Criteria:

A starting [*] enzyme will be evolved for improved activity using [*] substrate. Performance of the evolved [*] must show at least a [*] improvement compared to the performance of the starting [*] as measured by [*] under reaction conditions to include:

- [*] g/L substrate [*]
- [*] g/L [*]
- [*] buffer, [*]
- 24 h, [*] ^{o}C

Model [*] System Criteria:

Put in place a model [*] system [*] will enable the evaluation of [*].

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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.

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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 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$_____.00) to be paid to Company as follows: **[FILL IN SPECIFIC PAYMENT TERMS; WHAT FOLLOWS IS A SAMPLE APPROACH]** (a) _____ Dollars (US$_____.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

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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: _____.

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.

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(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).

(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.

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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: _____

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

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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:	_____

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: _____

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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.

EXHIBIT 10.11

[*] 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.

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.

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 [*]. 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.

[*] 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.

1.21 "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.

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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 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.

[*] 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.

(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 has been agreed upon 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 prior to initiating development of a Licensed Product within the Lubricant Field of Use. 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.

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.

[*] 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.

3.5 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.

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 August 23, 2006, 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.

[*] 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.

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 to [*] 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.

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

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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.

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.

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.

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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.

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: 650-980-5600
Fax: 650-298-5449

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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.

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

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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]

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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

Intentionally left blank as of the Execution Date.

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EXHIBIT 10.12

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

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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. 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 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

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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.

(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.

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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

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EXHIBIT 10.13

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 shall pass to Codexis or its designee upon delivery by Arch to Codexis or its designee, as applicable. 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.

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 fifth (5^{th}) anniversary of the Effective Date (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 the fifth (5^{th}) anniversary of the Effective Date 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 gross amounts invoiced by Codexis or its Affiliates for sales of Product to Third Parties during the Initial Period less the following unreimbursed, noncredited, or nonrefunded deductions with respect thereto, determined in accordance with GAAP and calculated in Indian Rupees and to the extent such amounts have not already been deducted from the amount invoiced: (a) amounts actually allowed as volume or quantity discounts; (b) sales, excise, turnover, value added taxes (VAT), and other taxes related to sale of Product; (c) credits or allowances actually granted for damaged Product, returns or rejections of Product, price adjustments, and billing errors; (d) commissions allowed or paid to Third Parties, including without limitation distributors, brokers, or agents, other than sales personnel, sales representatives, and sales agents employed by Codexis; (e) the actual amount of any write-offs for bad debt directly relating to sales of Product; and (f) all other expenses, including without limitation storage, transportation, and insurance charges. 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, the Profit for such sale shall be deemed to be zero.

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 the fifth (5th) anniversary of the Effective Date 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)
Less than or equal to [*]	[*]
Greater than [*] and less than or equal to [*]	[*]
Greater than [*] and less than or equal to [*]	[*]
Greater than [*]	[*]

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.

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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.

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 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.

[*] 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.

6.5 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.

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.

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.

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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.

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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 six (6) months' 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.

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

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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 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.

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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.

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.

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If to Arch: Arch Pharmalabs Limited
H wing, 4th Floor
Tex Centre
Off Saki Vihar Road
Chandivali, Mumbai- 400072
India
Attn: [*]
Facsimile: [*]

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.

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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.

(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

"**Direct Manufacturing Costs**" shall mean, with respect to Product (in bulk, vialed or finished form, as the case may be) for successful and failed lots, the sum of the following:

A. The amounts paid by Arch to Codexis or a Third Party for (i) providing the chemical and biological substances required for the manufacture of the Product (for purposes of this Exhibit A, collectively, the "**Raw Materials**") and packaging materials for producing such Product, (ii) manufacturing, filling, and/or finishing such Product or any component thereof, (iii) distributing, transporting, storing, and insuring such Product, and (iv) testing such Product, including with respect to the foregoing, all sales and excise taxes and customs duty charges imposed by governmental authorities with respect thereto to the extent actually paid by Arch and not reimbursed, credited, or refunded by a Third Party. For clarity, all duties and taxes that are available as a credit to Arch against its output tax liability, such as excise duty or VAT, shall be excluded from the determination of the amount of Direct Manufacturing Costs;

B. Direct expenses, which include those material, labor, and service expenses captured in time sheets and invoices, that are specific for such Product. Direct material expenses shall mean cost of Raw Materials, filters, manufacturing supplies, solvent, containers, container components, packaging, labels, and other printed materials used in production. Direct labor expenses shall mean [*] for personnel directly involved in manufacturing Product. Direct services expenses shall mean actual out-of-pocket payments to Third Parties for services required in the manufacture of Product; and

C. Utilities costs (including electricity, water, sewer, waste disposal and water treatment) that are directly attributable to the manufacture of Product.

Allocated costs, such as management time, factory administrative expenses (such as security, finance functions, house keeping, etc.) shall be excluded from Direct Manufacturing Costs.

In addition, in the event that Codexis purchases an aggregate of more than [*] of Product in a consecutive twelve (12) month period, the Direct Manufacturing Cost thereafter shall include the depreciation costs over a five (5) year period for equipment purchased by Arch to the extent such equipment is necessary to enable Arch to fulfill orders for Product in excess of [*] per year.

All such amounts, costs, and expenses shall be calculated in accordance with GAAP, consistently applied, for example, across other Arch products; provided that in no event shall any expense be double-counted or included in Direct Manufacturing Costs if such expense has already been accounted for elsewhere.

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Exhibit B

Initial Period Manufacturing Costs

"**Initial Period Manufacturing Costs**" shall mean, with respect to Product (in bulk, vialed or finished form, as the case may be) for successful and failed lots, the sum of the following:

A. The amounts paid by Arch to Codexis or a Third Party for (i) providing the chemical and biological substances required for the manufacture of the Product (for purposes of this Exhibit B, collectively, the "**Raw Materials**") and packaging materials for producing such Product, (ii) manufacturing, filling, and/or finishing such Product or any component thereof, (iii) distributing, transporting, storing, and insuring such Product, and (iv) testing such Product, including with respect to the foregoing, all sales and excise taxes and customs duty charges imposed by Governmental Authorities with respect thereto to the extent actually paid by Arch and not reimbursed, credited, or refunded by a Third Party. For clarity, all duties and taxes that are available as a credit to Arch against its output tax liability, such as excise duty or VAT, shall be excluded from the determination of Initial Period Manufacturing Costs;

B. Direct expenses, which include those material, labor, and service expenses captured in time sheets and invoices, that are specific for such Product. Direct material expenses shall mean cost of Raw Materials, filters, manufacturing supplies, solvent, containers, container components, packaging, labels, and other printed materials used in production. Direct labor expenses shall mean [*] for personnel directly involved in manufacturing Product. Direct services expenses shall mean actual out-of-pocket payments to Third Parties for services required in the manufacture of Product;

C. Indirect expenses, which include [*]. Indirect expenses can include [*], but excluding [*] used to manufacture Product; and

D. Overhead costs are direct and indirect manufacturing costs with respect to Product [*]. Such overhead costs include:

i. [*]; and

ii. [*].

Notwithstanding anything to the contrary, combined indirect costs set forth in Paragraph C and overhead costs set forth in Paragraph D shall not amount to greater than [*] of total Initial Period Manufacturing Costs.

Allocated costs, such as management time, factory administrative expenses (such as security, finance functions, house keeping, etc) shall be excluded from Initial Period Manufacturing Costs.

All such amounts, costs, and expenses shall be calculated in accordance with GAAP, consistently applied, for example, across other Arch products; provided that in no event shall any expense be double-counted or included in Initial Period Manufacturing Costs if such expense has already been accounted for elsewhere.

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EXHIBIT 10.14

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.

[*] 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.

1.2 "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.

1.14 "Third Party" shall mean any party other than a Party or an Affiliate of any Party.

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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 Affilates 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.

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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.

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.

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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.

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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.

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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 six (6) months' 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, 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.

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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.

(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.

[*] 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) 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

[*] 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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EXHIBIT 10.15

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: (a) [*] within one hundred and eighty (180) days after the Effective Date; (b) [*] within one hundred and eighty (180) days after the first anniversary of the Effective Date; (c) [*] within thirty (30) days after the second anniversary of the Effective Date; (d) [*] within one hundred and eighty (180) days after the second anniversary Effective Date; (e) [*] within thirty (30) days after the third anniversary of the Effective Date; and (f) [*] within one hundred eighty (180) days after the third anniversary of the Effective Date. 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.

[*] 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. 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.

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

[*] 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.

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 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 four (4) years after the Effective Date unless terminated earlier pursuant to this Section 9.

9.2 Upon sixty (60) days' 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 sixty (60) 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, 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) 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.

[*] 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.

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.

[*] 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. 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 21

Subsidiaries of Codexis, Inc.
As of July 31, 2008

Name of Subsidiary	State or Jurisdiction in Which Incorporated or Organized
Julich Chiral Solutions GmbH	Germany
Codexis Laboratories Singapore Pte. Ltd.	Singapore
Wasabi Acquisition LLC	Delaware
BioCatalytics Europe GmbH(1)	Austria
Codexis Laboratories Mauritius Private Limited	Mauritius
Codexis Laboratories India Private Limited(2)	India
Codexis Laboratories Hungary Kft.	Hungary

(1) 100% owned by Wasabi Acquisition LLC
(2) 99.99% owned by Codexis Mauritius, 0.01% owned by Codexis, Inc.

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 Amendment No. 1 to the Registration Statement (Form S-1 No. 333-150224) and related Prospectus of Codexis, Inc. for the registration of shares of its common stock.

/s/ Ernst & Young LLP

Palo Alto, California
July 31, 2008