Table of Contents

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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2012

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-34705

Codexis, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**71-0872999**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
200 Penobscot Drive, Redwood City	**94063**
(Address of principal executive offices)	**(Zip Code)**

650 421 8100
(Registrant's telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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. (Check one):

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of October 31, 2012, there were 37,552,137 shares of the registrant's Common Stock, par value $0.0001 per share, outstanding.

Codexis, Inc.

Quarterly Report on Form 10-Q
For The Three Months Ended September 30, 2012

INDEX

Codexis, Inc.

Condensed Consolidated Balance Sheets
(Unaudited)
(In Thousands)

	September 30, 2012	December 31, 2011
Assets		
Current assets:		
Cash and cash equivalents	$ 25,573	$ 25,762
Marketable securities	24,780	27,720
Accounts receivable, net of allowances of $17 at September 30, 2012 and December 31, 2011, respectively	16,527	18,917
Inventories	2,760	4,488
Prepaid expenses and other current assets	5,169	2,345
Total current assets	74,809	79,232
Restricted cash	1,511	1,511
Non-current marketable securities	3,578	10,348
Property and equipment, net	19,892	24,176
Intangible assets, net	13,777	16,442
Goodwill	3,241	3,241
Other non-current assets	2,228	972
Total assets	$ 119,036	$ 135,922
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 6,287	$ 10,364
Accrued compensation	4,708	6,785
Other accrued liabilities	7,419	7,354
Deferred revenues	2,286	3,789
Total current liabilities	20,700	28,292
Deferred revenues, net of current portion	1,346	1,485
Other long-term liabilities	3,994	3,455
Commitments and contingencies	—	—
Stockholders' equity:		
Common stock	4	4
Additional paid-in capital	293,163	287,792
Accumulated other comprehensive loss	(154)	(407)
Accumulated deficit	(200,017)	(184,699)
Total stockholders' equity	92,996	102,690
Total liabilities and stockholders' equity	$ 119,036	$ 135,922

See accompanying notes to the condensed consolidated financial statements (unaudited)

Codexis, Inc.

Condensed Consolidated Statements of Operations
(Unaudited)
(In Thousands, Except Per Share Amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2012	2011	2012	2011
Revenues:				
Product	$ 7,140	$ 12,199	$ 29,090	$ 33,528
Collaborative research and development	18,569	19,201	49,049	54,073
Government awards	632	1,882	2,247	2,771
Total revenues	26,341	33,282	80,386	90,372
Costs and operating expenses:				
Cost of product revenues	6,397	9,958	24,868	28,713
Research and development	14,191	16,786	46,190	45,502
Sales, general and administrative	7,909	8,871	24,093	27,160
Total costs and operating expenses	28,497	35,615	95,151	101,375
Loss from operations	(2,156)	(2,333)	(14,765)	(11,003)
Interest income	61	76	210	195
Other expenses	(45)	(411)	(320)	(378)
Loss before provision for income taxes	(2,140)	(2,668)	(14,875)	(11,186)
Provision for income taxes	169	74	443	68
Net loss	$ (2,309)	$ (2,742)	$ (15,318)	$ (11,254)
Net loss per share of common stock, basic and diluted	$ (0.06)	$ (0.08)	$ (0.42)	$ (0.32)
Weighted average common shares used in computing net loss per share of common stock, basic and diluted	37,116	35,919	36,494	35,576

See accompanying notes to the condensed consolidated financial statements (unaudited)

Codexis, Inc.

Condensed Consolidated Statements of Comprehensive Loss
(Unaudited)
(In Thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2012	2011	2012	2011
Net loss	$ (2,309)	$ (2,742)	$ (15,318)	$ (11,254)
Other comprehensive income (loss):				
Foreign currency translation adjustments	—	(31)	165	13
Reclassification of losses included in net loss	753	—	753	—
Unrealized gain (loss) on marketable securities, net of tax	(29)	(161)	(665)	244
Other comprehensive income (loss)	724	(192)	253	257
Total comprehensive loss	$ (1,585)	$ (2,934)	$ (15,065)	$ (10,997)

See accompanying notes to the condensed consolidated financial statements (unaudited)

Codexis, Inc.

Condensed Consolidated Statements of Cash Flows
(Unaudited)
(In Thousands)

	Nine Months Ended September 30,	
	2012	2011
Operating activities:		
Net loss	$ (15,318)	$ (11,254)
Adjustments to reconcile net loss to net cash used in operating activities:		
Amortization of intangible assets	2,665	2,787
Depreciation and amortization of property and equipment	6,822	5,678
Loss on disposal of property and equipment	93	31
Gain from extinguishment of asset retirement obligation	—	(124)
Stock-based compensation	4,543	7,393
Accretion of asset retirement obligation	22	27
Impairment of marketable securities	753	—
Amortization of premium on marketable securities	508	501
Changes in operating assets and liabilities:		
Accounts receivable	2,390	(3,991)
Inventories	1,727	(2,423)
Prepaid expenses and other current assets	(2,824)	(844)
Other assets	(1,321)	20
Accounts payable	(4,077)	(1,699)
Accrued compensation	(2,077)	(1,942)
Other accrued liabilities	581	7,355
Deferred revenues	(1,642)	891
Net cash (used in) provided by operating activities	(7,155)	2,406
Investing activities:		
Increase in restricted cash	—	(46)
Purchase of property and equipment	(2,632)	(7,813)
Purchase of marketable securities	(20,638)	(50,900)
Proceeds from sale of marketable securities	8,376	5,008
Proceeds from maturities of marketable securities	20,800	6,500
Net cash provided by (used in) investing activities	5,906	(47,251)
Financing activities:		
Proceeds from exercises of stock options	894	2,476
Net cash provided by financing activities	894	2,476
Effect of exchange rate changes on cash and cash equivalents	166	105
Net decrease in cash and cash equivalents	(189)	(42,264)
Cash and cash equivalents at the beginning of the period	25,762	72,396
Cash and cash equivalents at the end of the period	$ 25,573	$ 30,132

See accompanying notes to the condensed consolidated financial statements (unaudited)

Codexis, Inc.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Description of Business

Codexis, Inc. (together with its subsidiaries, "us," "we," "Codexis" or the "Company") is a producer of custom industrial enzymes. Our products enable novel, sustainable processes for the manufacture of biofuels, chemicals and pharmaceutical ingredients.

We are developing our flagship CodeXyme™ cellulase enzymes to convert non-food plant material, which we call cellulosic biomass, into affordable sugars, which can then be converted into renewable fuels and chemicals. We intend to market CodeXyme™ cellulase enzymes to renewable fuels and chemicals manufacturers worldwide. We are also developing our own novel processes to manufacture certain specialty and commodity bio-based chemicals, which we intend to commercialize with strategic partners. The first of these products is CodeXol™ detergent alcohols. Detergent alcohols are used to manufacture surfactants, which are key, active cleaning ingredients in consumer products such as shampoos, liquid soaps and laundry detergents.

We have commercialized our technology, products and services in the pharmaceuticals market. There are currently over 50 pharmaceutical firms using or evaluating our technology in their manufacturing process development, including the production of some of the world's best selling and fastest growing drugs.

We create our products by applying our CodeEvolver™ directed evolution technology platform, which introduces genetic mutations into microorganisms, giving rise to changes in the enzymes which they produce. Once we identify potentially beneficial mutations, we test combinations of these mutations until we have created variant enzymes that exhibit marketable performance characteristics superior to competitive products. This process allows us to make continuous, efficient improvements to the performance of our enzymes.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The accompanying condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and the applicable rules and regulations of the Securities and Exchange Commission ("SEC") for interim financial information. Accordingly, they do not include all of the information and notes required by GAAP for complete financial statements. These interim condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto contained in our Annual Report on Form 10-K filed with the SEC on March 5, 2012. The December 31, 2011 condensed consolidated balance sheet included herein was derived from the audited financial statements as of that date, but does not include all disclosures including notes required by GAAP for complete financial statements.

The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, reflect all adjustments of a normal recurring nature considered necessary to present fairly our financial position as of September 30, 2012 and results of our operations and comprehensive loss for the three and nine months ended September 30, 2012 and 2011, and cash flows for the nine months ended September 30, 2012 and 2011. The interim results are not necessarily indicative of the results that may be expected for the year ending December 31, 2012.

The unaudited interim condensed consolidated financial statements include the accounts of Codexis, Inc. and its wholly-owned subsidiaries. Codexis, Inc. has subsidiaries in the United States, Brazil, Hungary, India, Mauritius, The Netherlands and Singapore. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP 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 condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates and such differences may be material to the condensed 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 the condensed consolidated statement of comprehensive loss. Revenue and expense amounts are translated at average rates for each period. Where the U.S. dollar is the functional currency, nonmonetary assets and liabilities originally acquired or assumed in other currencies are recorded in U.S. dollars at the exchange rates in effect at the date they were acquired or assumed. Monetary assets and liabilities denominated in other currencies are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Foreign currency transaction gains and losses are not material for any period presented.

Fair Value of Financial Instruments

The carrying amounts of certain of our financial instruments, including cash and cash equivalents, restricted cash, accounts receivable and accounts payable, approximate fair value due to their short maturities.

Fair value is considered to be 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 or derived from observable market prices or other observable inputs. 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 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. The majority of cash and cash equivalents are maintained with major financial institutions in North America. Deposits with these financial institutions may exceed the amount of insurance provided on such deposits. Marketable securities included in current assets are comprised of corporate bonds, commercial paper, government-sponsored enterprise securities and U.S. Treasury obligations. Marketable securities included in non-current assets are comprised of corporate bonds and U.S. Treasury obligations that have a maturity date greater than 1 year. Our investment in common shares of CO_2 Solutions Inc. ("CO_2 Solutions") is included in non-current marketable securities.

We perform separate evaluations of impaired debt and equity securities to determine if the unrealized losses as of the balance sheet date are other-than-temporary impairment ("OTTI").

For our investments in equity securities, our evaluation considers a number of factors including, but not limited to, the length of time and extent to which the fair value has been less than cost, the financial condition and near term prospects of the issuer, and our management's ability and intent to hold the securities until fair value recovers. The assessment of the ability and intent to hold these securities to recovery focuses on our current and forecasted liquidity requirements, our capital requirements and securities portfolio objectives. Based on our evaluation, we concluded that as of September 30, 2012, the unrealized losses related to our equity investment in the common shares of CO_2 Solutions are other-than-temporary and as a result, we recorded $0.8 million as a sales, general and administrative expense in our condensed consolidated statement of operations (see Note 6).

For our investments in debt securities, our management determines whether we intend to sell or if it is more-likely-than-not that we will be required to sell impaired securities. This determination considers our current and forecasted liquidity requirements, our capital requirements and securities portfolio objectives. For all impaired debt securities for which there was no intent or expected requirement to sell, the evaluation considers all available evidence to assess whether it is likely the amortized cost value will be recovered. We conduct a regular assessment of our debt securities with unrealized losses to determine whether the securities have other-than-temporary impairment considering, among other factors, the nature of the securities, credit rating or financial condition of the issuer, the extent and duration of the unrealized loss, expected cash flows of underlying collateral and market conditions. Based on our evaluation, we concluded that as of September 30, 2012, the unrealized losses related to debt securities are temporary.

Our investments in debt and equity securities are classified as available-for-sale and are carried at fair value. Unrealized gains and losses are reported on the condensed consolidated statement of comprehensive loss. Amortization of purchase premiums and accretion of purchase discounts, realized gains and losses of debt securities and declines in value deemed to be other than temporary, if any, are included in interest income or other expenses. The cost of securities sold is based on the specific-identification method. There were no significant realized gains or losses from sales of marketable securities during the three and nine months ended September 30, 2012 and 2011.

Restricted Cash

Restricted cash consisted of amounts invested in money market accounts primarily for purposes of securing a standby letter of credit as collateral for our Redwood City, California facility lease agreement and for the purpose of securing a working capital line of credit. Restricted cash was unchanged during the three and nine months ended September 30, 2012.

Revenue Recognition

Revenues are 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) collectability is reasonably assured.

Our primary sources of revenues consist of collaborative research and development agreements, product revenues and government awards. 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 revenues consist of revenues from Equilon Enterprises LLC dba Shell Oil Products US ("Shell") and revenues from other collaborative research and development agreements. For each source of collaborative research and development revenues, product revenues and award revenues, we apply the following revenue recognition criteria:

- Up-front fees received in connection with collaborative research and development agreements, including license fees, technology access fees, and exclusivity fees, are deferred upon receipt, are not considered a separate unit of accounting and are recognized as revenues over the relevant performance periods.
- Revenues related to FTE services recognized as research services are performed over the related performance periods for each contract. We are required to perform research and development activities as specified in each respective agreement. The payments received 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.
- A payment that is contingent upon the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is an event (i) that can only be achieved based in whole or in part on either our performance or on the occurrence of a specific outcome resulting from our performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, and (iii) results in additional payments being due to us. Milestones are considered substantive when the consideration earned from the achievement of the milestone (i) is commensurate with either our performance to achieve the milestone or the enhancement of value of the item delivered as a result of a specific outcome resulting from our performance, (ii) relates solely to past performance, and (iii) is reasonable relative to all deliverable and payment terms in the arrangement.
- Other payments received for which such payments are contingent solely upon the passage of time or the result of a collaborative partner's performance are recognized as revenue when earned in accordance with the contract terms and when such payments can be reasonably estimated and collectability is reasonably assured.
- We recognize revenues from royalties based on licensees' sales of products using our technologies. Royalties are recognized as earned in accordance with the contract terms when royalties from licensees can be reasonably estimated and collectability is reasonably assured.
- 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 also been met. Product revenues consist of sales of biocatalysts, intermediates, active pharmaceutical ingredients and Codex Biocatalyst Panels and Kits. 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 licensed mutually agreed upon third party technology for use in our research and development collaboration with Shell. We recorded the license payments to research and development expense and offset related

reimbursements received from Shell. These payments made by Shell to us were direct reimbursements of our costs. We accounted for these direct reimbursable costs as a net amount, whereby no expense or revenue is recorded for the costs reimbursed by Shell. For any payments not reimbursed by Shell, we recognized these as expenses in the statement of operations. We elected to present the reimbursement from Shell as a component of our research and development expense since presenting the receipt of payment from Shell as revenues does not reflect the substance of the arrangement.

- We receive payments from government entities in the form of government awards. Government awards 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 awards are recognized in the period during which the related costs are incurred, provided that the conditions under which the government awards were provided have been met and we have only perfunctory obligations outstanding.
- Shipping and handling costs charged to customers are recorded as revenues. Shipping costs are included in our cost of product revenues. Such charges were not significant in any of the periods presented.

Milestone revenue

During the three months ended June 30, 2012, we recognized, in collaborative research and development revenue, $1.0 million of milestone revenue from one of our pharmaceutical partners related to the use of our enzymes in its manufacturing processes. We received no milestone revenue during the three months ended September 30, 2012.

Change in accounting estimate - U.S. Government awards

We recognize U.S. Government award revenue based on reimbursable costs incurred. Reimbursable costs include only allocable, allowable and reasonable costs, as determined in accordance with the Federal Acquisition Regulations and the related Cost Accounting Standards as applicable to the U.S. Government award. Costs incurred include direct labor and materials that are directly associated with the individual award plus indirect overhead and general and administrative type costs based upon our provisional indirect billing rates submitted by us to the U.S. Department of Energy (“DOE”). Our provisional indirect billing rates are subject to audit by the DOE. Changes in estimates affecting reimbursable costs are recognized in the period in which the change becomes known.

During 2011, our provisional indirect billing rates for the award from the DOE under the ARPA-E Recovery Act were audited by the DOE resulting in a revision to our provisional indirect billing rates. The revised indirect rates were subsequently approved by the DOE during the first quarter of 2012. The term of the award agreement ended in June 2012 and no further revenue has been recognized since that date.

Income Taxes

We use the liability method of 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 (“NOL”) carry forwards, 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.

We recognize the financial statement effects of an uncertain tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination.

Stock-Based Compensation

We recognize compensation expense related to share-based transactions, including the awarding of employee stock options, based on the estimated fair value of the awards granted. All awards granted, modified or settled after January 1, 2006 have been accounted for based on the fair value of the awards granted. We generally use the straight-line method to allocate stock-based compensation expense to the appropriate reporting periods. Some awards are accounted for using the accelerated method as appropriate for the terms of the awards.

We account for stock options issued to non-employees based on 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 change in value, if any, is recognized as an increase or decrease in stock based compensation expense during the period the related services are rendered.

Net Loss per Share of Common Stock

Basic and diluted net loss per share of common stock is computed by dividing the net loss by the weighted average number of shares of common stock outstanding during the period. Basic and diluted net loss per share of common stock was the same for each period presented, because inclusion of all potential common shares outstanding was anti-dilutive .. The following table presents the securities not included in the net loss per common share calculations for the three and nine months ended September 30, 2012 and 2011 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2012	2011	2012	2011
Options to purchase common stock	7,228	8,079	7,228	8,079
Unvested restricted stock units	839	561	839	561
Warrants to purchase common stock	260	266	260	266
Total	8,327	8,906	8,327	8,906

Reclassifications

Certain amounts in prior period financial statements related to Shell including related party collaboration revenue (see Note 3), related party receivable, and related party deferred revenue have been reclassified to the corresponding non-related party accounts, since effective July 1, 2011, Shell is no longer considered a related party (see Note 7).

Recent Accounting Pronouncements

In June 2011, the FASB issued ASU 2011-05 that eliminates the option to present items of other comprehensive income ("OCI") as part of the statement of changes in stockholders' equity, and instead requires either, OCI presentation and net loss in a single continuous statement in the statement of operations, or as a separate statement of comprehensive loss. This new guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2011, with early adoption permitted. We adopted this update in the fourth quarter of 2011 and have presented a separate condensed consolidated statement of comprehensive loss. The adoption of this accounting guidance did not have a material financial impact on our financial statements.

In May 2011, the FASB issued ASU 2011-04 that clarifies and changes some fair value measurement principles and disclosure requirements. Among them is the clarification that the concepts of highest and best use and valuation premise in a fair value measurement, should only be applied when measuring the fair value of nonfinancial assets. Additionally, the new guidance requires quantitative information about unobservable inputs, and disclosure of the valuation processes used and narrative descriptions with regard to fair value measurements within the Level 3 categorization of the fair value hierarchy. We adopted this accounting standard January 1, 2012. The adoption of this new guidance did not have a material impact on our financial statements or disclosures.

3. Collaborative Research and Development Agreements

Shell and Raizen

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 ("Shell Research Agreement") and a license agreement (the "Shell License Agreement") with Shell. In connection with the Shell Research Agreement, we agreed to use our proprietary technology platform to discover and develop enzymes and microorganisms for use in converting cellulosic biomass into biofuels and related products and Shell agreed to pay us (i) research funding at specified rates per FTE working on the project during the research term, (ii) milestone payments upon the achievement of milestones, and (iii) royalties on future product sales. The Shell Research Agreement also specified certain minimum levels of FTE services that we were required to allocate to the collaboration efforts that increased over the term of the agreement, which was originally set to expire on November 1, 2012.

In September 2012, we entered into an agreement with Shell (the "New Shell Agreement") which among other things, terminates the Shell Research Agreement effective as of August 31, 2012, except for certain provisions of the Shell Research Agreement which will survive such termination, including provisions regarding intellectual property rights, patent prosecution and maintenance, confidentiality and indemnification. The New Shell Agreement required Shell to pay us approximately $7.5 million as full, complete and final satisfaction of amounts that Shell may owe us under the Shell Research Agreement with respect to (i) FTEs assigned to the Shell Research Agreement and (ii) milestones achieved or achievable by us under the Shell Research Agreement. The $7.5 million is outstanding as of September 30, 2012 and recorded in accounts receivable on our condensed consolidated balance sheets.

Beginning September 1, 2012, we have no further obligations to Shell under the Shell Research Agreement to provide any FTEs to perform work under or after the collaboration and Shell has no future obligations to us under the Shell Research Agreement to provide funding for FTEs to perform work under or after the collaboration. We remain eligible to receive a one-time $3.0 million payment from Shell under the Shell Research Agreement upon the first sale by Shell of a product in the field of converting cellulosic biomass into fermentable sugars in Brazil, or in the fields of converting fermentable sugars derived from biomass into liquid fuel or liquid fuel additives or into lubricants.

Under the New Shell Agreement, Shell granted us royalty-bearing, non-exclusive rights and licenses to develop, manufacture, use and sell biocatalysts and microbes in the field of converting cellulosic biomass into fermentable sugars on a worldwide basis, except for Brazil, where such sugars are converted into liquid fuels, fuel additives or lubricants (the "Field of Use"). Raízen Energia Participações S.A. ("Raízen") holds the exclusive rights to use our biocatalysts and microbes for converting cellulosic biomass into fermentable sugars in Brazil, where such sugars are converted into liquid fuels, fuel additives or lubricants. Following the date on which our biocatalysts are used to produce sugars used in the Field of Use sufficient to produce 30.0 million gallons of liquid fuel, we will be required to pay Shell a royalty on our sales to third parties of our biocatalysts and microbes in the Field of Use, equal to a low single-digit percentage of net sales and we will also be required to pay Shell a royalty on our use of biocatalysts in the Field of Use, equal to a low single-digit percentage of our historical net sales of such biocatalysts or microbes. Shell is also entitled to discounted pricing under the New Shell Agreement for biocatalysts purchased from us by Shell for use in the Field of Use, but we are under no obligation to sell such biocatalysts to Shell.

Under the New Shell Agreement, we also granted to Shell a non-exclusive, royalty-free license to manufacture, use and import, solely for the use of Shell and its affiliates, (i) enzymes developed by us during the ten year period following August 31, 2012 outside of the Shell Research Agreement for use in the Field of Use and (ii) improvements to any microbe developed by us during the ten year period following August 31, 2012, outside of the Shell Research Agreement that is derivative of an identified microbe for use in the Field of Use. Shell remains subject to existing royalty obligations to us for future sales of products covered by the intellectual property and technology that remain exclusively licensed to Shell under the License Agreement.

Additionally, with respect to each invention relating to technology or materials regarding novel liquid fuel compounds, liquid fuel additives or lubricants, Shell will continue to be required to work exclusively with us, for a period of three years after the first non-provisional patent application filing for such invention, to identify biological methods of synthesis of the compound(s) that are claimed, or whose use as a liquid fuel compound, additive or lubricant, is claimed, in such patent filing.

Prior to the New Shell Agreement, Shell had an obligation under the Shell Research Agreement to fund us at specified rates for each FTE, which as of August 2012, were equal to $460,000 on an annual basis for each FTE in the United States and $399,000 on an annual basis for each FTE in Hungary. As of August 31, 2012, the number of FTEs assigned to our collaboration with Shell was 116.

In accordance with our revenue recognition policy, the $20 million up-front exclusivity fee and the research funding fees received for FTE services have been 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 payments earned under this agreement were determined to be at risk at the inception of the arrangement and substantive and were recognized upon achievement of the applicable milestone and when collectability of such payment was reasonably assured. There are no further milestone payments under the Shell Research Agreement, other than a $3.0 million milestone payment described above for which we may become eligible. We did not record any milestone revenues during the three and nine months ended September 30, 2012. We recorded $3.1 million of milestone revenues during the three and nine months ended September 30, 2011. For the three months ended September 30, 2012 and 2011, our collaborative research and development revenue from Shell was $17.5 million and $17.3 million, respectively. For the nine months ended September 30, 2012 and 2011, our collaborative research and development revenue from Shell was $45.3 million and $47.0 million, respectively.

The New Shell Agreement has a term that commences August 31, 2012 and continues until the later of August 31, 2032 or the date of the last to expire patent rights included in our collaboration that claim a biocatalyst or a microbe for use in the Field of Use.

Under the Shell Research Agreement and Shell License Agreement, we had the right, if mutually agreed upon with Shell, to license technology from third parties that would assist us in meeting objectives under the collaboration and Shell was obligated to reimburse us for the licensing costs of the technology. Payments made by us to the third-party providers were recorded as research and development expenses related to our collaborative research agreement with Shell. None of the acquired licenses are expected to be used in products that will be sold within the next year and the phase of the project has not reached technological feasibility. Shell reimbursed us for licensing costs of $94,000 and $51,000 for the three months ended September 30, 2012 and 2011, respectively. Shell reimbursed us for licensing costs of $365,000 and $116,000 for the nine months ended September 30, 2012 and 2011, respectively. We recorded these reimbursements against the costs incurred.

In June 2011, Shell completed the transfer of all of its equity interests in us, together with the associated right to appoint one member to our board of directors, to Raízen, Shell's joint venture with Cosan S.A. Indústria e Comércio, ("Cosan") in Brazil. As a result, Shell is no longer considered a related party. Notwithstanding the above, Shell did not transfer the Shell Research Agreement. Additionally in September 2011, we entered into a joint development agreement directly with Raízen. Work under this joint development agreement has been completed and we do not expect this project to continue.

Manufacturing Collaboration

Arch

In February 2010, we consolidated certain of the contractual terms in our then-existing agreements with Arch Pharmalabs, Ltd. ("Arch") by simultaneously terminating all of our existing agreements with Arch, other than the Master Services Agreement with Arch entered into as of August 1, 2006, and entering into new agreements with Arch. The new agreements, among other things, provide for biocatalyst supply from us to Arch and intermediate supply from Arch to us. We sell the biocatalysts to Arch at an agreed upon price, and Arch manufactures the intermediates on our behalf. Arch sells the intermediates to us at a formula-based or agreed upon price. We then directly market and sell the intermediates to a specified group of customers in the generic pharmaceutical industry. Under the new agreements, Arch may also sell intermediates directly to other customers, and a license royalty is owed by Arch to us based on the volume of product they sell to us and their other customers. Royalties earned from Arch under this arrangement were $48,000 and $42,000 for the three months ended September 30, 2012 and 2011, respectively, and are reflected in collaborative research and development revenue on our condensed consolidated statement of operations. Royalties earned from Arch under this arrangement were $118,000 and $84,000 for the nine months ended September 30, 2012 and 2011, respectively (See Note 13).

4. Joint Development Agreement with CO_2 Solutions

On December 15, 2009, we entered into an exclusive joint development agreement with CO_2 Solutions, a company based in Quebec City, Quebec, Canada, whose shares are publicly traded in Canada on the TSX Venture Exchange. The joint development agreement expired in January 2011. Under the agreement, we obtained a research license to CO_2 Solutions's intellectual property and agreed to conduct research and development activities jointly with CO_2 Solutions with the goal of advancing the development of carbon capture technology. We also purchased 10,000,000 common shares (approximately 16.6% of the total common shares outstanding at the time of investment) of CO_2 Solutions in a private placement subject to a four-month statutory resale restriction. This restriction expired on April 15, 2010. In July 2012, Alan Shaw, our former Chief Executive Officer and currently an advisor to our board of directors, resigned from the board of directors of CO_2 Solutions and we are currently considering potential replacements to this designated board seat.

In January 2011, we extended our joint development agreement with CO_2 Solutions on essentially the same terms as the original agreement. The extended agreement expires nine months after the expiry of any third party collaborations. We expect this agreement to expire during the first half of 2013.

We concluded that through September 30, 2012, we did not have the ability to exercise significant influence over CO_2 Solutions's operating and financial policies. We consider our investment in CO_2 Solutions's common shares as an investment in a marketable security that is available for sale, and carry it at fair value in non-current marketable securities. As discussed in Note 6, we recorded an impairment of $0.8 million in our condensed consolidated statement of operations as sales, general and administrative expense during the three months ended September 30, 2012. Subsequent changes in fair value will be recognized in the condensed consolidated statement of comprehensive loss. The fair value of our CO_2 Solution's common shares as of September 30, 2012 was determined by trading on the TSX Venture Exchange. Accordingly, we have classified our investment in CO_2 Solutions as a Level 1 investment as discussed in Note 6.

5. Balance Sheets Details

Cash Equivalents and Marketable Securities

At September 30, 2012, cash equivalents and marketable securities consisted of the following (in thousands):

	September 30, 2012				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Average Contractual Maturities (in days)
Money market funds	$ 19,700	$ —	$ —	$ 19,700	n/a
Commercial paper	1,497	—	—	1,497	162
Corporate bonds	18,748	25	—	18,773	161
U.S. Treasury obligations	5,516	5	—	5,521	354
Government-sponsored enterprise securities	2,001	3	—	2,004	88
Common shares of CO_2 Solutions	563	—	—	563	n/a
Total	$ 48,025	$ 33	$ —	$ 48,058	

The total cash and cash equivalents balance of $25.6 million as of September 30, 2012 was comprised of money market funds of $19.7 million, and $5.9 million held as cash, primarily with major financial institutions in North America. At September 30, 2012, we had one marketable security, a corporate bond, in a loss position for less than 12 months with an aggregated unrealized loss of $100 and an aggregated fair value of $1.0 million.

At December 31, 2011, cash equivalents and marketable securities consisted of the following (in thousands):

	December 31, 2011				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Average Contractual Maturities (in days)
Money market funds	$ 18,866	$ —	$ —	$ 18,866	n/a
Commercial paper	1,999	—	—	1,999	55
Corporate bonds	30,908	29	(45)	30,892	270
U.S. Treasury obligations	998	4	—	1,002	274
Government-sponsored enterprise securities	3,003	12	—	3,015	373
Common shares of CO_2 Solutions	1,316	—	(155)	1,161	n/a
Total	$ 57,090	$ 45	$ (200)	$ 56,935	

The total cash and cash equivalents balance of $25.8 million as of December 31, 2011, was comprised of money market funds of $18.9 million and $6.9 million held as cash, primarily with major financial institutions in North America. At December 31, 2011, we had 14 marketable securities, including corporate bonds and government-sponsored enterprise securities, in a loss position for less than 12 months with an aggregated unrealized loss of $46,000 and an aggregated fair value of $18.5 million.

Inventories

Inventories consisted of the following (in thousands):

	September 30, 2012	December 31, 2011
Raw materials	$ 1,887	$ 2,779
Work in process	—	54
Finished goods	873	1,655
Total inventories	$ 2,760	$ 4,488

6. Fair Value

Assets and liabilities recorded at fair value in the condensed consolidated financial statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels which are directly related to the amount of subjectivity associated with the inputs to the valuation of these assets or liabilities are as follows:

Level 1 — Inputs that 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) that 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.

For Level 2 financial investments, our investment advisor provides us with monthly account statements documenting the value of each investment based on prices received from an independent third-party valuation service provider. This third party evaluates the types of securities in our investment portfolio and calculates a fair value using a multi-dimensional pricing model that includes a variety of inputs, including quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, interest rates and yield curves observable at commonly quoted intervals, volatilities, prepayment speeds, loss severities, credit risks and default rates that are observable at commonly quoted intervals. As we are ultimately responsible for the determination of the fair value of these instruments, we perform quarterly analyses using prices obtained from another independent provider of financial instrument valuations, to validate that the prices we have used are reasonable estimates of fair value.

The following table presents our financial instruments that were measured at fair value on a recurring basis at September 30, 2012 by level within the fair value hierarchy (in thousands):

	September 30, 2012			
	Level 1	Level 2	Level 3	Total
Financial Assets				
Money market funds	$19,700	$ —	$ —	$19,700
Commercial paper	—	1,497	—	1,497
Corporate bonds	—	18,773	—	18,773
U.S. Treasury obligations	—	5,521	—	5,521
Government-sponsored enterprise securities	—	2,004	—	2,004
Common shares of CO_2 Solutions	563	—	—	563
Total	$20,263	$27,795	$ —	$48,058

The following table presents our financial instruments that were measured at fair value on a recurring basis at December 31, 2011 by level within the fair value hierarchy (in thousands):

	December 31, 2011			
	Level 1	Level 2	Level 3	Total
Financial Assets				
Money market funds	$18,866	$ —	$ —	$18,866
Commercial paper	—	1,999	—	1,999
Corporate bonds	—	30,892	—	30,892
U.S. Treasury obligations	—	1,002	—	1,002
Government-sponsored enterprise securities	—	3,015	—	3,015
Common shares of CO_2 Solutions	1,161	—	—	1,161
Total	$20,027	$36,908	$ —	$56,935

We estimated the fair value of our investment in 10,000,000 common shares of CQ Solutions using the market value of common shares as determined by trading on the TSX Venture Exchange. Accordingly, we have classified our investment in CO_2 Solutions as a Level 1 investment. At September 30, 2012, the fair value of our investment in CQ Solutions's common stock was $0.6 million . We evaluated our investment in the common shares of CO_2 Solutions to determine if the impairment was other-than-temporary considering the length of time and extent to which the fair value has been less than our cost, the financial condition and near term prospects of CO_2 Solutions, and our management's ability and intent to hold the securities until fair value recovers and concluded the impairment is other than temporary. As a result of our analysis, we recorded an impairment of $0.8 million during the three months ended September 30, 2012 as an expense in our condensed consolidated statement of operations as sales, general and administrative expense. At December 31, 2011, the estimated fair value of our investment in CO_2 Solutions's common stock was $1.2 million and the unrealized loss was $155,000.

7. Related Party Transactions

Shell and Raízen

Prior to June 2011, Shell was considered a related party due to the size of its ownership interest. As discussed in Note 3, "Collaborative Research and Development Agreements," Shell transferred full ownership of our common stock to Raízen, Shell's joint venture with Cosan in Brazil. Based on our analysis and effective as of July 1, 2011, Shell was no longer considered a related party. Before June 30, 2011, related party receivables, related party deferred revenue, and related party collaboration research and development revenue were primarily comprised of transactions under our five-year Shell Research Agreement collaborative research agreement (replaced by the New Shell Agreement effective as of August 31, 2012) and the Shell License Agreement. The revenues earned from Shell are included in the collaborative research and development line on our condensed consolidated statement of operations. Collaborative research and development revenue received from Shell accounted for 51%, 62% and 76% of our revenues for the years ended December 31, 2011, 2010 and 2009, respectively. Collaborative research and development revenue received from Shell accounted for 66% and 52% of our revenues for the three months ended September 30, 2012 and 2011, respectively. Collaborative research and development revenue received from Shell accounted for 56% and 52% of our revenues for the nine months ended September 30, 2012 and 2011, respectively.

At the time of the transfer, Raízen owned 5.6 million shares of our common stock and has the right to appoint a member to our board of directors. In September 2011, we entered into a joint development agreement with Raízen to develop an improved first generation ethanol process with enhanced economics. Work under this joint development agreement has been completed and we do not expect this project to continue.

Raízen has exclusive rights to market and use CodeXyme™ in Brazil. We are engaged in discussions with Raízen about obtaining rights to market CodeXyme™ to all ethanol producers in Brazil. Although we do not expect to receive development funding from Raízen for CodeXyme™, Raízen will remain a target customer for CodeXyme™ should Raízen decide to build capacity for second generation ethanol in Brazil.

Exela PharmaSci, Inc.

We signed a license agreement with Exela PharmaSci, Inc. ("Exela") in 2007. A member of our board of directors is also on the board of directors of Exela. Under the terms of the agreement, Exela would pay us a royalty based on their achievement of certain commercial goals.

During the three months ended September 30, 2012 and 2011, we recognized zero and $120,000, respectively, of revenue related to this arrangement shown in our condensed consolidated statement of operations as collaborative research and development revenue. During the nine months ended September 30, 2012 and 2011, we recognized $150,000 and $450,000, respectively, of revenue related to this arrangement. We did not recognize any revenue from Exela prior to 2011. As of September 30, 2012 and December 31, 2011, we had no amounts owed from Exela.

8. Commitments and Contingencies

Operating Leases

Our headquarters are located in Redwood City, California where we occupy approximately 107,000 square feet of office and laboratory space in four buildings. On March 16, 2011, we entered into a Fifth Amendment to Lease (the "Fifth Amendment") with Metropolitan Life Insurance Company ("MetLife") with respect to our offices located at 200 and 220 Penobscot Drive, Redwood City, California, (the "Penobscot Space"), 400 Penobscot Drive, Redwood City, California (the "Building 2 Space") and 640 Galveston Drive, Redwood City, California (the "Galveston Space"), and with respect to approximately 29,921 square feet of additional space located at 101 Saginaw Drive, Redwood City, California (the "Saginaw Space"). Under the Fifth Amendment, the term of the lease of the Penobscot Space, the Building 2 Space and the Saginaw Space lasts until January 31, 2020, and we have options to extend for two additional five year periods. Pursuant to the Fifth Amendment, we surrendered the Galveston Space in August 2011. The Fifth Amendment provides a number of incentives to us including forgiveness of rent payments for the initial two months of the extended lease term for certain buildings, a tenant improvement allowance ("TIA") of $2.4 million and an additional $0.8 million special allowances for certain HVAC costs.

We applied the TIA funds toward capital improvements to the expanded facility as well as upgrades and reconfiguration of existing lab and office space. A portion of the TIA may be utilized by us to pay costs for furniture, furnishings and equipment.

As of June 30, 2012, we had completed the capital improvements to the expanded facilities and incurred $3.6 million of capital improvement costs related to the facilities. During 2011, we requested and received $1.8 million of reimbursements from the landlord out of the TIA for the completed construction. We requested and received reimbursement of the remaining $1.4 million of TIA and special HVAC allowance during the second quarter of 2012. The TIA is recorded once cash is received and is amortized on a straight-line basis over the term of the lease as a reduction in rent expense.

On September 27, 2012, we entered into a Sixth Amendment to Lease (the "Sixth Amendment") with MetLife with respect to the Company's offices located at 501 Chesapeake Drive, Redwood City, California (the "501 Chesapeake Space"). The Sixth Amendment extends the term of the lease of the 501 Chesapeake Space, which would have otherwise expired on January 31, 2013, to January 31, 2017. Pursuant to the Sixth Amendment, we have two consecutive options to extend the term of the lease for the 501 Chesapeake Space for an additional period of five years per option.

Rent expense is recognized on a straight-line basis over the term of the lease. In accordance with the terms of the amended lease agreement, we exercised our right to deliver letters of credit in lieu of a security deposit. The letters of credit in the amount of $707,000 as of September 30, 2012 and December 31, 2011, are collateralized by deposit balances held by the bank. These deposits are recorded as restricted cash on the condensed consolidated balance sheets.

As of September 30, 2012 and December 31, 2011, we had asset retirement obligations of $601,000 and $580,000, respectively, from operating leases, whereby we must restore the facilities that we are renting to their original form. We incurred $22,000 and $27,000 of accretion expense related to our asset retirement obligations during the nine months ended September 30, 2012 and 2011, respectively. We are expensing the asset retirement obligation over the terms of the respective leases. We review the estimated obligation each period and we make adjustments if our estimates change.

Future minimum payments under noncancellable operating leases are as follows at September 30, 2012 (in thousands):

	Lease payments
3 months ending December 31,	
2012	$ 821
Years ending December 31,	
2013	3,114
2014	2,956
2015	3,040
2016	3,054
2017 and beyond	8,468
Total	$ 21,453

Litigation

We have been subject to various legal proceedings related to matters that have arisen during the ordinary course of business. Although there can be no assurance as to the ultimate disposition of these matters, we have determined, based upon the information available, that the expected outcome of these matters, individually or in the aggregate, will not have a material adverse effect on our consolidated financial position, results of operations or cash flows.

Indemnifications

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. The maximum amount of the indemnifications is not limited. We accrue for known indemnification issues when a loss is probable and can be reasonably estimated. There were no accruals related to indemnification issues for any periods presented.

Other contingencies

In November 2009, one of our foreign subsidiaries sold intellectual property to us. Under the local laws, the sale of intellectual property to a nonresident legal entity is deemed an export and is not subject to value added tax. However, there is uncertainty regarding whether the items sold represented intellectual property or research and development services, which would subject the sale to value added tax. We believe that the uncertainty results in an exposure to pay value added tax that is more than remote but less than likely to occur and, accordingly, have not recorded an accrual for this exposure. Should the sale be deemed a sale of research and development services, we could be obligated to pay an estimated amount of $0.6 million.

9. Warrants

We issued 3,308 common shares for 6,066 warrants in a net exercise transaction during the three and nine months ended September 30, 2012. At September 30, 2012, the following common stock warrants were issued and outstanding:

	September 30, 2012		
Issue Date	Shares Subject to warrants	Exercise Price per Share	Expiration
May 25, 2006	184,895	$ 5.96	May 25, 2013
July 17, 2007	2,384	$ 12.45	February 9, 2016
September 28, 2007	72,727	$ 8.25	September 28, 2017

10. Stockholders' Equity

In 2002, we adopted the 2002 Stock Plan (the "2002 Plan"), pursuant to which our board of directors issued incentive stock options, non-statutory stock options (options that do not qualify as incentive stock options) and restricted stock to our employees, officers, directors or consultants. In March 2010, our board of directors and stockholders approved the 2010 Equity Incentive Award Plan (the "2010 Plan"), which became effective upon the completion of our IPO in April 2010. A total of 1,100,000 shares of common stock were initially reserved for future issuance under the 2010 Plan and any shares of common stock reserved for future grant or issuance under our 2002 Plan that remained unissued at the time of completion of the IPO became available for future grant or issuance under the 2010 Plan. In addition, the shares reserved for issuance pursuant to the exercise of any outstanding awards under the 2002 Plan that expire unexercised will also become available for future issuance under the 2010 Plan. The 2010 Plan also provides for automatic annual increases in the number of shares reserved for future issuance, and during the three months ended March 31 2012 an additional 1,439,827 shares were reserved under the 2010 plan as a result of this provision. As of September 30, 2012, we had a total of 11,130,229 shares of common stock reserved for issuance under our Plans and no shares available for issuance under the 2002 Plan.

Additionally, during the three months ended June 30, 2012, we granted 400,000 options and 750,000 restricted stock awards pursuant to the employment agreement with our new chief executive officer, Mr. John Nicols. The option award has a per share exercise price equal to $3.46 per share, which was the closing price of the Company's common stock on June 13, 2012. Mr. Nicols will vest 25% of the option award on June 13, 2013 with the remaining shares vesting ratably on a monthly basis over a period of 36 months thereafter, such that the option award would be fully vested and exercisable on June 13, 2016. The restricted stock award of 750,000 shares vest over four years with 25% of the awards vesting on each annual anniversary of Mr. Nicols' start date such that the restricted stock award would be fully vested on June 13, 2016.

Additionally, during the three months ended September 30, 2012, we granted 200,000 options and 50,000 restricted stock awards pursuant to the offer letter agreement with our new chief financial officer, Mr. David O'Toole. The option award has a per share exercise price equal to $2.72 per share, which was the closing price of the Company's common stock on September 10, 2012. Mr. O'Toole will vest 25% of the option award on September 4, 2013 with the remaining shares vesting ratably on a monthly basis over a period of 36 months thereafter, such that the option award would be fully vested and exercisable on September 4, 2016. The restricted stock award of 50,000 shares vest over four years with 25% of the awards vesting on each annual anniversary of Mr. O'Toole's start date such that the restricted stock award would be fully vested on September 4, 2016.

We awarded zero and 767,953 restricted stock units ("RSU") during the three and nine months ended September 30, 2012, respectively. The fair value of the RSU awards was calculated based on the NASDAQ quoted stock price on the date of the grant with the expense recognized over the vesting period.

We issued 318,402 and 465,587 common shares for stock options exercised during the three and nine months ended September 30, 2012, respectively.

We issued 53,007 and 151,151 common shares for restricted stock units which vested during the three and nine months ended September 30, 2012, respectively.

Stockholder rights plan

In August 2012, our board of directors adopted a stockholder rights plan and declared a dividend of one preferred share purchase right for each share of our common stock held by stockholders of record as of September 18, 2012. Each right entitles stockholders, after the rights become exercisable, to purchase one one-thousandth of a share of our Series A Preferred Stock, par value $0.0001, at a purchase price of $11.35 per one-thousandth of a share of Series A Preferred Stock. In general, the rights become exercisable when a person or group acquires 15% or more of our common stock or a tender offer for 15% or more of our common stock is announced or commenced. The rights may discourage a third-party from making an unsolicited proposal to acquire us as exercise of the rights would cause substantial dilution to a person or group that attempts to acquire us on terms not approved by our board of directors. The rights should not interfere with any merger or other business combination approved by our board of directors since the rights may be redeemed by us at $0.0001 per right at any time before any person or group acquire 15% or more of our outstanding common stock. These rights expire in September 2013.

Stock-Based Compensation Expense

We estimate 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. Since we were not a publicly traded entity prior to April 2010, sufficient company-specific historical volatility data was not available for reporting periods prior to the three months ended June 30, 2012. As a result, for those prior periods, we estimated the expected volatility based on the historical volatility of a group of unrelated public companies within our industry. Effective for the quarter ended June 30, 2012, we determined we had sufficient company-specific historical volatility data. As a result, for the three months ended September 30, 2012, we estimate the expected volatility based on the historical volatility of our common stock.

Due to our limited history of grant activity, the expected life of options granted to employees is calculated using the “simplified method” permitted by the SEC as the average of the total contractual term of the option and its vesting period. 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 following table presents total stock-based compensation expense included in the condensed consolidated statements of operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2012	2011	2012	2011
Research and development	$ 682	$ 955	$2,115	$2,756
Sales, general and administrative	784	1,581	2,360	4,637
	$ 1,466	$ 2,536	$4,475	$7,393

During the second quarter of 2012, certain members of our management team were informed that their annual bonus for 2012 would be paid only in the form of common stock awards rather than cash payments. We expect to pay the 2012 annual bonus in the first quarter of 2013. Through September 30, 2012, we have accrued $0.5 million in bonuses to be settled in common stock awards, which is included in the above stock-based compensation expense table and on our condense consolidated balance sheet as additional paid-in capital.

11. Segment Reporting

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 makers are our Chief Executive Officer and our board of directors. The Chief Executive Officer and our board of directors review financial information presented on a consolidated basis, accompanied by information about revenues by geographic region, for purposes of allocating resources and evaluating financial performance. We have one business activity and there are no segment managers who are held accountable for operations, operating results beyond revenue goals or gross margins, or plans for levels or components below the consolidated unit level. Accordingly, we have a single reporting segment.

Operations outside of the United States consist principally of research and development and sales activities. Geographic revenues are identified by the location of the customer and consist of the following (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2012	2011	2012	2011
Revenues				
Americas(1)	$ 18,324	$ 19,680	$ 50,867	$ 54,816
Asia	6,961	9,713	20,533	26,311
Europe	1,056	3,889	8,986	9,245
	$ 26,341	$ 33,282	$ 80,386	$ 90,372

(1) Primarily United States

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):

	September 30, 2012	December 31, 2011
Long-lived assets		
Americas(1)	$ 29,481	$ 34,817
Europe	5,503	4,395
Asia	914	2,380
	$ 35,898	$ 41,592

(1) Primarily United States

12. Restructuring

During the third quarter of 2012, our board of directors approved and committed to a restructuring plan (the "Q3 2012 Restructuring Plan") to reduce our cost structure which included employee terminations in the United States and Singapore and the closing of our Singapore facility. Our current estimated cost of the Q3 2012 Restructuring Plan is $2.5 million, comprised of employee severance and other termination benefits, facility lease termination costs and equipment disposal. As of September 30, 2012, planned costs of $43,000 have been recognized in sales, general and administrative expenses and $663,000 have been recognized in research and development on our condensed consolidated statements of operations. We have made no cash payments as of September 30, 2012, with $706,000 recorded in accrued compensation on our condensed consolidated balance sheet as of September 30, 2012. We anticipate recording the remaining planned costs of $1.8 million under this restructuring plan during the fourth quarter of 2012 and the first quarter of 2013. We anticipate that all costs under the Q3 2012 Restructuring Plan will be paid by the end of the first half of 2013.

The table below summarizes the changes in our restructuring accrual for the Q3 2012 Restructuring Plan (in thousands):

	Severance, benefits and related personnel costs
Restructuring charges	$ 706
Cash payments	—
Balance at September 30, 2012	706

During the first quarter of 2012, our board of directors approved and committed to a restructuring plan (the "Q1 2012 Restructuring Plan") to reduce our cost structure, which included employee terminations in Hungary and the United States. The total estimated cost of the Q1 2012 Restructuring Plan was $567,000, comprised of employee severance and other termination benefits. As of September 30, 2012, planned costs of $572,000 have been recognized in sales, general and administrative expenses on our condensed consolidated statements of operations. We have made cash payments of $452,000 and recorded $60,000 of reductions to previously recorded charges with the remaining $60,000 recorded in accrued compensation on our condensed consolidated balance sheet as of September 30, 2012. We do not anticipate recording any further charges under this restructuring plan. We anticipate that all costs under the Q1 2012 Restructuring Plan will be paid by December 31, 2012.

The table below summarizes the changes in our restructuring accrual for the Q1 2012 Restructuring Plan (in thousands):

	Severance, benefits and related personnel costs
Restructuring charges	$ 510
Cash payments	(24)
Balance at March 31, 2012	486
Restructuring charges	53
Adjustments to previously accrued charges	(49)
Cash payments	(422)
Balance at June 30, 2012	68
Restructuring charges	9
Adjustments to previously accrued charges	(11)
Cash payments	(6)
Balance at September 30, 2012	$ 60

13. Subsequent Events

In November 2012, we entered into a new commercial arrangement with Arch by simultaneously terminating all of our existing supply agreements with Arch and entering into a new enzyme supply agreement with Arch (the "New Enzyme Supply Agreement"), pursuant to which Arch agreed to exclusively purchase enzymes from us for use in the manufacture of certain of Arch's products and we agreed to exclusively supply, with limited exceptions, certain of our enzymes to Arch at an agreed upon price for use in such manufacture. Under the New Enzyme Supply Agreement, Arch will no longer produce active pharmaceutical ingredients ("API") and intermediates for us and will no longer pay us royalties on the sale of APIs and intermediates to customers, and we will no longer have exclusive rights to market such APIs and intermediates in certain markets.

ITEM 2. 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 the unaudited condensed consolidated financial statements and the related notes thereto included elsewhere in this Quarterly Report on Form 10-Q and the audited consolidated financial statements and notes thereto and management's discussion and analysis of financial condition and results of operations for the year ended December 31, 2011 included in our Annual Report on Form 10-K filed with the SEC on March 5, 2012. This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended,(the "Exchange Act"). These statements are often identified by the use of words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "should," "estimate," or "continue," and similar expressions or variations. Such forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section titled "Risk Factors," set forth in Part II, Item 1A of this Quarterly Report on Form 10-Q and elsewhere in this Report. The forward-looking statements in this Quarterly Report on Form 10-Q represent our views as of the date of this Quarterly Report on Form 10-Q. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report on Form 10-Q.

Overview

We are a producer of custom industrial enzymes. Our products enable novel, sustainable processes for the manufacture of biofuels, chemicals, and pharmaceutical ingredients.

We are developing our flagship CodeXyme™ cellulase enzymes to convert non-food plant material, which we call cellulosic biomass, into affordable sugars, which can then be converted into renewable fuels and chemicals. We intend to market CodeXyme™ cellulase enzymes to biofuels and chemicals manufacturers worldwide. We are also developing our own novel processes to manufacture certain specialty and bio-based commodity chemicals, which we intend to commercialize with strategic partners. The first of these products is CodeXol™ detergent alcohols. Detergent alcohols are used to manufacture surfactants, which are key, active cleaning ingredients in consumer products such as shampoos, liquid soaps and laundry detergents.

We have commercialized our technology, products and services in the pharmaceuticals market. There are currently over 50 pharmaceutical firms using our technology, products and services in their manufacturing process development, including the production of some of the world's bestselling and fastest growing drugs.

We create our products by applying our CodeEvolver™ directed evolution technology platform which introduces genetic mutations into microorganisms, giving rise to changes in the enzymes which they produce. Once we identify potentially beneficial mutations, we test combinations of these mutations until we have created variant enzymes that exhibit marketable performance characteristics superior to competitive products. This process allows us to make continuous, efficient improvements to the performance of our enzymes.

To date, we have generated revenues primarily from collaborative research and development funding, pharmaceutical product sales and government awards. Our revenues have increased in each of the last three fiscal years, growing from $82.9 million in 2009, to $107.1 million in 2010 to $123.9 million in 2011. However, our revenues of $80.4 million for the nine months ended September 30, 2012 are down by $10.0 million, or 11%, compared to our revenues of $90.4 million for the nine months ended September 30, 2011.

Most of our revenues since inception have been derived from collaborative research and development arrangements, which accounted for 78%, 66% and 58% of our revenues in 2009, 2010 and 2011, respectively. Collaborative research and development arrangements accounted for 60% and 61% of our revenues for the nine months ended September 30, 2011 and 2012, respectively.

Our collaborative research agreement with Shell was terminated effective August 31, 2012 and as a result we will no longer receive collaborative research and development revenue from Shell for all periods beginning after August 31, 2012, which will significantly decrease our revenues as compared to prior periods. See Note 3 to the condensed consolidated financial statements for more information regarding the termination of the collaborative research agreement with Shell. Collaborative research and development revenues received from Shell accounted for 76%, 62% and 51% of our revenues in 2009, 2010 and 2011, respectively. Collaborative research and development revenues received from Shell accounted for 52% and 56% of our revenues for the nine months ended September 30, 2011 and 2012, respectively. As a result of the termination of our collaborative research agreement with Shell, we will need to obtain other third party funding to support our advanced biofuels program. We are in early stage discussions with multiple parties about potential collaborations, but there can be no assurances that any of our discussions will lead to collaborations or that any new collaboration will fully substitute for the termination of the Shell collaboration. We currently do not expect to receive development funding from Raízen to support our advanced biofuels program, although Raízen will remain a target customer for CodeXyme™ should Raízen decide to build capacity for second generation ethanol in Brazil in the future.

Our product sales accounted for 22%, 31% and 39% of our revenues in 2009, 2010 and 2011, respectively. Product sales accounted for 37% and 36% of our revenues for the nine months ended September 30, 2011 and 2012, respectively. Our product sales have increased in each of the last three fiscal years, from $18.6 million in 2009 to $32.8 million in 2010 and to $49.0 million in 2011. However, our product sales decreased from $33.5 million for the nine months ended September 30, 2011 to $29.1 million for the nine months ended September 30, 2012 as a result of delayed product orders from certain on-patent pharmaceuticals customers.

We anticipate that our product revenues will decrease, but that our gross profit on product revenue will remain comparable with our historical gross profit levels subsequent to the November 2012 enzyme supply agreement we signed with Arch. Under the new arrangement, Arch agreed to exclusively purchase enzymes from us for use in the manufacture of certain of Arch's products. Arch will no longer produce APIs and intermediates for us to market and sell. We expect that selling our proprietary enzymes to Arch rather than selling the resulting APIs or intermediates that Arch manufactured for us will result in a decrease in our product revenues in all future periods but that our product gross profit will remain comparable with our historical product gross profit. For the year ended December 31, 2011 our product gross profit was $7.2 million and for the nine months ended September 30, 2012 and 2011 our product gross profit was $4.2 million and $4.8 million, respectively.

In the third quarter of 2012, we implemented a series of cost reduction measures including the termination of approximately 55% of our global workforce and the closing of our Singapore facility. We estimate we will incur $2.5 million in restructuring expenses related to these cost reduction measures including severance for terminated employees and other exit-related costs arising from contractual and other obligations. In the third quarter of 2012, we recorded $0.7 million of severance related expenses and we expect to record the remaining $1.8 million during the fourth quarter of 2012 and the first quarter of 2013.

We have continued to experience significant losses as we have invested heavily in research and development and administrative infrastructure in connection with the growth in our business. We intend to continue our investment in research and development. As of September 30, 2012, we had an accumulated deficit of $200.0 million. We incurred net losses of $20.3 million, $8.5 million and $16.6 million in the years ended December 31, 2009, 2010 and 2011, respectively and a net loss of $15.3 million for the nine months ended September 30, 2012.

Revenues during 2009, 2010 and 2011 were derived primarily from the pharmaceuticals and biofuels markets, and consisted of collaborative research and development revenues, product sales and government awards, which are separately identified in our condensed consolidated statements of operations.

Revenues and Operating Expenses

Revenues

Our revenues are comprised of collaborative research and development revenues, product revenues and government awards.

- Collaborative research and development revenues include license, technology access and exclusivity fees, FTE payments, milestones, royalties, and optimization and screening fees.
- Product revenues consist of sales of biocatalysts, intermediates, APIs, Codex Biocatalyst Panels and Kits.
- Government awards consist of payments from government entities. The terms of these awards 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 awards from Germany, Singapore and the United States. We expect to bid on additional awards from the United States and other governments in the future.

Cost of Product Revenues

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 our direct and research-related overhead expenses, which include salaries and other personnel-related expenses (including stock-based compensation), occupancy-related costs, supplies, depreciation of facilities and laboratory equipment and amortization of acquired technologies, as well as research consultants, 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.

Sales, General and Administrative Expenses

Sales, 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 expenses, travel and relocation costs and restructuring expenses.

Critical Accounting Policies and Estimates

The interim condensed consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States and include our accounts and the accounts of our wholly-owned subsidiaries. The preparation of our condensed 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 condensed 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. There have been no material changes to our critical accounting policies and estimates discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2011.

Financial Operations Overview

The following table shows the amounts from our condensed consolidated statements of operations for the periods presented (in thousands).

	Three Months Ended September 30,		% of Total Revenues		Nine Months Ended September 30,		% of Total Revenues	
	2012	2011	2012	2011	2012	2011	2012	2011
Revenues:								
Product	$ 7,140	$ 12,199	27%	37%	$ 29,090	$ 33,528	36%	37%
Collaborative research and development	18,569	19,201	70%	58%	49,049	54,073	61%	60%
Government awards	632	1,882	2%	6%	2,247	2,771	3%	3%
Total revenues	26,341	33,282	100%	100%	80,386	90,372	100%	100%
Costs and operating expenses:								
Cost of product revenues	6,397	9,958	24%	30%	24,868	28,713	31%	32%
Research and development	14,191	16,786	54%	50%	46,190	45,502	57%	50%
Sales, general and administrative	7,909	8,871	30%	27%	24,093	27,160	30%	30%
Total costs and operating expenses	28,497	35,615	108%	107%	95,151	101,375	118%	112%
Loss from operations	(2,156)	(2,333)	nm	nm	(14,765)	(11,003)	nm	nm
Interest income	61	76	0%	0%	210	195	0%	0%
Other expenses	(45)	(411)	nm	nm	(320)	(378)	nm	nm
Loss before provision for income taxes	(2,140)	(2,668)	nm	nm	(14,875)	(11,186)	nm	nm
Provision for income taxes	169	74	1%	0%	443	68	1%	0%
Net loss	$ (2,309)	$ (2,742)	nm	nm	$ (15,318)	$ (11,254)	nm	nm

Three months ended September 30, 2012 compared to three months ended September 30, 2011

Revenues

(In Thousands)	Three Months Ended September 30, 2012	2011	Change $	Change %
Product	$ 7,140	$ 12,199	$(5,059)	(41%)
Collaborative research and development	18,569	19,201	(632)	(3%)
Government awards	632	1,882	(1,250)	(66%)
Total revenues	$ 26,341	$ 33,282	$(6,941)	(21%)

Revenues decreased during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 due to decreased revenues from all three revenue categories including product sales, collaborative research and development projects, and government awards.

Product revenues decreased $5.1 million during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 primarily due to decreased sales of our statin-family of products and products used in on-patent pharmaceuticals in hepatitis C and diabetic therapies.

Collaborative research and development revenues decreased $0.6 million during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 primarily due to a reduction of $1.4 million due to the termination of our collaborations in carbon management in December 2011, partially offset by a $0.2 million increase in our collaboration with Shell and a $0.4 million increase from collaborations with our pharmaceuticals customers.

Our collaborative research and development revenues with Shell increased $0.2 million during the three months ended September 30, 2012 compared to the three months ended September 30, 2011, due to the agreed upon final invoicing for our research efforts at the termination of the collaborative research agreement with Shell. We will receive no further collaborative research and development revenue from Shell.

Government award revenues decreased $1.3 million during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 as our award from the U.S. Department of Energy, or DOE, under the ARPA-E Recovery Act program expired June 30, 2012, and our award revenue from the Singapore Economic Development Board, or EDB, decreased $0.7 million. Our award revenue from the DOE was $0.6 million in the three months ended September 30, 2011. Our award from the EDB was $0.6 million during the three months ended September 30, 2012 compared to $1.3 million in three months ended September 30, 2011. We will receive no further EDB award revenue subsequent to our announcement in September 2012 to close our Singapore facility.

Our top five customers accounted for 89% and 81% of our total revenues for the three months ended September 30, 2012 and 2011, respectively. Shell accounted for 66% and 52% of our total revenues for the three months ended September 30, 2012 and 2011, respectively.

Cost of Product Revenues

(In Thousands)	Three Months Ended September 30, 2012	2011	Change $	%
Cost of revenues:				
Product	$ 6,397	$ 9,958	$(3,561)	(36%)
Gross profit:				
Product	$ 743	$ 2,241	$(1,498)	(67%)
Product gross margin %	10%	18%		

Our cost of product revenues decreased $3.6 million during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 primarily due to the $5.1 million decrease in our product sales. Gross margins decreased from 18% to 10% during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 primarily due to a decrease in product sales of our on-patent, higher margin products in the third quarter of 2012.

Operating Expenses

(In Thousands)	Three Months Ended September 30, 2012	2011	Change $	%
Research and development	$ 14,191	$ 16,786	$(2,595)	(15%)
Sales, general and administrative	7,909	8,871	(962)	(11%)
Total operating expenses	$ 22,100	$ 25,657	$(3,557)	(14%)

Research and Development. Research and development expenses decreased $2.6 million during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 primarily due to a $1.4 million decrease in employee compensation costs related to restructuring actions in the third quarter of 2012 partially offset by $0.7 million in termination benefits resulting from our third quarter restructuring efforts. Lab supply cost decreased $0.7 million and outside services decreased $0.4 million as a result of the termination of the Shell research collaboration. We reduced travel cost by $0.3 million compared to the three months ended September 30, 2011 as part of our cost control efforts. Research and development expenses included stock-based compensation expense of $0.7 million and $1.0 million during the three months ended September 30, 2012 and 2011, respectively.

Sales, General and Administrative. Sales, general and administrative expenses decreased $1.0 million during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 primarily due to a $0.6 million decrease in compensation costs as a result of restructuring actions in the first quarter of 2012 partially offset by one-time severance costs of the restructuring actions in the third quarter of 2012. Stock compensation costs decreased $0.8 million during the three months ended September 30, 2012, primarily due to the departure of our former Chief Executive Officer and our former Chief Financial Officer in the first quarter of 2012. We also decreased spending on consultants and other outside services by $0.2 million. Travel costs decreased $0.1 million. These decreased expenses were partially offset by a $0.8 million expense for an other-than-temporary impairment of our equity investment in CO_2 Solutions recognized in the three months ended September 30, 2012. Sales, general and administrative expenses included stock-based compensation expense of $0.8 million and $1.6 million during the three months ended September 30, 2012 and 2011, respectively.

Restructuring Charges All Plans

The table below summarizes the changes in our restructuring accrual for all restructuring plans during the three months ended September 30, 2012 (in thousands):

	Severance, benefits and related personnel costs
Balance at June 30, 2012	$ 68
Restructuring charges	715
Adjustments to previously accrued charges	(11)
Cash payments	(6)
Balance at September 30, 2012	$ 766

During the first quarter of 2012, our board of directors approved and committed to a restructuring plan ("Q1 2012 Restructuring Plan") to reduce our cost structure which included employee terminations in Hungary and the United States. The total cost of the Q1 2012 Restructuring Plan was estimated at $567,000, comprised of employee severance and other termination benefits. As of September 30, 2012, planned costs of $572,000 have been recognized in sales, general and administrative expenses on our condensed consolidated statements of operations. During the three months ended September 30, 2012, we recorded $9,000 of restructuring expenses under the plan, made cash payments of $6,000 and recorded $11,000 of reductions to previously recorded charges with the remaining $60,000 recorded as accrued compensation on our condensed consolidated balance sheet. We do not anticipate recording any further charges under this restructuring plan. We anticipated that all costs under the Q1 2012 Restructuring Plan will be paid by December 31, 2012. The table below summarizes the changes in our restructuring accrual for the Q1 2012 Restructuring Plan (in thousands):

	Severance, benefits and related personnel costs
Balance at June 30, 2012	$ 68
Restructuring charges	9
Adjustments to previously accrued charges	(11)
Cash payments	(6)
Balance at September 30, 2012	$ 60

During the third quarter of 2012, our board of directors approved and committed to a restructuring plan ("Q3 2012 Restructuring Plan") to reduce our cost structure which included employee terminations in the United States and Singapore and the closing of our Singapore facility. The total estimated cost of the Q3 2012 Restructuring Plan is $2.5 million, comprised of employee severance and other termination benefits, facility lease termination costs and equipment disposal. As of September 30, 2012, planned costs of $43,000 have been recognized in sales, general and administrative expenses and $663,000 have been recognized in research and development on our condensed consolidated statements of operations. We have made no cash payments as of September 30, 2012 with $706,000 recorded in accrued compensation on our condensed consolidated balance sheet as of September 30, 2012. We anticipate recording the remaining planned costs of $1.8 million under this restructuring plan during the fourth quarter of 2012 and the first quarter of 2013. We anticipated that all costs under the Q3 2012 Restructuring Plan will be paid by the first half of 2013. The table below summarizes the changes in our restructuring accrual for the Q3 2012 Restructuring Plan (in thousands):

	Severance, benefits and related personnel costs
Restructuring charges	$ 706
Cash payments	—
Balance at September 30, 2012	$ 706

Other Income (Expense), net

(In Thousands)	Three Months Ended September 30, 2012	2011	Change $	Change %
Interest income	$ 61	$ 76	$ (15)	(20%)
Other expenses	(45)	(411)	366	(89%)
Total other income (expense), net	$ 16	$ (335)	$351	(105%)

Interest Income. Interest income was flat during the three months ended September 30, 2012 compared to the three months ended September 30, 2011.

Other Expenses. Other expenses, decreased $0.4 million during the three months ended September 30, 2012 compared to the three months ended September 30, 2011 primarily related to decreased losses from foreign currency translations during the three months ended September 30, 2012.

Provision for Income Taxes. The tax provision for the three months ended September 30, 2012 and 2011 primarily consisted of income taxes attributable to foreign operations.

Nine months ended September 30, 2012 compared to nine months ended September 30, 2011

Revenues

(In Thousands)	Nine Months Ended September 30, 2012	2011	Change $	Change %
Product	$ 29,090	$ 33,528	$(4,438)	(13%)
Collaborative research and development	49,049	54,073	(5,024)	(9%)
Government awards	2,247	2,771	(524)	(19%)
Total revenues	$ 80,386	$ 90,372	$(9,986)	(11%)

Revenues decreased during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 due to decreased revenues from all three revenue categories, including collaborative research and development projects, product sales and government awards.

Product revenues decreased $4.4 million during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 primarily due to decreased sales of our statin-family of products to our generics customers and decreased sales of our products used in on-patent hepatitis C, diabetic and dementia therapies. Collaborative research and development revenues decreased $5.0 million during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 primarily due to a reduction of $4.1 million due to the termination of our collaborations in carbon management in December 2011, a $1.6 million reduction in our collaboration with Shell and reductions of $0.3 million in collaborations with our pharmaceuticals customers, partially offset by a $1.0 million milestone from one of our pharmaceutical partners related to the use of our enzymes in its manufacturing processes.

Our collaborative research and development revenues with Shell decreased $1.6 million during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 due to the reduction in the number of funded FTEs from 128 to 116 starting August 2011, resulting in decreased revenue of approximately $0.3 million per month. This was partially offset by the agreed upon final invoicing of $7.5 million for our research efforts at the termination of our collaborative research agreement with Shell, which was terminated effective August 31, 2012. We did not recognize any milestone revenue during the nine months ended September 30, 2012 compared to $3.1 million during the nine months ended September 30, 2011. We will receive no further collaborative research and development revenue from Shell.

Government award revenues decreased $0.5 million during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 due to a decrease of $0.7 million in our award from the EDB from $1.3 million in nine months ended September 30, 2011 to $0.6 million during the nine months ended September 30, 2012. This was partially offset by a $0.1 million increase in our DOE award from $1.5 million in the nine months ended September 30, 2011 to $1.6 million during the nine months ended September 30, 2012. The 2012 revenue amount included $0.5 million of revenue recognized in the first quarter of 2012 related to prior periods as a result of a change in accounting estimate related to our indirect billing rates under the award. The award from the U.S. Department of Energy expired June 30, 2012 and no further revenue is expected.

Our top five customers accounted for 85% and 78% of our total revenues for the nine months ended September 30, 2012 and 2011, respectively. Shell accounted for 56% and 52% of our total revenues for the nine months ended September 30, 2012 and 2011.

Cost of Product Revenues

(In Thousands)	Nine Months Ended September 30, 2012	2011	Change $	%
Cost of revenues:				
Product	$ 24,868	$ 28,713	$(3,845)	(13%)
Gross profit:				
Product	$ 4,222	$ 4,815	$ (593)	(12%)
Product gross margin %	15%	14%		

Our cost of product revenues decreased $3.8 million during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 primarily due to a $4.4 million decrease in product revenues. Gross margins increased by 1% to 15% during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 primarily due to a change in the sales mix towards higher margin on-patent product sales in the first quarter of 2012.

Operating Expenses

(In Thousands)	Nine Months Ended September 30, 2012	2011	Change $	%
Research and development	$ 46,190	$ 45,502	$ 688	2%
Sales, general and administrative	24,093	27,160	(3,067)	(11%)
Total operating expenses	$ 70,283	$ 72,662	$(2,379)	(3%)

Research and Development. Research and development expenses increased $0.7 million during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 primarily due to a $1.4 million increase in employee compensation costs related to increased headcount compared to 2011 and termination benefits resulting from our third quarter restructuring efforts. We incurred additional expenses of $1.0 million for depreciation and amortization expense due to leasehold improvements and capital equipment acquisitions. We incurred an additional $0.3 million for consulting costs related to our expansion into Brazil and for product development. We reduced travel expenses $0.7 million compared to 2011 and decreased lab supplies and outside research cost $0.4 million due to the Shell collaboration ending in August 2012. Stock based compensation decreased $0.6 million. Research and development expenses included stock-based compensation expense of $2.1 million and $2.8 million during the nine months ended September 30, 2012 and 2011, respectively.

Sales, General and Administrative. Sales, general and administrative expenses decreased $3.1 million during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 primarily due to a $2.3 million decrease in stock compensation costs attributable to the departure of our former Chief Executive Officer and our former Chief Financial Officer. We decreased spending on consultants by $1.3 million and decreased travel costs by $0.5 million compared to the nine months ended September 30, 2011. This was partially offset by $0.8 million expense for an other-than-temporary impairment of our equity investment in CO_2 Solutions during the nine months ended September 30, 2012. We incurred additional expenses of $0.2 million for depreciation and amortization expense for our information systems expansion. Sales, general and administrative expenses included stock-based compensation expense of $2.4 million and $4.6 million during the nine months ended September 30, 2012 and 2011, respectively.

Restructuring Charges All Plans

The table below summarizes the changes in our restructuring accrual for all restructuring plans during the nine months ended September 30, 2012 (in thousands):

	Severance, benefits and related personnel costs
Restructuring charges	$ 1,278
Adjustments to previously accrued charges	(60)
Cash payments	(452)
Balance at September 30, 2012	$ 766

During the first quarter of 2012, our board of directors approved and committed to the Q1 2012 Restructuring Plan. The total cost of the Q1 2012 Restructuring Plan was estimated at $567,000, comprised of employee severance and other termination benefits. As of September 30, 2012, planned costs of $572,000 have been recognized in sales, general and administrative expenses on our condensed consolidated statements of operations. We have made cash payments of $452,000 and recorded $60,000 of reductions to previously recorded charges with the remaining $60,000 recorded in accrued compensation on our condensed consolidated balance sheet. We do not anticipate recording any further charges under this restructuring plan. We anticipate that all costs under the Q1 2012 Restructuring Plan will be paid by December 31, 2012. The table below summarizes the changes in our restructuring accrual for the Q1 2012 Restructuring Plan (in thousands):

	Severance, benefits and related personnel costs
Restructuring charges	$ 572
Adjustments to previously accrued charges	(60)
Cash payments	(452)
Balance at September 30, 2012	$ 60

During the third quarter of 2012, our board of directors approved and committed to the Q3 2012 Restructuring Plan. The total estimated cost of the Q3 2012 Restructuring Plan is $2.5 million, comprised of employee severance and other termination benefits, facility lease termination costs and equipment disposal. As of September 30, 2012, planned costs of $43,000 have been recognized in sales, general and administrative expenses and $663,000 have been recognized in research and development on our condensed consolidated statements of operations. We have made no cash payments as of September 30, 2012 with $706,000 recorded in accrued compensation on our condensed consolidated balance sheet as of September 30, 2012. We anticipate recording the remaining planned costs of $1.8 million under this restructuring plan during the fourth quarter of 2012 and the first quarter of 2013. We anticipated that all costs under the Q3 2012 Restructuring Plan will be paid by the first half of 2013. The table below summarizes the changes in our restructuring accrual for the Q3 2012 Restructuring Plan (in thousands):

	Severance, benefits and related personnel costs
Restructuring charges	$ 706
Cash payments	—
Balance at September 30, 2012	$ 706

Other Income (Expense), net

(In Thousands)	Nine Months Ended September 30, 2012	2011	Change $	Change %
Interest income	$ 210	$ 195	$15	8%
Other expenses	(320)	(378)	58	(15%)
Total other income (expense), net	$ (110)	$ (183)	$73	(40%)

Interest Income. Interest income was flat during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011.

Other Expenses. Other expenses, decreased $0.1 million during the nine months ended September 30, 2012 compared to the nine months ended September 30, 2011 primarily related to decreased losses from foreign currency translations during the nine months ended September 30, 2012.

Provision for Income Taxes. The tax provision for the nine months ended September 30, 2012 and 2011 primarily consisted of income taxes attributable to foreign operations.

Liquidity and Capital Resources

(In Thousands)	September 30, 2012	December 31, 2011
Cash and cash equivalents	$ 25,573	$ 25,762
Marketable securities(1)	24,780	27,720
Accounts receivable, net	16,527	18,917
Accounts payable, accrued compensation and accrued liabilities	18,414	24,503
Working capital (1)	54,109	50,940

(1) Includes only the current portion of our marketable securities

	Nine Months Ended September 30,	
(In Thousands)	2012	2011
Net cash (used in) provided by operating activities	$ (7,155)	$ 2,406
Net cash provided by (used in) investing activities	5,906	(47,251)
Net cash provided by financing activities	894	2,476
Effect of foreign exchange rates on cash and cash equivalents	166	105
Net decrease in cash and cash equivalents	$ (189)	$ (42,264)

Cash Flows from Operating Activities

Operating activities used $7.2 million of net cash during the nine months ended September 30, 2012. We incurred a net loss of $15.3 million in the nine months ended September 30, 2012, which included depreciation and amortization of $9.5 million and non-cash share-based compensation expense of $4.5 million. Changes in operating asset and liability accounts used $7.2 million of net cash during the nine months ended September 30, 2012.

Operating activities provided $2.4 million of net cash during the nine months ended September 30, 2011. We incurred a net loss of $11.3 million in the nine months ended September 30, 2011, which included depreciation and amortization of $8.5 million and non-cash share-based compensation expense of $7.4 million. Changes in operating asset and liability accounts used $2.6 million of net cash during the nine months ended September 30, 2011.

Cash Flows from Investing Activities

Cash flows from investing activities primarily relate to our investments in marketable securities and purchases of property and equipment.

Cash provided by investing activities was $5.9 million during the nine months ended September 30, 2012 and consisted of $8.5 million related to our net decrease of investments in marketable securities which represents net amounts transferred into our cash and cash equivalents, offset by capital expenditures of $2.6 million primarily related to the costs of facility improvements and purchases of lab equipment.

Cash used by investing activities totaled $47.3 million during the nine months ended September 30, 2011 and consisted of purchases of marketable securities of $50.9 million and capital expenditures of $7.8 million primarily due to the purchase of lab equipment and improvements to our facilities in Redwood City, California offset by $11.5 million of cash received from maturities and sales of marketable securities.

Cash Flows from Financing Activities

Cash provided by financing activities totaled $0.9 million during the nine months ended September 30, 2012 consisting of proceeds from the exercise of stock options.

Cash provided by financing activities totaled $2.5 million during the nine months ended September 30, 2011 consisting of proceeds from the exercise of stock options.

Contractual Obligations and Commitments

Our contractual obligations relate primarily to operating leases. Our commitments for operating leases primarily relate to our leased facilities in Redwood City, California. The following table summarizes the future commitments arising from our contractual obligations at September 30, 2012 (in thousands):

	Total	2012	2013	2014	2015	2016	2017 and beyond
Operating leases	$21,453	$821	$3,114	$2,956	$3,040	$3,054	$ 8,468
Total	$21,453	$821	$3,114	$2,956	$3,040	$3,054	$ 8,468

Off-Balance Sheet Arrangements

As of September 30, 2012, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K as promulgated by the SEC.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk Management

Our cash flow and earnings are subject to fluctuations due to changes in foreign currency exchange rates, interest rates and other factors. There were no significant changes in our market risk exposures during the three months ended September 30, 2012. This is discussed in further detail in our Annual Report in Form 10-K filed with the SEC on March 5, 2012.

Equity Price Risk

As described in Note 4 to the condensed consolidated financial statements, we have an investment in common shares of CO_2 Solutions, whose shares are publicly traded in Canada on the TSX Venture Exchange. In September 2012, the fair value of our investment in CO_2 Solutions's common stock was $0.6 million and our carrying cost for the investment was $1.3 million. We evaluated our investment in the common shares of CO_2 Solutions to determine if the impairment was other-than-temporary considering the length of time and extent to which the fair value has been less than our cost, the financial condition and near term prospects of CO_2 Solutions, and our management's ability and intent to hold the securities until fair value recovers and concluded the impairment is other than temporary. As a result of our analysis, we recorded an impairment of $0.8 million during the three months ended September 30, 2012 as an expense in our condensed consolidated statement of operations as sales, general and administrative expense.

This investment is exposed to fluctuations in both the market price of CO_2 Solutions's common shares and changes in the exchange rates between the U.S. dollar and the Canadian dollar. The effect of a 10% adverse change in the market price of CO_2 Solution's common shares as of September 30, 2012 would have been an unrealized loss of approximately $56,000, recognized as a component of our condensed consolidated statement of comprehensive income. The effect of a 10% adverse change in the exchange rates between the U.S. dollar and the Canadian dollar as of September 30, 2012 would have been an unrealized loss of approximately $56,000, recognized as a component of our condensed consolidated statements of comprehensive income.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures. We maintain disclosure controls and procedures and internal controls that are designed to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer (principal executive officer) and our Chief Financial Officer (principal financial and accounting officer), as appropriate, to allow timely decisions regarding required disclosure.

Our management, including our disclosure committee, our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as required by Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended. Based on this review, our Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures were effective as of September 30, 2012 at the reasonable assurance level.

Changes in Internal Control over Financial Reporting. There were no changes in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 or 15d-15 that occurred during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls. Our management, including our Chief Executive Officer and Chief Financial Officer, believes that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at the reasonable assurance level. However, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and not be detected.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are not currently a party to any material litigation or other material legal proceedings.

ITEM 1A. RISK FACTORS

You should carefully consider the risks described below together with the other information set forth in this Quarterly Report on Form 10-Q, which could materially affect our business, financial condition or future results. The risks described below are not the only risks facing our company. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or operating results.

Risks Relating to Our Business and Strategy

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 January 2002. From 2002 until 2005, our operations focused on organizing and staffing our company and developing our technology platform. In 2005, we recognized our first revenues from product sales. Since 2005, we have continued to generate revenues, but because our revenue growth has occurred in recent periods, our limited operating history may make it difficult to evaluate our current business and predict our future performance. 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 or annual 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 report and in our annual report on Form 10-K:

- our ability to achieve or maintain profitability;
- our ability to secure third-party funding for our advanced biofuels program;
- our ability to obtain substantial additional capital that may be necessary to expand our business;
- our relationships with and dependence on collaborators in our principal markets;
- the feasibility of commercializing biofuels and bio-based chemicals derived from cellulose;
- our dependence on, and the need to attract and retain key management and other personnel;
- any adverse affects our recent restructuring plan may have on our ability to react to business developments and manage our business;

- our ability to realize the expected benefits from the reduction in force we undertook at the end of August 2012;
- our dependence on a limited number of customers;
- our dependence on a limited number of products in our pharmaceutical business;
- our primary reliance on one contract manufacturer for commercial scale production of substantially all of our enzymes;
- the ability of Arch to effectively market pharmaceutical products manufactured using our enzymes;
- our ability to maintain internal control over financial reporting;
- our ability to manage our growth;
- the success of our customers' pharmaceutical products in the market and the ability of such customers to obtain regulatory approvals for products and processes;
- our ability to control and to improve pharmaceutical gross margins;
- our ability to develop and successfully commercialize new products for the pharmaceuticals market;
- our ability to maintain license rights for commercial scale expression systems for cellulases;
- fluctuations in the price of and demand for commodities that our enzymes and fermentation organisms can be employed to produce or for substitute commodities;
- the availability, cost and location of cellulosic biomass sources;
- changes to existing biofuel regulations and policies;
- our potential bio-based chemical products might not be approved or accepted by our customers;
- our ability to independently develop, manufacture, market, sell and distribute commercial cellulase enzymes;
- our ability to obtain and maintain governmental awards;
- risks associated with the international aspects of our business;
- our ability to integrate any businesses we may acquire with our business;
- our ability to accurately report our financial results in a timely manner;
- our ability to obtain, protect and enforce our intellectual property rights;
- our ability to prevent the theft or misappropriation of our biocatalysts, the genes that code for our biocatalysts, know-how or technologies;
- potential advantages that our competitors and potential competitors may have in securing funding or developing products;
- business interruptions, such as earthquakes and other natural disasters;
- public concerns about the ethical, legal and social ramifications of genetically engineered products and processes;
- our ability to comply with laws and regulations;
- our ability to properly handle and dispose of hazardous materials used in our business;
- potential product liability claims;
- the existence of government subsidies or regulation with respect to carbon dioxide emissions; and
- our ability to use our net operating loss carryforwards to offset future taxable income.

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, such losses may increase due to the termination of our research and collaboration with Shell, and we may not achieve or maintain profitability.

We have incurred net losses since our inception, including losses of $20.3 million, $8.5 million and $16.6 million in 2009, 2010 and 2011, respectively. As of September 30, 2012, we had an accumulated deficit of $200.0 million. To date, we have derived a substantial portion of our revenues from research and development agreements with our collaborators, particularly Shell, who accounted for 76%, 62% and 51% of our revenues in 2009, 2010 and 2011, respectively, and 56% of our revenues for the nine months ended September 30, 2012. Our research and development collaboration with Shell terminated effective as of August 31, 2012, and we do not expect to receive further collaboration revenue from Shell. If we are unable to enter into binding collaboration agreements with new partners for our advanced biofuels program, our revenues will decline substantially and our net losses may increase. In addition, some of our collaboration agreements provide for milestone payments and future royalty payments, which we will only receive if we and our collaborators develop and commercialize products. We also expect to spend significant amounts to fund the development of additional pharmaceutical and potential bioindustrial products, including our CodeXyme™ cellulase enzymes, CodeXol™ detergent alcohols and other products for the advanced biofuel and bio-based chemicals markets. There can be no assurance that any of these products will become commercially viable or that we will ever achieve profitability on a quarterly or annual basis. 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.

Our advanced biofuels program is heavily dependent on our ability to secure third-party funding.

Our current business plan for biofuels is heavily dependent on third-party funding. We previously received significant funding for our advanced biofuels program from Shell under a collaborative research agreement. This agreement terminated effective as of August 31, 2012. We are in early stage discussions with multiple parties about potential collaborations, but we cannot assure you that any of our discussions will lead to collaborations or that any new collaboration will fully substitute for the termination of the Shell collaboration. We currently do not expect to receive development funding from Raízen to support our advanced biofuels program, although Raízen will remain a target customer for CodeXyme™ should Raízen decide to build capacity for second generation ethanol in Brazil in the future. If we are unable to agree to terms with new collaborators that provide us with the financial assistance and infrastructure necessary for us to develop and commercialize our products and execute our strategy with respect to advanced biofuels, we may need to fund this development ourselves, which will have a material adverse effect on our financial condition, or we may need to suspend the program which may have a material adverse effect on our business and prospects.

Termination of our two-way research collaboration with Shell and our three-way research collaboration with Shell and Iogen may adversely impact our cellulosic ethanol program.

Our advanced biofuels research collaboration with Shell terminated effective as of August 31, 2012 and the research term of the three-way advanced biofuels collaboration with Iogen and Shell terminated on June 30, 2012. As a result of these terminations, our ability to develop technology for use in the production of cellulosic ethanol at commercial scale may be adversely impacted. Despite the termination of the research term of our three-way research collaboration with Shell and Iogen, many elements of our collaborative research and license agreement with Shell and Iogen will continue. For example, the collaborative research and license agreement provides for certain rights, licenses and obligations of each party with respect to intellectual property and program materials that will continue after the research activities have ended. Disagreements or conflicts between and among the parties could develop even though the research program has ended. These disagreements or conflicts could result in expensive arbitration or litigation, which may not be resolved in our favor.

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 business, including investing in our CodeXyme™ cellulase enzymes and CodeXol™ detergent alcohol business opportunities. Although we believe that, based on our current level of operations, our existing cash, cash equivalents and marketable securities will provide adequate funds for ongoing operations, planned capital expenditures and working capital requirements for at least the next 12 months, we may need additional capital if our current plans and assumptions change. Our need for additional capital will depend on many factors, including the financial success of our pharmaceutical business, identifying a business partner to fund our cellulase and ethanol programs, our spending to develop and commercialize new and existing products, the effect of any acquisitions of other businesses, technologies or facilities that we may make or develop in the future, our spending on new market opportunities, including bio-based chemicals, and the filing, prosecution, enforcement and defense of patent claims. If our capital resources are insufficient to meet our capital requirements, and we are unable to enter into or maintain collaborations with partners that are able or willing to fund our development efforts or commercialize any products that we develop or enable, 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 raise 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 fail to generate sufficient revenues to achieve planned gross margins and to control operating costs, 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.

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 in our markets is fundamental to the success of our business. We currently have license agreements, research and development agreements, supply agreements and/or distribution agreements with various collaborators. We may have limited or no control over the amount or timing of resources that any collaborator is able or willing to devote to our partnered products or collaborative efforts. Any of our collaborators may fail to perform their obligations. 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 revenues 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 that are developed during the collaboration, 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 unable or less willing to expend their resources on research and development or commercialization efforts due to general market conditions, their financial condition or other circumstances beyond our control; or
- our collaborators experience business difficulties, which could eliminate or impair their ability to effectively perform under our agreements;

Additionally, our business could be negatively affected if any of our collaborators or suppliers undergoes a change of control or were to otherwise assign the rights or obligations under any of our agreements.

Commercialization of biofuels and bio-based chemicals derived from cellulose may not be feasible.

We are developing CodeXyme™ cellulase enzymes for use in producing advanced biofuels and bio-based chemicals. However, production and commercialization of cellulosic biofuels and bio-based chemicals may not be feasible for a variety of reasons. For example, the development of technology for converting sugar derived from cellulosic biomass into a commercially viable biofuel or bio-based chemical is still unproven, and we do not know whether this can be done commercially and profitably. As of the date of this report, we believe that there are no commercial scale cellulosic biofuel or cellulosic bio-based chemicals production plants in operation, although several are under construction. There can be no assurance that anyone will be able or willing to develop and operate these production plants at commercial scale or that any of these facilities can be profitable. Additionally, 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 biofuels will increase.

If we lose key personnel, including key management personnel, or are unable to attract and retain additional personnel as needed in the future, it could disrupt the operation of our business, delay our product development programs, harm our research and development efforts, and we may be unable to pursue collaborations or develop our own products.

Our business involves complex, global operations across a variety of markets and requires a management team and employee workforce that is knowledgeable in the many areas in which we operate. The loss of any key members of our management team 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.

In addition, 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 areas of biofuels and bio-based chemicals, or due to the availability of personnel with the qualifications or experience necessary for our business. Additionally, potential future government awards may require us to maintain a minimum level of staffing. 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 and customers 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 and engineers. 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 technology platform or acquired through strategic or other transactions, especially in the 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 attract personnel with appropriate skills or to develop the necessary expertise could impair our ability to grow our business.

In August and September 2012, we implemented a corporate restructuring plan that included a reduction in work force of approximately 55% of our total workforce and the closure of one of our overseas offices. The restructuring and reductions in workforce have had and may continue to have a negative effect on employee morale, and we may have difficulty in attracting and retaining qualified personnel.

We have implemented cost saving measures in the third and fourth quarters of 2012 and may implement additional cost saving measures in the future. These measures may interfere with the operation of our business and if we are unable to realize the anticipated benefits of these measures, our operating results and financial condition could be adversely affected.

In the third and fourth quarters of 2012, we implemented a reduction in our global workforce and implemented other cost savings measures to reduce our cash expenditures. These measures included the termination of approximately 55% of our global workforce and the closing of our Singapore facility. If we are unable to realize the expected operational efficiencies and financial benefits from this workforce reduction, our operating results and financial condition would be adversely affected. Restructuring costs will include expenses related to severance for terminated employees and other exit-related costs arising from contractual and other obligations. We continue to review our cost structure and may implement further cost saving initiatives in the future. These cost reduction efforts may interfere with our ability to achieve our business objectives, may be difficult to manage, may cause concerns from current and potential customers, suppliers and other third parties with whom we do business and may increase the likelihood of turnover of other key employees, all of which may have an adverse impact on our business.

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, 2010, our top five customers accounted for 85% of our total revenues, with Shell accounting for 62% of our total revenues. For the year ended December 31, 2011, our top five customers accounted for 77% of our total revenues, with Shell accounting for 51% of our total revenues. For the

nine months ended September 30, 2012, our top five customers accounted for 85% of our total revenues, with Shell accounting for 56% of our total revenues. Our research collaboration with Shell terminated effective as of August 31, 2012, which means that we will not receive any additional collaboration funding from Shell. 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 of business from Shell will, and the loss or reduction from one or a combination of our other significant customers could, materially adversely affect our revenues, financial condition and results of operations.

We are dependent on a limited number of products in our pharmaceutical business.

Our current product revenues are derived from a limited number of pharmaceutical products. For the year ended December 31, 2011, we derived 83% of our product revenue from two pharmaceutical product families: statins and hepatitis C therapies. We expect a limited number of pharmaceutical products to continue to account for a significant portion of our pharmaceutical product revenues for the foreseeable future. This product concentration increases the risk of quarterly fluctuations in our revenues and operating results. The loss or reduction of business of one or a combination of our significant pharmaceutical products could materially adversely affect our revenues, financial condition and results of operations.

We are dependent on contract manufacturers for commercial scale production of substantially all of our enzymes.

We have limited internal capacity to manufacture enzymes. As a result, we are dependent upon the performance and capacity of third party manufacturers for the commercial scale manufacturing of the enzymes used in our pharmaceutical and cellulase businesses.

We primarily rely on one contract manufacturer for our pharmaceutical business, Lactosan GmbH & Co. KG, or Lactosan, to manufacture substantially all of the commercial enzymes used in our pharmaceutical business. Our pharmaceutical business, therefore, faces risks of difficulties with, and interruptions in, performance by Lactosan, the occurrence of which could adversely impact the availability, launch and/or sales of our enzymes in the future. We have qualified other contract manufacturers to manufacture enzymes for our pharmaceutical business, but currently have limited reliance on them for our supply requirements. The failure of any contract manufacturers that we may use to supply manufactured enzymes on a timely basis or at all, or to manufacture our enzymes in compliance with our specifications or applicable quality requirements or in volumes sufficient to meet demand would adversely affect our ability to sell pharmaceutical products, could harm our relationships with our collaborators or customers and could negatively affect our revenues and operating results. We may be forced to secure alternative sources of supply, which may be unavailable on commercially acceptable terms, cause delays in our ability to deliver products to our customers, increase our costs and decrease our profit margins.

We do not have any supply agreements in place with any enzyme contract manufacturers, other than Lactosan. In the absence of a supply agreement, a contract manufacturer will be under no obligation to manufacture our enzymes and could elect to discontinue their manufacture at any time. 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 substantial capital investments to build that capacity or to contract with other manufacturers on terms that may be less favorable than the terms we currently have with our suppliers. If we choose to build our own additional manufacturing facility, it could take two years or longer before our facility is able to produce commercial volumes of our enzymes. Any resources we expend on acquiring or building internal manufacturing capabilities could be at the expense of other potentially more profitable opportunities. 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 also expect to use contract manufacturers to produce our cellulase enzymes. Our cellulase enzyme business will encounter similar risks in engaging contract manufacturers as our pharmaceutical business in the event we elect to use contract manufacturers.

Our generic pharmaceutical business is partially dependent on Arch's ability to effectively market and sell certain pharmaceutical products.

Under our new agreement with Arch, Arch manufactures and sells certain APIs and intermediates to pharmaceutical companies worldwide. Arch purchase enzymes from us to manufacture these APIs and intermediates. A portion of our pharmaceuticals product revenues are dependant on Arch's ability to market and sell APIs and intermediates that are made by Arch using our enzymes. We cannot control Arch's level of activity or expenditures relating to the marketing of such pharmaceutical products relative to the rest of their products or marketing efforts. Arch may fail to effectively market these pharmaceutical products. Conflicting priorities, competing demands or other factors that we cannot control, and of which we may not be aware, may cause Arch to deemphasize such pharmaceutical products. If Arch does not successfully promote these pharmaceutical products in the marketplace, this could have an adverse impact on our pharmaceutical business and our revenues and operating results.

We are required to assess our internal control over financial reporting on an annual basis and any adverse findings from such assessment could impair our ability to accurately and timely report our results of operation and result in a loss of investor confidence in our financial reports, significant expenses to remediate any internal control deficiencies and adverse effects on our stock price.

Under Section 404 of the Sarbanes-Oxley Act, we are required to perform an annual evaluation of our internal control over financial reporting. Although, as of December 31, 2011, we concluded that our internal control over financial reporting was effective, we cannot make assurances that, in the future, 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. We need to maintain our processes and systems and adapt them as our business grows and changes in order to maintain compliance with Section 404, a process that is expensive, time-consuming and requires significant management attention. Furthermore, as we grow our business or acquire other businesses, our internal controls may become more complex and we may require significantly more resources to ensure they remain effective.

If we or our independent registered public accounting firm identify internal control deficiencies in the future, 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 Securities Exchange Act of 1934, as amended, restatements of our consolidated financial statements, significant expenses to remediate any such deficiencies, a decline in our stock price, suspension or delisting of our common stock by The NASDAQ Global Market, or other material adverse effects on our business, reputation, results of operations, financial condition or liquidity.

Our business could be adversely affected if our customers' pharmaceutical products are not received well in the market, if their pharmaceutical products, or the processes used by our customers to manufacture their final pharmaceutical products, fail to be approved, or if our customers discontinue their drug development activities for any reason.

Our enzymes are used in the manufacture of intermediates and APIs which are then used in the manufacture of final pharmaceutical products by our existing and potential branded drug customers. Our business could be adversely affected if these final pharmaceutical products do not perform in the market as well as expected, or if our customers encounter competition from new entrants into the market with competing, and possibly superior, pharmaceutical products. Additionally, these pharmaceutical products must be approved by the FDA in the United States and similar regulatory bodies in other markets prior to commercialization. If our customers who sell branded-drugs, which we refer to as innovators, fail to receive regulatory approval for the drugs, fail to receive regulatory approval for new manufacturing processes for previously approved drugs, or decide for business or other reasons to discontinue their drug development activities, our revenues and prospects 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 markets. If any pharmaceutical process that uses our enzymes does not receive approval by the appropriate regulatory body or if customers decide not to pursue approval, our business could be adversely affected.

Our pharmaceutical product gross margins are variable and may decline from quarter to quarter.

Our pharmaceutical product gross margins 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, including product mix, pricing pressure from our pharmaceutical customers and competition from other products or technologies. This variability may have a material adverse impact on our operating results and financial condition and cause our stock price to decline.

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

We plan to launch new products for the pharmaceutical market. These efforts are subject to numerous risks, including the following:

- pharmaceutical companies may be reluctant to adopt new manufacturing processes that use our enzymes;
- we may be unable to successfully develop the enzymes or manufacturing processes for our products in a timely and cost-effective manner, if at all;
- we may face difficulties in transferring the developed technologies to our customers and the contract manufacturers that we may use for commercial scale production of intermediates and enzymes;
- the 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;
- customers may not be willing to purchase these products for the pharmaceutical market from us on favorable terms, if at all;
- we may face product liability litigation, unexpected safety or efficacy concerns and pharmaceutical product recalls or withdrawals;
- changes in laws or regulations relating to the pharmaceutical industry could cause us to incur increased costs of compliance or otherwise harm our business;
- our customers' pharmaceutical products may experience adverse events or face competition from new products, which would reduce demand for our products;
- we may face pressure from existing or new competitive products; and
- we may face pricing pressures from existing or new competitors, some of which may benefit from government subsidies or other incentives.

If we are unable to maintain license rights to a commercial scale expression system for enzymes that convert cellulosic biomass to sugars, our business may be materially adversely affected.

We entered into a license agreement with Dyadic International, Inc. and its affiliate, or Dyadic, in November 2008 to obtain access to an expression system and the enzymes that convert cellulosic biomass to sugars. Under the license agreement with Dyadic, we obtained a non-exclusive license under intellectual property rights of Dyadic relating to Dyadic's proprietary fungal expression technology for the production of enzymes and to the cellulase enzymes. We also obtained access to specified materials of Dyadic relating to such Dyadic technology. Our license is sublicenseable to Shell and to affiliates of Shell in the field of biofuels. Dyadic has the right to terminate our licenses under the license agreement if we challenge the validity of any of the patents licensed under the license agreement and for various other reasons. Our licenses and access to such materials of Dyadic under the license agreement will terminate as a result of any termination of the license agreement other than due to Dyadic's material breach. If we are unable to maintain these rights on commercially reasonable terms or if the license agreement is terminated for any reason, we will need to buy or license this type of expression system from another party or develop this type of expression system ourselves, which may be difficult, costly and time consuming, in part because of the broad, existing intellectual property rights owned by Novozymes and E.I. Du Pont De Nemours and Company, or DuPont, and others. If any of these events occur, our business may be materially adversely affected.

Fluctuations in the price of and demand for certain commodities may reduce demand for the commercial products that use our technology, thus reducing demand for our technology.

Biofuels and some bio-based chemicals are anticipated to be marketed as an alternative to fossil fuel-based products. Therefore, if the price of natural gas or oil falls, any revenues that we generate from biofuel or bio-based chemical products could decline, and we may be unable to produce products that are a commercially viable alternative to fossil fuel-based products. Additionally, demand for liquid transportation fuels, including biofuels, may decrease due to economic conditions or otherwise. Demand for bio-based chemicals may also decrease if the price of natural gas or oil decreases. Similarly, CodeXyme™ cellulase enzymes are used in producing fermentable sugars, which are anticipated to be marketed as an alternative to fermentable sugars from sugar and starch food sources, such as corn and sugar cane. Therefore, if the price of sugar falls, the demand for CodeXyme™ cellulase enzymes, may fall, and we may be unable to produce cellulase enzymes for use in producing fermentable sugars that are a commercially viable alternative to fermentable sugars from sugar and starch food sources.

Our biofuel and bio-based chemical business opportunities may be limited by the availability, cost or location of feedstocks.

Our business opportunities in the biofuel and bio-based chemical markets may be dependent on the availability and price of feedstocks, including sugar, starch and cellulosic biomass. If the availability of these feedstocks decreases or their price increases, this may reduce the desirability of our biofuel and bio-based chemical products and have a material adverse effect on our financial condition and operating results. At certain levels, prices may make these products uneconomical to use and produce.

The price and availability of feedstocks may be influenced by general economic, market and regulatory factors. These factors include the availability of arable land to supply feedstock, weather conditions, farming decisions, logistics for collection and storage of cellulosic biomass, 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 feedstocks is difficult to predict, especially without knowing what types of feedstocks we may need to use.

Our current business plan for the biofuel and bio-based chemical markets is to leverage our primary competitive strength, which we believe is our ability to optimize the performance of CodeXyme™ cellulase enzymes rapidly for varying feedstocks and process conditions. While CodeXyme™ cellulase enzymes may perform well on specific feedstocks and under certain process conditions, it might not perform well on other feedstocks or process conditions. If CodeXyme™ cellulase enzymes do not perform as planned on our customers' feedstocks, our business may be adversely affected.

Changes to existing biofuel regulations and policies may present technical, regulatory and economic barriers, all of which may significantly reduce demand for biofuels.

The market for biofuels is heavily influenced by foreign, federal, state and local government regulations and policies concerning the petroleum industry. In 2007, the U.S. Congress passed an alternative fuels mandate that currently calls for approximately 36 billion gallons of liquid transportation fuels sold in 2022 to come from alternative sources, including biofuels. Of this amount, a minimum of 21 billion gallons must be advanced biofuels, with 16 billion gallons of that to be cellulosic derived. In the U.S. and a number of other countries, these regulations and policies have been modified in the past and may be modified again in the future. For example, the U.S. Environmental Protection Agency has the authority to adjust or reduce the gallon milestones of the alternative fuels mandate to reflect the marketplace supply availability. 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. Congressional and market uncertainty regarding future policies will 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 bioindustrial products may be subject to additional regulations. Adoption of E15 (15% ethanol blend) in the United States may also be a significant factor in commercialization of cellulosic ethanol. The U.S. Environmental Protection Agency granted final approval for the sale of E15 on June 15, 2012. However, federal, state and local governments have yet to determine their role in providing infrastructure support to aid retailers in installing, or replacing, fuel pumps that are required for E15. Installation of such pumps is an option, not a requirement, and if it is not adopted in the coming years it may limit the future demand for both corn-based and cellulosic ethanol in the United States.

Our potential bio-based chemical products may not be approved or accepted by customers.

We have only recently entered the market for bio-based chemical products used by large consumer products or chemical companies through our collaboration with Chemtex, a subsidiary of Gruppo Mossi & Ghisolfi, and we intend to explore other opportunities in these markets. In entering these markets, we intend to sell our bio-based chemical products, like CodeXol™ detergent alcohols, as alternatives to chemicals currently in use, and in some cases the chemicals that we seek to replace have been used for many years. The potential customers for our bio-based chemical products generally have well developed manufacturing processes and arrangements with suppliers of the chemical components of their products and may resist changing these processes and components. These potential customers frequently impose lengthy and complex product qualification procedures on their suppliers. Factors that these potential customers consider during the product qualification process include consumer preference, manufacturing considerations such as process changes and capital and other costs associated with transitioning to alternative components, supplier operating history, regulatory issues, product liability and other factors, many of which are unknown to, or not well understood by, us. Satisfying these processes may take many months or years. If we are unable to convince these potential customers that

our products are comparable to the chemicals that they currently use or that the use of our products produces benefits to them, we will not be successful in these markets and our business will be adversely affected. Additionally, in contrast to the tax incentives relating to biofuels, tax credits and subsidies are not currently available in the United States for consumer products or chemical companies who use our bio-based chemical products.

We have only limited experience with independently developing, manufacturing, marketing, selling and distributing commercial cellulase enzymes.

We currently have only limited resources and capability to develop, manufacture, market, sell or distribute CodeXyme™ cellulase enzymes on a commercial scale. We will determine how to best deploy these limited resources based on various criteria, including: investment required, estimated time to market, regulatory hurdles, infrastructure requirements and industry-specific expertise necessary for successful commercialization. At any time, we may modify our strategy and pursue collaborations for the development and commercialization of CodeXyme™ cellulase enzymes that we intended to pursue independently. We may pursue opportunities that ultimately require more resources than we anticipate or which may be technically unsuccessful. In order for us to commercialize CodeXyme™ cellulase enzymes directly, we would need to establish or obtain additional capability to develop, manufacture, market, sell and distribute CodeXyme™ cellulase enzymes. If we are unable to successfully commercialize CodeXyme™ cellulase enzymes resulting from our internal product development efforts, we will continue to incur losses. Even if we successfully develop and commercialize CodeXyme™ cellulase enzymes, we may not generate significant sales and achieve profitability in our business.

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

We have received various government awards to complement and enhance our own resources. We may seek to obtain financial assistance in the future to offset all or a portion of the costs of building additional manufacturing facilities and research and development activities. We cannot be certain that we will be able to secure any such government assistance. Any of our existing awards or new financial assistance that we may obtain may be terminated, modified or recovered by the granting governmental body under certain conditions.

We are subject to routine audits by government agencies or other third parties as part of our government awards. The government auditor may review our performance, cost structures and compliance with applicable laws, regulations and standards. Funds available under government financial assistance must be applied by us toward the research and development programs specified by the funding agencies, rather than for all of our programs generally. If any of our costs are found to be allocated improperly, the costs may not be reimbursed and any costs already reimbursed may have to be refunded. Accordingly, an audit could result in an adjustment to our revenues and results of operations.

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, repatriate profits to the United States or operate our foreign-located facilities;
- 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, regulations and legal proceedings including tax, import/export, anti-corruption and exchange control laws;
- the availability of government subsidies or other incentives that benefit competitors in their local markets that are not available to us;
- increased demands on our limited resources created by our diversified, global operations may require us to expand the capabilities of our administrative and operational resources and to attract, train, manage and retain qualified management, technicians, scientists and other personnel which we may be unable to do effectively;
- economic or political instability in foreign countries;
- difficulties associated with staffing and managing foreign operations; and
- the need to comply with a variety of U.S. and foreign laws applicable to the conduct of international business, including import and export control laws and anti-corruption laws.

We have recently begun doing business in Brazil and we will likely need to secure licenses, permits or other governmental approvals in order to use our technology there. The failure to obtain any applicable licenses, permits or other governmental approvals could delay or prevent the deployment of our technology in Brazil.

If we engage in any acquisitions, we will incur a variety of costs and may potentially face numerous risks that could adversely affect our business and 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. For example, in October 2010, we acquired substantially all of the patents and other intellectual property rights associated with Maxygen's directed evolution technology. In connection with any future acquisitions, we could:

- issue additional equity securities, which would dilute our current stockholders;
- incur substantial debt to fund the acquisitions;
- use our cash to fund the acquisitions; or
- assume significant liabilities including litigation risk.

Acquisitions involve numerous risks, including problems integrating the purchased operations, technologies or products, unanticipated costs and other liabilities, 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's 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, we may acquire companies that have insufficient internal financial controls, which could impair our ability to integrate the acquired company and adversely impact our financial reporting. 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 third parties that sell our pharmaceutical products that are manufactured using our biocatalysts to provide us with complete and accurate information regarding revenues, costs of revenues and payments owed to us on a timely basis. In addition, we rely on suppliers and certain contract manufacturers, including Arch, to provide us with timely and accurate information regarding our inventories and manufacturing cost information, and we rely on current and former collaborators to provide us with 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 performance metrics for the period, 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 revenues 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 in a timeframe consistent with our reporting requirements.

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.

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 September 30, 2012, we owned or controlled approximately 307 issued patents and approximately 320 pending patent applications in the United States and in various foreign jurisdictions. Some of our gene shuffling patents will expire as early as 2014. We also have license rights to a number of issued patents and pending patent applications in the United States and in various foreign jurisdictions. Our owned and licensed patents and patent applications are directed to our enabling technologies and to the methods and products that support our business in the pharmaceuticals manufacturing, biofuels and bio-based chemicals markets. 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. Moreover, the U.S. Leahy-Smith America Invents Act, enacted in September 2011, brings significant changes to the U.S. patent system, which include a change to a “first to file” system from a “first to invent” system and changes to the procedures

for challenging issued patents and disputing patent applications during the examination process, among other things. The effects of these changes on our patent portfolio and business have yet to be determined, as the U.S. Patent and Trademark Office must still implement regulations relating to these changes and U.S. courts have yet to address the new provisions, but in any event, these changes could increase the costs and uncertainties surrounding the prosecution of our patent applications and the enforcement or defense of our patent rights. Additional uncertainty may result from legal precedent handed down by the United States Federal Circuit Court and Supreme Court as they determine legal issues concerning the scope and construction of patent claims and inconsistent interpretation of patent laws by the lower courts. 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, or (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. Moreover, third parties could practice our inventions in territories where we do not have patent protection. Such third parties may then try to import products made using our inventions into the United States or other territories. 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.

Third parties may claim that we are infringing their intellectual property rights or other proprietary rights, which may subject us to costly and time consuming litigation and prevent us from developing or commercializing our products.

Our commercial success also depends in part on our ability to operate without infringing patents and proprietary rights of third parties, and without 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 make, use or sell our products in those countries, or import our products into 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 industries in which we operate, and the biotechnology industry in particular, are characterized by frequent and extensive litigation regarding patents and other intellectual property rights. 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 divert our management's time from focusing on business operations and could 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 or using our products or technologies that use the subject intellectual property;
- pay monetary damages or substantial royalties;
- grant cross-licenses to third parties relating to our patents or proprietary rights;

- 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, or relocate the operations relating to the allegedly infringing technology to another jurisdiction, which may result in significant cost or delay to us, could be technically infeasible or could prevent us from selling some of our products in the United States or other jurisdictions.

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 before the United States Patent and Trademark Office 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, any 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 Brazil, where we have recently begun to do business, 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 certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property, particularly those relating to biotechnology and/or bioindustrial technologies. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate. This could make it difficult for us to stop the infringement of our patents or misappropriation of our other intellectual property rights. Additionally, proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business.

If our biocatalysts, or the genes that code for our biocatalysts, are stolen, misappropriated or reverse engineered, 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, misappropriated or reverse engineered, 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 or in countries in which we do not have patents covering the misappropriated biocatalysts.

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 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.

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. In addition, as we enter new markets, we will face new competition and will need to adapt to competitive factors that may be different from what we face today.

We are aware that other companies, including Royal DSM N.V., or DSM, DuPont, Novozymes, and Vercipia Biofuels, an affiliate of BP P.L.C., 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 Pharmaceutical Industries Ltd. There are also many large, well-established fine chemical manufacturing companies, such as DSM, BASF Corporation and Lonza Group Ltd, that compete to supply pharmaceutical intermediates and APIs to our customers. We also face increasing competition from generic pharmaceutical manufacturers and contract 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 and Amano Enzyme Inc., whose industrial enzymes (for detergents, for example) are occasionally used in pharmaceutical processes. There is also competition in this area from several small companies with product offerings comprised primarily of naturally occurring biocatalysts or that offer biocatalyst optimization services.

We expect to enter the market for cellulases, which are used to produce sugar for the manufacture of biofuels and bio-based chemicals. Our significant competitors in this market include Novozymes and DuPont, which have both been active in this market for many years. Novozymes, has partnered with a number of companies and organizations on a regional basis to develop cellulases for the production of biofuels, including partnering with M&G in Italy to be the cellulase supplier to a commercial scale cellulosic ethanol plant being built by Chemtex, and DuPont is marketing a line of cellulases to convert

cellulosic biomass into sugar. These competitors have greater resources than we do, own or otherwise control established intellectual rights portfolios, have existing relationships with customers that we hope to sell CodeXyme™ cellulases to, have long-term supply agreements already in place with customers for their bio-based products, and have the supply chain in place to sell their cellulases on a global platform. Our ability to compete in this market may be limited by our relatively late start. Additionally, DSM has announced that it expects to participate in this market.

There are also other companies developing competing cellulosic ethanol technologies. Significant competitors include companies such as: Novozymes, which is opening a biofuel demonstration plant with Inbicon A/S of Denmark; DuPont Danisco Cellulosic Ethanol, or DDCE, which is developing facilities to produce cellulosic ethanol; DSM, which acquired C5 Yeast Company B.V. in 2011 enhancing DSM's position in the cellulosic biofuel sector, and which has recently partnered with POET LLC to form POET-DSM Advanced Biofuels to construct a facility to produce cellulosic ethanol; Mascoma Corporation, which entered into a definitive agreement with Valero Energy Corporation in December 2011 to build a commercial-scale cellulosic ethanol biorefinery; BP, which is developing a commercial scale cellulosic ethanol facility through its affiliate Vercipia Biofuels; and Coskata, Inc., which is developing a hybrid thermochemical-biocatalytic process to produce ethanol from a variety of feedstocks. With our CodeXol™ detergent alcohols, we have recently entered the bio-based chemical market. Our significant competitors in this market include companies that have been active in this marketplace for many years, namely Sasol, Shell, BASF, Kao Corporation and Liaoning Huaxing. These companies have greater resources in this market than we do and have long-term supply arrangements already in place with consumer products companies. Our ability to compete in this market may be limited by our relatively late start.

Our ability to compete successfully in any of these markets 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. They also started developing products earlier than we did, which may allow them to establish blocking intellectual property positions or bring products to market before we can. In addition, certain of our competitors may also benefit from local government subsidies and other incentives that are not available to us. 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. We cannot be certain that any products we develop in the future will compare favorably to products offered by our competitors or that our existing or future products will compare favorably to any new products that are developed by 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.

In addition, various governments have recently announced a number of spending programs focused on the development of clean technology, including alternatives to petroleum-based fuels. Such spending programs could lead to increased funding for our competitors or the rapid increase in the number of competitors within those markets.

Our limited 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.

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, infections in our laboratory or production facilities or those of our contract manufacturers 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.

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 increased 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, the release of such biocatalysts into uncontrolled environments could have unintended consequences. 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.

Compliance with stringent laws and regulations may be time consuming and costly, which could adversely affect the commercialization of our bioindustrial products.

Our bioindustrial products, including those used in the biofuels and bio-based chemicals markets, 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. In addition, our bioindustrial products will be subject to foreign regulations if we attempt to

produce or sell our products outside the United States. For example, we expect that our products and technologies will be subject to import and export controls when they are shipped internationally. Any failure to comply or delays in compliance, with the various existing and evolving industry regulations and standards could prevent or delay the commercialization of any bioindustrial products developed using our technologies and subject us to fines and other penalties.

We use hazardous materials in our business and we must comply with environmental laws and regulations. Any claims relating to improper handling, storage or disposal of these materials or noncompliance of applicable laws and regulations could be time consuming and costly and could adversely affect our business and results of operations.

Our research and development and commercial processes involve the use of hazardous materials, including chemical, radioactive, and biological materials. Our operations also produce hazardous waste. We cannot eliminate entirely the risk of accidental contamination or discharge and any resultant injury from these materials. Federal, state, local and foreign laws and regulations govern the use, manufacture, storage, handling and disposal of, and human exposure to, 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. Although we believe that our activities comply in all material respects with environmental laws, there can be no assurance that violations of environmental, health and safety laws will not occur in the future as a result of human error, accident, equipment failure or other causes. Compliance with applicable environmental laws and regulations may be expensive, and the failure to comply with past, present, or future laws could result in the imposition of fines, third party property damage, product liability and personal injury claims, investigation and remediation costs, the suspension of production, or a cessation of operations, and our liability may exceed our total assets. Liability under environmental laws can be joint and several and without regard to comparative fault. Environmental laws could become more stringent over time imposing greater compliance costs and increasing risks and penalties associated with violations, which could impair our research, development or production efforts and harm our business. In addition, we may have to indemnify some of our customers or suppliers for losses related to our failure to comply with environmental laws, which could expose us to significant liabilities.

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. For example, we may be named directly in product liability suits relating to drugs that are produced using our enzymes or that incorporate our intermediates and APIs. The biocatalysts, pharmaceutical intermediates and APIs that we produce or are produced for us by our manufacturing partners could be subject to quality control or contamination issues of which we are not aware. Claims could be brought by various parties, including customers who are purchasing products directly from us, other companies who purchase products from our customers or by the end users of the drugs. We could also be named as co-parties in product liability suits that are brought against our contract manufacturers who manufacture our enzymes, pharmaceutical intermediates and APIs, such as Lactosan and/or Arch. Insurance coverage is expensive and may be difficult to obtain, and may not be available in the future on acceptable terms, or at all. We cannot assure you that our contract manufacturer has adequate insurance coverage to cover against potential claims. In addition, 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. This insurance may not provide adequate coverage against potential losses, and if claims or losses exceed our liability insurance coverage, we may go out of business. Moreover, we have agreed to indemnify some of our customers for certain claims that may arise out of the use of our products, which could expose us to significant liabilities.

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. If the Internal Revenue Service challenges our analysis that our existing NOLs are not subject to limitations arising from previous ownership changes, our ability to utilize NOLs could be 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. 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 in our financial statements, even if we attain profitability.

Risks Related to Owning our Common Stock

We are subject to anti-takeover provisions in our certificate of incorporation and bylaws and under Delaware law, as well as our stockholder rights plan, 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 may delay or prevent an acquisition of us. Among other things, our amended and restated certificate of incorporation and bylaws provide for a board of directors which is divided into three classes, with staggered three-year terms and provide that all stockholder action must be effected at a duly called meeting of the stockholders and not by a consent in writing, and further provide that only our board of directors, the chairman of the board of directors, our chief executive officer or president may call a special meeting of the stockholders. In addition, our amended and restated certificate of incorporation allows our board of directors, without further action by our stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. 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.

On September 3, 2012, we entered into a stockholder rights plan and declared a dividend of one preferred stock purchase right for each share of our common stock held by stockholders of record as of September 18, 2012. Each right entitles stockholders, after the rights become exercisable, to purchase one one-thousandth of a share of our Series A Preferred Stock, par value $0.0001, at a purchase price of $11.35 per one-thousandth of a share of Series A Preferred Stock. In general, the rights become exercisable at the close of business on the tenth business day following (i) public announcement that a person or group acquired 15% or more of our common stock or (ii) commencement or announcement of

a tender offer for 15% or more of our common stock. The rights may discourage a third-party from making an unsolicited proposal to acquire us, as exercise of the rights would cause substantial dilution to a person or group that attempts to acquire us on terms not approved by our board of directors. The rights should not interfere with any merger or other business combination approved by our board of directors since the rights may be redeemed by us at $0.0001 per right at any time before any person or group acquires 15% or more of our outstanding common stock. These rights expire in September 2013.

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.

Based on the number of shares outstanding as of September 30, 2012, our officers, directors and stockholders who hold at least 5% of our stock together beneficially own approximately 35.95% of our outstanding common stock. 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. As of September 30, 2012, Raízen, Biomedical Sciences Investment Fund Pte Ltd. and CMEA Ventures beneficially owned approximately 14.9%, 8.5% and 8.1% of our common stock, respectively.

Our share price may be volatile which may cause the value of our common stock to decline and subject us to securities class action litigation.

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;
- the position of our cash, cash equivalents and marketable securities;
- 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, our collaborators or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- any announcements or developments from Raízen;
- announcements or developments regarding technical progress of CodeXyme™ cellulase enzymes or CodeXol™ detergent alcohols;
- additions or losses of one or more significant pharmaceutical products;
- announcements or developments regarding pharmaceutical products manufactured using our biocatalysts, intermediates and APIs;
- the entry into, modification or termination of collaborative arrangements;
- additions or losses of customers;

- additions or departures of key management or scientific personnel;
- competition from existing products or new products that may emerge;
- issuance of new or updated research reports by securities or industry analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- disputes or other developments related to proprietary rights, including patent litigation and our ability to obtain patent protection for our technologies;
- changes in existing laws, regulations and policies applicable to our business and products, including the National Renewable Fuel Standard program;
- contractual disputes or litigation with our partners, customers or suppliers;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders or our other 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, including the recent financial crisis.

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. 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.

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 in a negative manner, 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.

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

As a public company, we incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as related rules implemented by the Securities and Exchange Commission and The NASDAQ Stock Market, impose various requirements on public companies that require our management and other personnel to devote a substantial amount of time to compliance initiatives.

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, 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. Our compliance with Section 404 requires that we incur substantial accounting expense and expend significant management time on compliance-related issues. Moreover, if we are not able to maintain compliance with the requirements of Section 404, our stock price could decline, and we could face sanctions, delisting or investigations by The NASDAQ Global Market, or other material adverse effects on our business, reputation, results of operations, financial condition or liquidity.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

(a)

Not applicable.

(b) Use of Proceeds from Public Offering of Common Stock

On April 27, 2010, we closed our IPO, in which we sold 6,000,000 shares of common stock at a price to the public of $13.00 per share. The aggregate offering price for shares sold in the offering was $78.0 million. The offer and sale of all of the shares in the IPO were registered under the Securities Act of 1933, as amended, pursuant to a registration statement on Form S-1 (File No. 333-164044), which was declared effective by the SEC on April 21, 2010.

There has been no material change in the planned use of proceeds from our IPO as described in our final prospectus filed with the SEC on April 22, 2010 pursuant to Rule 424(b). We invested the funds received in registered money market fund and other marketable securities.

ITEM 3. Defaults Upon Senior Securities

Not applicable

ITEM 4. Mine Safety Disclosures

Not applicable

ITEM 5. Other Information

(a)

On November 5, 2012, the Company entered a change of control severance agreement with David Anton, the Company's Senior Vice President, BioIndustrials, in the form entered into between the Company and certain of its officers, as filed as Exhibit 10.23 to the Company's Registration Statement on Form S-1 (File No. 333-164044), effective April 21, 2010. See the Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on April 30, 2012 related to the Company's 2012 Annual Meeting of Stockholders for a description of the Company's form change of control severance agreement.

On November 1, 2012, the Company entered into an Enzyme Supply Agreement (the "New Arch Enzyme Supply Agreement") with Arch, pursuant to which Arch agreed to exclusively purchase enzymes from the Company for use in the manufacture of certain of Arch's products (the "Specified Products") and the Company agreed to exclusively supply, with limited exceptions, certain of the Company's proprietary enzymes to Arch at an agreed upon price for use in such manufacture. The exclusivity may expire in certain circumstances, including if Arch fails to purchase a specified minimum quantity of enzymes from the Company. Under the terms of the New Arch Supply Agreement, Arch has an obligation to use

commercially reasonably efforts to market the Specified Products to its customers. The Company has agreed not to buy or source any of the Specified Products from anyone other than Arch and has agreed not to sell any Specified Products to any of Arch's customers. Each of the parties to the New Arch Supply Agreement has made customary representations, warranties and covenants in the New Arch Supply Agreement and each party has agreed to indemnify the other for certain losses arising out of breaches of such representations, warranties and covenants, and other specified matters. The New Arch Supply Agreement terminates on February 16, 2020, unless extended by mutual agreement of the parties and/or unless terminated at an earlier date in accordance with the customary terminations provisions contained in the Agreement.

The New Arch Supply Agreement supersedes and terminates each of (i) the Enzyme and Product Supply Agreement, effective as of February 16, 2010, as amended April 22, 2011 and August 17, 2011, between the Company and Arch, (ii) the Memorandum of Understanding for Transfer Pricing and Royalty Calculation, effective as of February 16, 2010, as amended April 25, 2011, between the Company and Arch, (iii) the Product Supply Agreement, effective as of February 16, 2010, as amended April 22, 2011 and August 17, 2011, between Codexis Laboratories India Private Limited ("Codexis India") and Arch, and (iv) the Memorandum of Understanding for Transfer Pricing, effective as of February 16, 2010, as amended April 25, 2011, between Codexis India and Arch, as amended (collectively, the "Prior Arch Supply Agreements"). The Prior Arch Supply Agreements provided that the Company would supply Arch with enzymes at an agreed upon price, and Arch would in turn manufacture certain APIs, or intermediates used in the manufacture of APIs, using those enzymes and would supply such APIs or intermediates to the Company at a formula-based or agreed upon price. The Company had the exclusive right to sell such APIs or intermediates to innovator pharmaceutical companies worldwide, generic pharmaceutical companies in the United States, Canada, Europe and Israel, and certain pharmaceutical companies in India. Arch had the exclusive right to manufacture, market and sell such APIs or intermediates to generic pharmaceutical companies in countries other than the United States, Canada, Europe and Israel, and certain other pharmaceutical companies in India. Under this collaboration, Arch owed a license royalty to the Company based on the volume of product they sold to the Company or the customers to which it sold product directly. Royalties earned from Arch under this arrangement were $752,000 for the twelve months ended December 31, 2011 and $589,000 in the nine months ended September 30, 2012. With the termination of the Prior Arch Supply Agreements, Arch will no longer produce APIs and intermediates for the Company and will no longer pay the Company royalties on the sale of APIs and intermediates to customers, and the Company will no longer have exclusive rights to market such APIs and intermediates in certain markets.

The foregoing is only a summary of the material terms of the New Arch Supply Agreement, does not purport to be a complete description of the rights and obligations of the parties thereunder and is qualified in its entirety by reference to the Agreement that will be filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ending December 31, 2012.

(b)

Not applicable.

ITEM 6. Exhibits

3.1	Amended and Restated Certificate of Incorporation of Codexis, Inc. filed with the Secretary of the State of the State of Delaware on April 27, 2010 and effective as of April 27, 2010 (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010, filed on May 28, 2010).

3.2	Certificate of Designations of Series A Junior Participating Preferred Stock of Codexis, Inc., filed with the Secretary of State of the State of Delaware on September 4, 2012 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, filed on September 4, 2012).
3.3	Amended and Restated Bylaws of Codexis, Inc. effective as of April 27, 2010 (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010, filed on May 28, 2010).
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company's Quarterly Report for the quarter ended June 30, 2012, filed on August 9, 2012).
4.2	Rights Agreement by and between the Company and Wells Fargo Bank, N.A., which includes the Form of Certificate of Designations of Series A Junior Participating Preferred Stock as Exhibit A, the Form of Right Certificate as Exhibit B and the Summary of Rights to Purchase Preferred Shares as Exhibit C, dated as of September 3, 2012 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed on September 4, 2012).
10.1	Exclusive Negotiation Agreement by and between the Company and Equilon Enterprises LLC dba Shell Oil Products US effective as of July 10, 2012.
10.2†	Agreement by and between the Company and Equilon Enterprises LLC dba Shell Oil Products US effective as of August 31, 2012.
10.3	Offer Letter Agreement by and between the Company and David O'Toole effective as of September 1, 2012.
10.4	David O'Toole Stock Option Grant Notice and Stock Option Agreement dated September 10, 2012 between David O'Toole and the Company.
10.5	David O'Toole Restricted Stock Grant Notice and Restricted Stock Agreement dated September 10, 2012 between David O'Toole and the Company.
10.6	Sixth Amendment to Lease by and between the Company and Metropolitan Life Insurance Company dated as of September 27, 2012.
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
32.1	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. §1350.
101**	The following materials from Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012, formatted in Extensible Business Reporting Language (XBRL) includes: (i) Condensed Consolidated Balance Sheets at September 30, 2012 and December 31, 2011, (ii) Condensed Consolidated Statements of Income for the Three and Nine months Ended September 30, 2012 and 2011, (iii) Condensed Consolidated Statements of Cash Flows for the Three and Nine months Ended September 30, 2012 and 2011, and (iv) Notes to Condensed Consolidated Financial Statements.

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

** XBRL information is furnished and not filed or a part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Exchange Act of 1933, as amended, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Codexis, Inc.

Date: November 7, 2012

By: /s/ John Nicols
John Nicols
President and Chief Executive Officer
(principal executive officer)

Date:November 7, 2012

By: /s/ David O'Toole
David O'Toole
Senior Vice President and Chief Financial Officer
(principal financial and accounting officer)

EXHIBIT INDEX

Listed and indexed below are all Exhibits filed as part of this report.

ITEM 6. Exhibits

3.1	Amended and Restated Certificate of Incorporation of Codexis, Inc. filed with the Secretary of the State of the State of Delaware on April 27, 2010 and effective as of April 27, 2010 (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010, filed on May 28, 2010).
3.2	Amended and Restated Bylaws of Codexis, Inc. effective as of April 27, 2010 (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010, filed on May 28, 2010).
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company's Quarterly Report for the quarter ended June 30, 2012, filed on August 9, 2012).
10.1	Exclusive Negotiation Agreement by and between the Company and Equilon Enterprises LLC dba Shell Oil Products US effective as of July 10, 2012.
10.2†	Agreement by and between the Company and Equilon Enterprises LLC dba Shell Oil Products US effective as of August 31, 2012.
10.3	Offer Letter Agreement by and between the Company and David O'Toole effective as of September 1, 2012.
10.4	David O'Toole Stock Option Grant Notice and Stock Option Agreement dated September 10, 2012 between David O'Toole and the Company.
10.5	David O'Toole Restricted Stock Grant Notice and Restricted Stock Agreement dated September 10, 2012 between David O'Toole and the Company.
10.6	Sixth Amendment to Lease by and between the Company and Metropolitan Life Insurance Company dated as of September 27, 2012.
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
32.1	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. §1350.
101**	The following materials from Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012, formatted in Extensible Business Reporting Language (XBRL) includes: (i) Condensed Consolidated Balance Sheets at September 30, 2012 and December 31, 2011, (ii) Condensed Consolidated Statements of Income for the Three and Nine months Ended September 30, 2012 and 2011, (iii) Condensed Consolidated Statements of Cash Flows for the Three and Nine months Ended September 30, 2012 and 2011, and (iv) Notes to Condensed Consolidated Financial Statements.

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

** XBRL information is furnished and not filed or a part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Exchange Act of 1933, as amended, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.

Exhibit 10.1

EXCLUSIVE NEGOTIATION AGREEMENT

THIS EXCLUSIVE NEGOTIATION AGREEMENT, together with exhibits and schedules attached hereto, (the "**Agreement**") is entered into and effective as of July 10, 2012 (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**."

WHEREAS, Shell and Codexis entered into a certain Amended and Restated Collaborative Research Agreement, effective as of November 1, 2006, as amended (the "**Research Agreement**"), pursuant to which the Parties have collaborated to develop certain new biocatalytic processes for use in the conversion of biomass to fuels and/or fuel additives and/or lubricants; and

WHEREAS, the Parties desire to reduce the number of days of advance notice required under Section 2.6(c) of the Research Agreement for Shell to reduce the total number of FTEs assigned by Codexis to perform Codexis' obligations under the Program and, in exchange for such reduction, the Parties agree to negotiate the terms and conditions of an agreement under which Shell would grant to Codexis certain intellectual property rights.

NOW, THEREFORE, in consideration of the promises and undertakings set forth herein, the Parties hereby agree as follows:

1. **DEFINED TERMS.** All terms defined in the Research Agreement shall have the same meaning in this Agreement, unless otherwise expressly defined in this Agreement.

2. **ADVANCE NOTICE REQUIREMENT.** Codexis and Shell each agree that the advance notice requirement set forth in Section 2.6(c) of the Research Agreement for the reduction of any number between 13 and $\leq$ 48 of the total number of FTEs assigned by Codexis to perform Codexis' obligations under the Program will be changed and reduced from 90 days to 1 day; provided that Shell may not exercise its right under this Section 2 to deliver notice of its intention to reduce the number of such FTEs by any number between 13 and $\leq$ 48 until August 31, 2012.

3. **EXCLUSIVE NEGOTIATION.** In exchange for the reduction in the advance notice requirement set forth in Section 2.6(c) of the Research Agreement, as set forth in Section 2 above, Shell, on behalf of itself and its wholly owned direct and indirect subsidiaries, agrees to negotiate with Codexis exclusively, and in good faith, until September 1, 2012 the terms and conditions of an agreement under which Shell would grant to Codexis certain rights and licenses in the Field of Use to develop, make, use and sell Biocatalysts to Third Parties on a worldwide basis, except Brazil.

[*Signature Page Follows*]

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.

EQUILON ENTERPRISES LLC
DBA SHELL OIL PRODUCTS US

By: /s/Phillip Baxley
Name: Phillip Baxley
Title: Attorney in Fact

CODEXIS, INC.

By: /s/John J. Nicols
Name: John J. Nicols
Title: President and Chief Executive Officer

Exhibit 10.2

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXECUTION COPY

AGREEMENT

THIS AGREEMENT, together with the schedules attached hereto, (this "**Agreement**") is entered into as of the Execution Date and effective as of August 31, 2012 (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 Amended and Restated License Agreement, entered into as of November 1, 2007 and effective as of November 1, 2006, as amended (the "**License Agreement**"), pursuant to which Codexis granted to Shell certain license rights under Codexis Patent Rights, Codexis Licensed Technology, Program Patent Rights and Program Technology so that Shell can manufacture, use, sell, offer for sale and import Licensed Products (as such terms are defined below).

WHEREAS, the Parties desire to amend the License Agreement as of the Effective Date, pursuant to which Shell would grant to Codexis a certain royalty-bearing, non-exclusive license under Codexis Patent Rights, Codexis Licensed Technology, Program Patent Rights and Program Technology so that Codexis can manufacture, use, sell, offer for sale and import Licensed Products in the Intermediate Field of Use (as such term is defined below), in accordance with the terms and conditions herein.

WHEREAS, Shell and Codexis entered into a certain Amended and Restated Collaborative Research Agreement, entered into as of November 1, 2007 and effective as of November 1, 2006, as amended (the "**Research Agreement**"), pursuant to which the Parties have collaborated 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 to terminate the Research Agreement as of the Effective Date, pursuant to which Shell would pay to Codexis a certain payment in full satisfaction of Shell's remaining FTE funding obligation under the Research Agreement and Codexis and its Affiliates would have no further obligations to Shell to provide any FTEs to perform work under the Program (as such term is defined below), in accordance with the terms and conditions herein.

WHEREAS, Shell, Shell Chemicals Canada Limited ("**Shell Canada**"), Codexis and Iogen Energy Corporation ("**IE**") entered into a certain Collaborative Research and License Agreement, effective as of July 10, 2009 (the "**IE/Codexis/Shell Agreement**"), pursuant to which Codexis and IE collaborated to develop technology relating to the conversion of biomass to ethanol, focusing in particular on development of yeasts for the production of ethanol from C5 and C6 sugars and enzymes for saccharification of pretreated biomass.

WHEREAS, Codexis and Dyadic International (USA), Inc. and Dyadic International, Inc. (together with Dyadic International (USA), Inc., hereinafter "**Dyadic**"), entered into a certain License Agreement, effective as of November 14, 2008 (the "**Dyadic License**"), pursuant to which Codexis obtained a non-exclusive license under certain Dyadic patent rights and know-how relating to the generation and use of Dyadic's proprietary C1 (as such term is defined below) technology for the expression of certain genes and secretion of certain corresponding enzymes.

WHEREAS, Shell and Codexis entered into a certain letter agreement, dated November 3, 2008 (the "**Dyadic Letter**"), pursuant to which Shell agreed to make certain payments under the Dyadic License with respect to certain Shell activities using the C1 technology, directly to Dyadic.

WHEREAS, the Parties desire to amend and restate each Party's responsibility for payments under the Dyadic License for such Party's manufacture, use, sale, offer for sale or importation of Licensed Products (as defined in the Dyadic License).

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 Unless specified elsewhere in this Agreement, **"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 1.1(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 1.1(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 percent (50%) 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.

1.2 "Assignee" has the meaning set forth in Section 7.1.

1.3 "Assignment" has the meaning set forth in Section 7.1.

1.4 "Associated Company" means any business entity controlling, controlled by, or under common control with any other business entity. For the purpose of the definition of "Associated Company" only, "control" means (a) 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 (b) 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. Notwithstanding anything to the contrary, for purposes of this Agreement, neither Shell nor any of its Affiliates (other than IE or Raízen Energia Participações S.A., a Brazilian company, having offices at Avenida Presidente Juscelino Kubitcheck, 1327 6 O Andar, São Paulo, D5 04543-011, Brazil (**"Raízen"**)) shall be deemed to be an Associated Company of IE or Raízen.

1.5 "Biocatalyst" has the meaning set forth in the License Agreement.

1.6 "Biomass" has the meaning set forth in the License Agreement.

1.7 "C1" means any fungal strain, enzyme, gene or other material that was licensed by Dyadic to Codexis pursuant to the Dyadic License, and any progeny, derivative or modification of the foregoing.

1.8 "Calendar Year" means (a) for the first Calendar Year of the term of this Agreement, the period beginning on the Effective Date and ending on December 31, 2012, (b) for each Calendar Year during the term of this Agreement thereafter, each successive period beginning on January 1 and ending twelve (12) consecutive calendar months later on December 31, and (c) for the last Calendar Year of the term of this Agreement, the period beginning on January 1 of the Calendar Year in which this Agreement expires or terminates and ending on the effective date of expiration or termination of this Agreement.

1.9 "Cellulase Technology" means any Microbe or Biocatalyst developed by Codexis and/or its Affiliates that is a derivative of C1 and/or C1-derived enzymes for which Shell receives rights to such Microbe or Biocatalyst pursuant to and/or in accordance with, (a) Section 2.1 of the License Agreement, (b) Section 4.5 of the IE/Codexis/Shell Agreement and/or (c) Section 4.2 of this Agreement, in each case for use in the Intermediate Field of Use.

1.10 "Codexis Licensed Technology" has the meaning set forth in the License Agreement.

1.11 "Codexis Patent Rights" has the meaning set forth in the License Agreement.

1.12 "Codexis Qualified Transaction" means any transfer or assignment by Codexis of its rights and obligations to a successor of all or substantially all of the business or assets relating to this Agreement, whether by sale, acquisition, merger, operation of law or otherwise.

1.13 "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 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.

1.14 "**Cost**" shall have the meaning set forth on Schedule A attached hereto.

1.15 "**Covered Information**" means Confidential Information under the Research Agreement that is related to, or useful in, the use or practice of Technology (as defined in the Research Agreement) that falls within the Intermediate Field of Use.

1.16 "**Covered Technology**" means the intellectual property licensed by Codexis to Shell pursuant to Section 4.2(a) only. For purposes of clarification, "Covered Technology" shall not include any intellectual property or other technology covered under the license grants in Section 2.1 of the License Agreement or Section 4.5 of the IE Agreement/Codexis/Shell Agreement.

1.17 "**Covered Use**" means the use (or proposed use) of a Sample in the Sample Territory that is fully compliant with all instructions and guidance provided by Codexis to Shell with respect to the applicable Sample pursuant to Section 4.2(d).

1.18 "Dyadic Letter" has the meaning set forth in the Recitals.

1.19 "Dyadic License" has the meaning set forth in the Recitals.

1.20 "**First Commercial Sale**" means the first transfer by Codexis and/or a Codexis Affiliate of a Biocatalyst to a Third Party in exchange for cash, or cash equivalent to which value can be assigned after achievement of the Triggering Event.

1.21 "FTE" means the efforts of one or more employees of Codexis, its Affiliates, the Assignee and/or its Associated Companies equivalent to the efforts of one full time employee (i.e., an employee that works at least one thousand seven hundred sixty (1760) hours per year).

1.22 "Fuel Field of Use" has the meaning set forth in the License Agreement.

1.23 "Gross Margin" means Net Sales minus Cost, the difference of which is then divided by Net Sales.

1.24 "IE/Codexis/Shell Agreement" has the meaning set forth in the Recitals.

1.25 "Information" means data, results, evaluations, inventories, Microbes, show-how, know-how, computer chip and programs, processes, machines, biological chemicals, enzymes, proteins, intermediates, trade secrets, techniques, methods, developments, materials, methods of analysis, compositions of matter, copyrights or other information.

1.26 "Intermediate Field of Use" has the meaning set forth in the License Agreement.

1.27 "License Agreement" has the meaning set forth in the Recitals.

1.28 "**Licensed Field Information**" shall mean Confidential Information under the License Agreement that is related to, or useful in, the use or practice of Technology and Materials (as such term is defined in the License Agreement) that fall within the Intermediate Field of Use.

1.29 "Licensed Product" has the meaning set forth in the License Agreement.

1.30 "**Losses**" means any and all liability, damage, loss, cost or expense (including without limitation reasonable attorneys' fees).

1.31 "Lubricant" has the meaning set forth in the License Agreement.

1.32 "Lubricant Field of Use" has the meaning set forth in the License Agreement.

1.33 "Microbes" has the meaning set forth in the License Agreement.

1.34 "Most Favored Nation Pricing" has the meaning set forth in Section 8.2.

1.35 "Net Sales" means the proceeds, expressed in United States Dollars, from the sale of a Biocatalyst by Codexis and/or its Affiliates to Third Parties (other than Shell Facilities) less: (i) bad debts related to such Biocatalyst; (ii) compulsory payments and rebates, actually paid or deducted; (iii) customs duties and other governmental charges, as well as sales, use, excise, inventory, value added, and other taxes, related directly and only to the sale of such Biocatalyst; (iv) commissions allowed or paid to Third Parties, including without limitation distributors, brokers, or agents; and (v) Transportation Costs of such Biocatalyst.

1.36 "Patents" means all patent applications and patents, corresponding foreign patent applications and patents, and all continuations and divisions of any 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.

1.37 "Program" has the meaning set forth in the Research Agreement.

1.38 "Program Licensed Technology" has the meaning set forth in the License Agreement.

1.39 "Program Patent Rights" has the meaning set forth in the License Agreement.

1.40 "Research Agreement" has the meaning set forth in the Recitals.

1.41 "Sample" has the meaning set forth in Section 4.2(d).

1.42 "Sample Territory" has the meaning set forth in Section 4.2(d).

1.43 "Shell Facility" means any cellulosic fuel production facility in which Shell and/or a Shell Affiliate (other than [***] or any Associated Company of [***]) collectively own, and thereafter continues to own, at least [***] percent ([***]%) but less than [***] percent ([***]%) of the outstanding equity of the entity or, if the entity is not an equity issuing entity, has made at least [***] percent ([***]%) but less than [***] percent ([***]%) of the aggregate capital contribution to the entity and continues to maintain these minimum capital contribution requirements.

1.44 "Shell-Modified Sample" means a Sample that has been modified by Shell, a Shell Affiliate, a Shell Facility or any Third Party.

1.45 "**Technology Licensed to Shell**" has the meaning set forth in Section 7.1(b).

1.46 "Territory" means worldwide, except Brazil.

1.47 "Third Party" means any party other than Codexis, Shell or Affiliates of either Party.

1.48 "Third Party Patents" means, on a Sample-by-Sample basis, all issued Patents owned by Third Parties in the Sample Territory that cover (a) the composition of matter of such Sample or (b) any Covered Use, and that, in each of (a) and (b), were known to Codexis, or should have been known to Codexis after due inquiry, at the time Codexis transferred such Sample to Shell pursuant to Section 4.2(d).

1.49 "**Transportation Costs**" means, with respect to transport of any Biocatalyst, all costs associated with any packages and packing, transportation, storage and/or insurance for such Biocatalyst.

1.50 "**Triggering Event**" means the production of sugars in the Intermediate Field of Use in the Territory derived from the use of Biocatalysts by Codexis, its Affiliates and/or its customers sufficient to produce the first thirty million (30,000,000) gallons of liquid fuel.

ARTICLE 2

AMENDMENT AND TERMINATION OF THE RESEARCH AGREEMENT

2.1 Amendments to the Research Agreement.

(a) Amendment to First Sale Payment. Section 3.4(h) of the Research Agreement shall be deleted and replaced with the following:

Shell shall pay to Codexis a one-time, non-refundable, non-creditable milestone payment equal to Three Million United States Dollars ($3,000,000) upon the earlier of the First Sale (a) in the Intermediate Field of Use in Brazil, (b) in the Fuel Field of Use or (c) in the Lubricant Field of Use. Such payment shall be due within thirty (30) days after the receipt by Shell of an invoice from Codexis, such invoice to be issued by Codexis to Shell after receipt by Codexis of notification, in writing, from Shell of such First Sale.

(b) Amendment to the Survival Provision of the Research Agreement Section 11.4(b) of the Research Agreement shall be deleted and replaced with the following:

> 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), 2.9, 3.4(h), 3.7, 6.1, 8.3, 9.4, 9.5, 11.4(b) and 11.4(c).

(c) Amendment to Assignment Provision of the Research Agreement. The Parties agree that Section 12.2 of the Research Agreement will be deleted and replaced in its entirety with the following:

> Neither Party may transfer or assign its rights and obligations under this Amended and Restated Research 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 Research Agreement to an Affiliate of such Party or to a successor to all or substantially all of its business or assets relating to the Amended and Restated Collaborative Research Agreement or, separately, to the Intermediate Field of Use (as defined in the 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 Research Agreement prior to the effective date of transfer or assignment of this Amended and Restated Research Agreement and, thereafter, this Amended and Restated Research Agreement shall be binding upon such transferee, assignee or successor. Any attempted transfer or assignment of this Amended and Restated Research Agreement not in accordance with this Section 12.2 will be null and void.

(d) Amendment to the Confidentiality Provision of the Research Agreement. Notwithstanding anything to the contrary in the Research Agreement, the Parties agree that Codexis and its Affiliates can disclose Covered Information (other than Shell business plans and economic models) to Third Parties, Shell Affiliates or Shell Facilities so long as each Third Party, Shell Affiliate or Shell Facility agrees, prior to such disclosure, to be bound by obligations of confidentiality and non-use no less restrictive than those set forth in Article 6 of the Research Agreement.

2.2 Buy-Out and Termination of Research Agreement. The Parties agree that the Research Agreement shall terminate on August 31, 2012. Notwithstanding anything to the contrary in the Research Agreement, within sixty (60) days after the Effective Date, Shell shall pay to Codexis a payment equal to Seven Million Five Hundred Forty-Three Thousand Three Hundred Thirty-Three United States Dollars ($7,543,333) in full, complete and final satisfaction of any and all payments that Shell may owe Codexis under Sections 3.3(c), 3.4(b) and 3.4(f) of the Research Agreement. For the avoidance of doubt, beginning September 1, 2012, (a) Codexis and its Affiliates shall have no further obligations to Shell under the Research Agreement to

provide any FTEs to perform work under or after the Program and (b) Shell and its Affiliates shall have no further obligations to Codexis under the Research Agreement to provide funding for any FTEs to perform work under or after the Program.

2.3 Removal of Research Restrictions. The Parties hereby agree that Section 9.4 of the Research Agreement shall be null and void solely with respect to development of enzymes and Microbes for use in the Intermediate Field of Use in the Territory upon the occurrence of any of the following: (a) the appointment of a trustee, receiver or custodian for all or substantially all of the property of Codexis, which appointment is not dismissed within sixty (60) days thereafter; (b) the filing of a petition for relief in bankruptcy by Codexis on its own behalf, or the filing of any such petition against Codexis if the proceeding is not dismissed or withdrawn within sixty (60) days thereafter; (c) the termination, pursuant to Section 7.1(b) of this Agreement, of the rights granted to Codexis and its Affiliates by Shell under Section 4.1 of this Agreement; or (d) the termination of this Agreement by Shell pursuant to Section 13.2; provided that, in the event of any of (a), (b), (c) or (d), Shell shall have a right to conduct research to make improvements to enzymes and Microbes only for use in the Intermediate Field of Use in the Territory. Notwithstanding the foregoing, nothing in this Agreement shall exempt Shell or any Shell Affiliate from complying with any of the restrictions related to the development or use of (i) Dyadic Materials and/or Production Strains (in each case, as defined in the Dyadic License) contained in the Dyadic License and/or the Dyadic Letter or (ii) C1 Materials and/or C1 Strains (in each case, as defined in the IE/Codexis/Shell Agreement) contained in the IE/Codexis/Shell Agreement, including without limitation Section 4.4 of the IE/Codexis/Shell Agreement.

ARTICLE 3

IP COMMITTEE

3.1 IP Committee.

(a) Function. Shell and Codexis shall establish an IP Committee (the "**IP Committee**") to keep the Parties informed as to the filing, maintenance, enforcement and defense of Patents licensed by a Party or to a Party pursuant to Section 4.1 or Section 4.2. Codexis will consult with Shell, and will consider Shell's comments and recommendations, with respect to such Patents to be filed and the maintenance, enforcement and defense of such Patents, and will provide a status update to Shell regarding such Patents at least once per year.

(b) Membership. Shell and Codexis each, in its sole discretion, shall appoint one (1) member to the IP Committee and shall provide written notice to the other Party of the name and contact information of such member within five (5) days after the Effective Date. Each Party may appoint substitutes for its member at any time, such substitution to be effective immediately upon providing the name and contact information of such substitute to the other Party's representative on the IP Committee.

(c) Chair. The IP Committee shall be chaired by the Codexis representative.

(d) Meetings. The IP Committee shall meet (in person or via teleconference) at Codexis' discretion but not less frequently than once per year, unless otherwise agreed, at places and on dates agreed upon by Shell and Codexis. Representatives of Shell or Codexis or both, in addition to members of the IP Committee, may attend such meetings at the invitation of either Party.

(e) Minutes. Codexis will provide accurate written minutes of meetings of the IP Committee in a timely manner after each meeting.

(f) Decisions. All decisions of the IP Committee shall be made by consensus of the Parties. The Codexis representative shall have one (1) vote and the Shell representative shall have one (1) vote; provided, however, that in the case where consensus of the Parties has not been reached, the final decision shall be made by Codexis; provided, further, that in the event Codexis exercises such final decision right with respect to the maintenance, enforcement or defense of any applicable Patent then, notwithstanding anything to the contrary in this Agreement, the Research Agreement or the License Agreement, Shell shall have no obligation to co-fund any such maintenance, enforcement or defense decision with respect to such Patent.

(g) Expenses. Shell and Codexis shall each bear all expenses of their respective members related to their participation on the IP Committee.

(h) Disbanding of the IP Committee. The Parties shall have the right to disband the IP Committee upon mutual agreement. Failure to agree to disband the IP Committee shall not constitute a breach of this Agreement, nor trigger the Dispute Resolution process as described in Section 14.6.

ARTICLE 4

LICENSE GRANTS

4.1 License by Shell to Codexis Under Program Patent Rights and Program Licensed Technology. Subject to the restrictions of the Dyadic License, as may be amended in the future, Shell hereby grants to Codexis and its Affiliates an irrevocable (subject to Section 7.1(b) and Section 13.3(b)), non-exclusive, royalty-bearing right and license under the Program Patent Rights and Program Licensed Technology to develop, manufacture, have manufactured, use, have used, sell, have sold, offer for sale, have offered for sale, import and have imported, (a) Biocatalysts (including improvements to any Biocatalysts) and (b) Microbes, and in each case of (a) and (b), in the Intermediate Field of Use in the Territory, such license to include the right to grant sublicenses solely for purposes of manufacturing enzymes and Microbes. For the avoidance of doubt, Program Patent Rights and Program Licensed Technology in the preceding sentence comprise the Program Patent Rights and Program Licensed Technology under the License Agreement.

4.2 License Grant by Codexis to Shell.

(a) License Grant.

(i) Codexis hereby grants to Shell, subject to the terms set out inSchedule B, an irrevocable (subject to Section 13.3(c)), non-exclusive, royalty-free license in the Territory under intellectual property rights and Patents developed by Codexis during the period

beginning on the Effective Date and ending on the ten (10) year anniversary of the Effective Date to manufacture, have manufactured, use and import, in each case solely for use by Shell or Shell Affiliates, (i) enzymes developed by Codexis outside of the Research Agreement for use in the Intermediate Field of Use in the Territory, and (ii) improvements to any Microbe developed by Codexis outside of the Research Agreement that is a derivative of C1 for use in the Intermediate Field of Use in the Territory, and in each case of (i) and (ii), such license to include the right, subject to the restrictions contained in the Dyadic License, to grant sublicenses only to Shell Affiliates (other than [***] and its Associated Companies) and Shell Facilities (other than a Shell Facility in which [***] and/or its Associated Companies is an equity participant). Notwithstanding anything to the contrary, a Shell Facility that is a sublicensee of Shell or a Shell Affiliate under this Section 4.2(a) shall have no right to grant any further sublicense to any party (including, for example, any equity participant in such Shell Facility), except that such Shell Facility shall retain the right to "have manufactured" such enzymes and/or Microbes solely for use by such Shell Facility.

(ii) In the event that the collective ownership interest of Shell and/or a Shell Affiliate (other than [***] or any Associated Company of [***]) in a Shell Facility drops below [***] percent ([***]%), then if such Shell Facility, prior to the date of such ownership interest drop, used enzymes and Microbes, and the right to use intellectual property rights and Patents covering such enzymes and Microbes, that are the subject of the license grant in Section 4.2(a)(i) in the Intermediate Field of Use to produce liquid fuels in the amount:

(1) less than [***] of liquid fuel, then any and all sublicense rights granted by Shell to such Shell Facility with respect to such enzymes, such Microbes, and the right to use such intellectual property rights and Patents, shall automatically terminate in the entirety; or

(2) equal to or greater than [***] of liquid fuel, then the sublicense rights granted by Shell to such Shell Facility with respect to such enzymes and Microbes, and right to use such intellectual property rights and Patents, shall continue in effect but solely with respect to such enzymes, Microbes and intellectual property rights and Patents developed by Codexis prior to the date of such ownership drop. For the avoidance of doubt, sublicense rights to such Shell Facility shall not include any enzymes or Microbes, or the right to use any intellectual property rights or Patents, developed by Codexis after the date of the ownership interest drop;

provided that, in either (1) or (2), upon request of a Shell Facility, Codexis will use commercially reasonable efforts to negotiate with such Shell Facility commercial terms for access to Codexis technology.

(iii) For the avoidance of doubt, in the event of any Assignment, the license grant in this Section 4.2(a): (1) shall not apply to any enzymes, Microbes or other technology developed, in-licensed and/or acquired by an Assignee prior to the effective date of such Assignment, and (2) shall only apply to enzymes developed after the effective date of such Assignment that are derivatives of (A) any Biocatalyst and/or (B) any enzymes developed by Codexis and/or its Affiliates from C1, and in each case of (A) and (B), solely to the extent developed prior to the effective date of such Assignment.

[***] 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) For the avoidance of doubt, nothing in this Agreement shall impact the scope of the license grant set forth in Section 4.5 of the IE/Codexis/Shell Agreement.

(c) Technical and Business Updates.

(i) Beginning six (6) months following the Effective Date and ending upon the ten (10) year anniversary of the Effective Date, (i) Codexis shall provide Shell with semi-annual written updates of Codexis commercially relevant technical developments that are subject to the license grant in Section 4.2(a) during the previous six (6) months, and (ii) at Shell's prior request, Codexis shall, at its own expense, participate semi-annually in a teleconference with Shell, at its own expense, to provide an overview of Codexis' progress towards commercialization in the Intermediate Field of Use during the previous six (6) months, such overview to be limited by confidentiality obligations of Codexis and/or its Affiliates.

(ii) Beginning six (6) months following the Effective Date and ending upon either Codexis' expenditure (including, without limitation, any expenditure by a Codexis Affiliate or a Third Party) of [***] United States Dollars ($[***]) on improvement of the Cellulase Technology, or an Assignment as described in Section 7.1, (A) Codexis shall provide Shell with semi-annual financial reports on the number of FTEs assigned to improve the Cellulase Technology, and (B) at Shell's prior request and sole expense, but no more than once in any two (2) consecutive calendar years, Codexis shall permit an independent Third Party, mutually acceptable to Shell and Codexis, to conduct an audit of work directed to improvement of the Cellulase Technology, such audit to be limited by reasonable confidentiality obligations to Codexis and/or its Affiliates and to be conducted at times that are reasonably acceptable to Codexis, to determine the amount of expenditure directed to improvement of the Cellulase Technology as of the date of such audit, and for no other purpose. The Third Party audit firm will be required to treat all materials made available for inspection by Codexis as Confidential Information of Codexis in accordance with Article 12.

(d) Technology Transfer. Beginning six (6) months following the Effective Date and ending upon the ten (10) year anniversary of the Effective Date, upon the reasonable written request of Shell but no more often than once every twelve (12) months, Codexis, subject to the restrictions in the Dyadic License, will provide Shell, or a Shell Affiliate (other than IE and its Associated Companies) or a Shell Facility (other than a Shell Facility in which IE and/or its Associated Companies is an equity participant), in each case identified by Shell in writing to Codexis, with samples of commercially relevant Microbes and enzymes that are the subject of the license grant in Section 4.2(a) (each, a "**Sample**"). Such written request of Shell shall include a listing of jurisdictions in which Shell intends to use such Samples (the "**Sample Territory**"). Upon delivery of a Sample to Shell, or a Shell Affiliate (other than [***] and its Associated Companies) or a Shell Facility (other than a Shell Facility in which [***] and/or its Associated Companies is an equity participant), so long as each such Affiliate or such Shell Facility has been identified by Shell in writing, Codexis shall deliver written instructions and/or guidance with respect to Covered Uses for such Sample in the applicable jurisdictions in the Sample Territory. Such instructions and/or guidance may include reference to, and limitations imposed as a result of, Third Party Patents. In the event that Codexis provides Shell a Sample, and Shell then desires to provide such Sample to a Shell Affiliate (other than [***] and its Associated Companies) or a Shell Facility (other than a Shell Facility in which [***] and/or its Associated Companies is an

equity participant), Shell shall notify Codexis in writing, prior to providing such a Sample, of the identity and location of such Shell Affiliate or such Shell Facility. Shell covenants and agrees that Shell will not, and Shell will not authorize or permit any Shell Affiliate or Shell Facility to, provide, transfer or sell any Sample to any Third Party (including, without limitation [***]), [***], or any Associated Company of [***] (including, without limitation [***]). If Shell desires reasonable additional technology transfer assistance, Codexis will use commercially reasonable efforts to provide such reasonable assistance to the extent Codexis has personnel qualified to provide such assistance and that Codexis can provide such assistance without undue disruption to its other projects and business activities. Shell shall pay for any such Codexis assistance at Codexis' then prevailing market rates for such activities. Codexis shall, from time-to-time, submit to Shell written invoices for any such assistance provided to Shell, and Shell shall pay to Codexis such invoiced amounts within thirty (30) days after receipt thereof.

(e) Intellectual Property Claims. Each Party shall promptly inform the other Party in writing of any claim or suit brought by a Third Party alleging that the practice of any Covered Technology (including without limitation, any Covered Use) may infringe any Patent controlled by such Third Party. In the event of such claim or suit, and upon [***] written request, [***] shall use commercially reasonable efforts to (1) [***] and/or (2) recommend and/or make [***], and in each case of (1) and (2), to the extent [***] has personnel qualified to provide such assistance and that [***] can provide such assistance without undue disruption to its other projects and business activities. In the event such Patent controlled by such Third Party is:

(i) a Third Party Patent, [***] shall provide such assistance at [***] cost and expense; or

(ii) not a Third Party Patent, [***] shall pay for such assistance at [***] then prevailing market rates and, in connection with such assistance, [***] shall, from time-to-time, submit to [***] written invoices for such assistance, and [***] shall pay to [***] such invoiced amounts within thirty (30) days after receipt thereof.

ARTICLE 5

AMENDMENT TO THE IE/CODEXIS/SHELL AGREEMENT

5.1 Consent to Assignment Provision of the IE/Codexis/Shell Agreement. Shell covenants and agrees that it shall, upon the written request of Codexis, promptly and without qualification or request for any consideration, provide Codexis with Shell's prior written consent under Section 11.2 of the IE/Codexis/Shell Agreement to a Codexis Qualified Transaction.

[***] 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

AMENDMENTS TO THE LICENSE AGREEMENT

6.1 Amendment to Shell's Covenant in the License Agreement. Section 7.3 of the License Agreement shall be revised to include the following at the end of Section 7.3 of the License Agreement:

> In addition, Shell covenants that, notwithstanding anything to the contrary in this Amended and Restated License Agreement, Shell shall not (d) sell, offer for sale, transfer or import any Biocatalyst to [***] or any Third Party in the Intermediate Field of Use, so long as such Biocatalyst qualifies as a Commercial Improvement to any and all Biocatalysts that are derived from Research Technology (as defined in the IE/Codexis/Shell Agreement), except that such limitation, subject to the Dyadic License, shall not apply to (i) organizations for contract manufacture with respect to the manufacture of Biocatalysts solely for use by Shell or (ii) Shell's or its Affiliates' or sublicensees' activities in Brazil.
>
> In addition, Shell covenants that, notwithstanding anything to the contrary in this Amended and Restated License Agreement, Shell shall not authorize or grant a sublicense to (e) any Shell Affiliate (other than [***]), [***], or any Third Party to sell, offer for sale, transfer or import any Biocatalyst to [***] or any Third Party in the Intermediate Field of Use, so long as such Biocatalyst qualifies as a Commercial Improvement to any and all Biocatalysts that are derived from Research Technology (as defined in the IE/Codexis/Shell Agreement), except that such limitation, subject to the Dyadic License, shall not apply to (i) organizations for contract manufacture with respect to the manufacture of Biocatalysts solely for use by Shell or (ii) Shell's or its Affiliates' or sublicensees' activities in Brazil.

6.2 Amendment to Assignment Provision of the License Agreement. The Parties agree that Section 10.2 (Assignments) of the License Agreement will be deleted and replaced in its entirety with the following:

> 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 an Affiliate of such Party or to a successor to all or substantially all of its business or assets relating to the Amended and Restated License Agreement or, separately, to the Intermediate Field of Use 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.

[***] 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.

6.3 Amendment to Confidentiality Provisions of the License Agreement. Notwithstanding anything to the contrary in the License Agreement, the Parties agree that Codexis and its Affiliates can disclose Licensed Field Information (other than Shell business plans and economic models) to Third Parties, Shell Affiliates or Shell Facilities, so long as each such Third Party, Shell Affiliate or Shell Facility agrees prior to such disclosure to be bound by obligations of confidentiality and non-use no less restrictive than those set forth in Article 5 of the License Agreement.

6.4 Removal of Research Restrictions. The Parties hereby agree that Section 7.3 of the License Agreement shall be null and void solely with respect to development of enzymes and Microbes for use in the Intermediate Field of Use in the Territory upon the occurrence of any of the following (a) the appointment of a trustee, receiver or custodian for all or substantially all of the property of Codexis, which appointment is not dismissed within sixty (60) days thereafter; (b) the filing of a petition for relief in bankruptcy by Codexis on its own behalf, or the filing of any such petition against Codexis if the proceeding is not dismissed or withdrawn within sixty (60) days thereafter; or (c) the termination of this Agreement by Shell pursuant to Section 13.2. Notwithstanding the foregoing, nothing in this Agreement shall exempt Shell or any Shell Affiliate from complying with any of the restrictions related to the development or use of (i) Dyadic Materials and/or Production Strains (in each case, as defined in the Dyadic License) contained in the Dyadic License and/or the Dyadic Letter or (ii) C1 Materials and/or C1 Strains (in each case, as defined in the IE/Codexis/Shell Agreement) contained in the IE/Codexis/Shell Agreement, including without limitation Section 4.4 of the IE/Codexis/Shell Agreement.

6.5 Limitation. In the event that (a) the Assignee, pursuant to Section 7.1(b), terminates the rights granted to Codexis and its Affiliates by Shell under Section 4.1 of this Agreement or (b) Shell terminates this Agreement pursuant to Section 13.2 for a material failure by Codexis to comply with any of Codexis' obligations contained in this Agreement, the terms of this Article 6 shall not apply to Shell as of the effective date of such termination.

ARTICLE 7

TECHNOLOGY DEVELOPMENT OBLIGATION UPON THIRD PARTY ASSIGNMENT BY CODEXIS

7.1 In the event of a valid assignment of this Agreement by Codexis to a Third Party in accordance with Section 14.2 of this Agreement (an **"**Assignment"), the Third Party assignee (the **"**Assignee") must, within ninety (90) days after the effective date of the Assignment, provide Shell a written notice stating its intention to do one of the following:

(a) Expend [***] United States Dollars ($[***]) either on (1) the development of any Cellulase Technology, or (2) in payments directly to Shell, net of certain expenditures of Codexis, its Affiliates and/or Third Parties, such expenditures and such payments as set forth, together with examples for purposes of illustration, in Schedule C; or

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) Terminate the rights granted to Codexis and its Affiliates by Shell under Section 4.1 of this Agreement;provided, that in the event the Assignee elects to terminate the rights granted to Codexis and its Affiliates by Shell under Section 4.1 of this Agreement, (i) the license granted by Codexis to Shell pursuant to Section 4.2(a) of this Agreement shall automatically be converted to an exclusive license (subject to any pre-existing agreements or commitments), with unrestricted sublicense rights (subject to the restrictions in the Dyadic License and/or any pre-existing agreements or commitments); and (ii) Shell shall have the right, at Shell's sole expense, to bring an infringement action or similar proceeding against any Third Party that Shell reasonably suspects of infringement or unauthorized use of the Program Licensed Technology and/or the Patents that are subject to the license grant in Section 4.2(a) (collectively, the **"Technology Licensed to Shell**"), in each case in the Intermediate Field of Use in the Territory;provided, however, that Shell shall, at least thirty (30) days prior to commencing any such infringement action or similar proceeding, provide to the Assignee written notice of Shell's intention to commence such infringement action or similar proceeding, including a reasonable description of the alleged infringement and the identity of the alleged infringing party, and Shell shall reasonably and in good faith consider the Assignee's comments thereto. If requested to do so by Shell, the Assignee shall cooperate with Shell in any such action, including, but not limited to, by joining the action as a party if necessary to maintain standing; provided that Shell will reimburse the Assignee for any reasonable expenses (including reasonable attorneys' fees) actually incurred by the Assignee in cooperating with Shell in any such action or proceeding, which Shell shall pay to Assignee reasonably promptly after receiving from Assignee any written invoices thereto. Any award recovered by Shell in any such action or proceeding shall belong solely to Shell. Shell shall not enter into any settlement of any such action that would restrict the scope, or adversely affect the enforceability of, the "Technology Licensed to Shell", without Assignee's prior written consent. Upon reasonable request by the Assignee, Shell shall keep the Assignee reasonably informed of the status of its activities regarding any litigation, settlement or other resolution thereof concerning the Technology Licensed to Shell.

7.2 Notwithstanding anything to the contrary in this Agreement, including without limitation Section 13.2, in the event that the Assignee delivers a notice to Shell pursuant to Section 7.1(a) and then fails to achieve the required level of expenditure under Section 7.1(a), Shell shall have the right to provide a written notice to Assignee requiring Assignee to make good or otherwise cure such failure. In the event that Assignee's annualized FTE expenditure at the end of such sixty (60) day period is sufficient to meet its minimum expenditure requirements pursuant to Section 7.1(a), then Assignee shall be deemed to have "cured" such breach. If such default is not cured within sixty (60) days after the date such notice was sent, then Assignee shall pay Shell [***] United States Dollars ($[***]), net of any permissible reductions set forth in the relevant subsection of Section 7.1(a). Notwithstanding anything to the contrary in this Agreement, the obligations of Assignee under the preceding sentence shall be Shell's sole and exclusive remedy under this Agreement for Assignee's failure to achieve the required level of expenditure under Section 7.1(a) and is in lieu of any other remedy, whether at law or at equity.

7.3 In the event that the Assignee delivers a notice to Shell pursuant to Section 7.1(a) above, the Assignee shall provide a report to Shell within forty-five (45) days of such notice setting forth (a) the number of FTEs assigned by Codexis, its Affiliates and/or Third Parties to develop Cellulase Technology during the period beginning on the Effective Date and ending on the effective date of the Assignment and (b) the Assignee's remaining development obligations

under Section 7.1(a), if any. In the event that the Assignee has remaining development obligations under Section 7.1(a), within forty-five (45) days after the end of each calendar quarter, the Assignee shall provide Shell with a report setting forth the number of FTEs assigned by the Assignee and its Associated Companies for the development of the Cellulase Technology during the just ended calendar quarter. Such reporting obligation shall continue until the Assignee has fulfilled the expenditure requirements set forth in Section 7.1(a). Codexis, its Affiliates, the Assignee and its Associated Companies shall keep complete, true and accurate books of account and records for the purpose of verifying the reports presented by Codexis to Shell pursuant to this Section 7.3. Said books and records will be kept for a period of at least three (3) years following the reporting period to which they pertain and shall be available, after not less than fifteen (15) business days prior written notice, for inspection, such inspection not to occur more frequently than once in any Calendar Year, by Shell using Shell personnel or by an independent public accountant, certified in the U.S. and affiliated with a recognized accounting firm selected by Shell and reasonably acceptable to the Assignee, solely in order to, and only to the extent necessary to, verify the accuracy of the reports delivered by the Assignee to Shell pursuant to this Section 7.3. Such independent public accountant will be obliged by Shell to treat all materials made available for inspection by Codexis as Confidential Information in accordance with Article 12. Shell shall bear the full cost of the performance of any audit performed pursuant to this Section 7.3.

7.4 Notwithstanding anything to the contrary in this Agreement, in the event that Codexis and/or its Affiliates have expended [***] United States Dollars ($[***]) to develop the Cellulase Technology prior to the forty-eight (48) month anniversary of the Effective Date, including an expenditure of at least [***] United States Dollars ($[***]) prior to the twenty-four (24) month anniversary of the Effective Date, Codexis shall provide written notice thereof to Shell and the provisions of this Article 7 shall be null and void as of the date of such notice. The expenditures of Codexis and/or its Affiliates shall be calculated by multiplying the number of FTEs assigned by Codexis and/or its Affiliates to develop the Cellulase Technology during the relevant period by [***] United States Dollars ($[***]) per year.

7.5 The Parties agree that the FTE rates set forth in this Article 7 for purposes of calculating expenditures by Codexis, its Affiliates, the Assignee and its Associated Companies shall be used even if the amounts that Codexis, its Affiliates, the Assignee and/or its Associated Companies (i) receive as reimbursement, or (ii) actually expend, for the development of the Cellulase Technology are different than such FTE rates.

ARTICLE 8

FINANCIAL TERMS

8.1 Royalty Payment from Codexis to Shell.

(a) In consideration for the rights granted to Codexis and its Affiliates under this Agreement by Shell, Codexis shall pay to Shell royalty payments as follows: (i) for the sale by Codexis and/or its Affiliates of any Biocatalyst to any Third Party for use in the Intermediate Field of Use in the Territory after the First Commercial Sale, Codexis shall pay to Shell a royalty equal to [***] percent ([***] %) of Net Sales and (ii) for the use of any Biocatalyst by 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.

and/or its Affiliates in the Intermediate Field of Use in the Territory after the Triggering Event, Codexis shall pay to Shell a royalty equal to [***] percent ([***] %) of the fair market price of such Biocatalysts as indicated by Net Sales during the prior twelve (12) months for such Biocatalyst or, if no such Net Sales have occurred, then as mutually agreed upon by the Parties acting reasonably and in good faith. Notwithstanding the foregoing, the Parties agree that in the event that a particular sale of any Biocatalyst to any Third Party for use in the Intermediate Field of Use by Codexis and/or its Affiliates would trigger a royalty obligation to Shell and/or its Affiliates under this Agreement and any other agreement that Shell and/or its Affiliates is a party to (each such agreement, an "**Other Agreement**"), Codexis and/or its Affiliates shall owe only one (1) payment to Shell and/or its Affiliates for such sale, such payment to be equal to the average royalty among the parties to the Other Agreement that would owe to Shell a royalty to be paid under this Agreement and any Other Agreement for such sale, such average royalty to be weighted to reflect each such party's relative economic benefit in such sale. For purposes of illustration, not intended to be limiting, example calculations of royalty payments to Shell are set forth in Schedule D.

(b) Within ninety (90) days after the end of each calendar quarter in which any sales that would give rise to a payment obligation under this Article 8 have occurred, Codexis shall provide Shell a written statement of royalties due to Shell and, together with such written statement, all payments due to Shell based on such written statement.

8.2 Most Favored Nation Pricing. In the event that Codexis supplies Biocatalysts to Shell and Shell Affiliates during the term of this Agreement, Codexis agrees that it will supply Biocatalysts to Shell and Shell Affiliates in the Intermediate Field of Use in the Territory at a price equal to [***] (a) the United States Dollar [***] (excluding [***] included in [***]) for which [***] has sold such Biocatalysts to [***] in the Intermediate Field of Use in the Territory [***], and (b) [***] United States Dollar [***] in the Intermediate Field of use in the Territory [***] and in each case of (a) and (b), plus all applicable [***] for such Biocatalysts; provided, however, under no circumstances will Codexis be required to supply Biocatalysts to Shell at a transfer price less than [***] for such Biocatalysts (collectively, "**Most Favored Nation Pricing**"). Notwithstanding anything to the contrary, Codexis shall have no obligation to supply any Biocatalyst to Shell or any Shell Affiliate. For purposes of illustration, examples of Most Favored Nation Pricing are set forth in Schedule E.

8.3 Audits.

(a) Codexis will keep, and will require its Affiliates to keep, complete, true and accurate books of account and records for the purpose of showing the derivation of (i) all royalties payable to Shell under Section 8.1 or (ii) Most Favored Nation Pricing pursuant to Section 8.2. 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 a recognized accounting firm selected by Shell and reasonably acceptable to Codexis, for the purpose of verifying statements provided to Shell (A) pursuant to Section 8.1(b) regarding royalties due to Shell or (B) Most Favored Nation Pricing pursuant to Section 8.2. Such independent public accountant will be obliged by Shell to treat all materials made available for inspection by Codexis as Confidential Information in accordance with Article 12.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) In the event that the independent public accountant described in Section 8.3(a) alleges that an underpayment or an overpayment has been made, and the Parties agree on the amount of such underpayment or such overpayment, Codexis, in the event of an underpayment, will pay to Shell 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 Shell under this Agreement. Shell shall bear the full cost of the performance of any audit performed under Section 8.3(a), unless such audit discloses a variance to the detriment of Shell 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, Codexis shall bear the full cost of the performance of such audit.

(c) Notwithstanding the provisions of Section 14.6, in the event that the independent public accountant described in Section 8.3(a) alleges that an underpayment or an overpayment has been made, and a Party provides written notice to the other Party disputing such allegation within thirty (30) days after such allegation, the Parties shall mutually select a U.S.-based 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 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 12. In the event that such U.S.-based recognized public accounting firm determines that an underpayment or an overpayment has been made, Codexis, in the event of an underpayment, will pay to Shell 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 Shell 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 Shell of more than ten percent (10%) (determined on an aggregate basis for all payments covered by the audit), Codexis shall reimburse Shell for Shell's portion of the expenses for such audit with fifteen (15) days after Shell's written request for such reimbursement and, in addition, the cost of the initial audit by Shell pursuant to Section 8.1(a). The determination of such US-based recognized public accounting firm pursuant to this Section 8.3(c) shall be final and binding upon the Parties, and shall not be subject to dispute resolution pursuant to Section 14.6.

8.4 Dyadic Payments.

(a) Notwithstanding anything to the contrary in the Dyadic Letter, the Parties hereby agree that (i) [***] will be directly responsible [***] and (ii) [***] to make payments due under the [***]; provided that in the event that the supply of enzymes [***] any particular payment [***] make such payment [***].

(b) [***] solely with respect to the activities of Codexis and its Affiliates in Category A and/or Category F (as each is defined in the Dyadic License).

8.5 No Royalties to Codexis on Third Party Enzyme Sales by Codexis. Notwithstanding anything to the contrary in the License Agreement, Shell shall not owe Codexis any Intermediate Royalty (as such term is defined in the License Agreement) under Section 3.1(a) of the License Agreement as a result of the sale of any enzyme or Microbe by Codexis and/or its Affiliates to any Third Party in the Intermediate Field of Use in the Territory.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

8.6 Mode of Payment; Late Payment Interest.

(a) All payments made by Codexis to Shell under this 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 Shell may from time to time designate by written notice to Codexis. For the purpose of determining royalties payable under this Agreement, any revenues Codexis and/or its Affiliates receive in currencies other than United States Dollars shall be converted into United States Dollars according to Codexis' reasonable standard internal conversion procedures. 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 Shell under the terms of this Agreement.

(b) Any payment due and payable to Shell under the terms and conditions of this Agreement made by Codexis 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 Codexis to Shell.

ARTICLE 9

IP Matters

9.1 Abandonment of Patents. In the event that Codexis decides to abandon any of the Patents within the Technology Licensed to Shell, Codexis shall, at least forty-five (45) days prior to any abandonment thereof, provide advance written notice thereof to Shell. Shell may elect to receive assignment of such Patents by providing to Codexis written notice of such election within fifteen (15) business days after Shell's receipt of such Codexis notice of abandonment. In the event Shell elects to receive such assignment, Codexis shall, to the extent feasible and as soon as reasonably practicable, assign such Patents to Shell (or otherwise transfer to Shell responsibility for, including without limitation all costs associated with, the prosecution, maintenance, enforcement and defense of such Patents and all costs associated therewith).

ARTICLE 10

REPRESENTATIONS AND WARRANTIES

10.1 Mutual Representations and Warranties. Each Party represents and warrants to the other that: (a) it is duly organized and validly existing under the applicable laws of the jurisdiction of its incorporation, and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof; (b) it is qualified to do business and is in good standing in each jurisdiction in which it conducts business; (c) it is duly authorized to execute

and deliver this Agreement and to perform its obligations hereunder, and the person executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate action; and (d) this Agreement is legally binding upon it and enforceable in accordance with its terms and the execution, delivery and performance of this Agreement by it does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material law. In addition, each Party represents and warrants to the other that, as of the Effective Date, to its knowledge, there is no action, suit or inquiry or investigation instituted by any person which questions or threatens the validity of this Agreement.

10.2 Disclaimer of Warranties. EXCEPT AS SPECIFICALLY SET FORTH IN THIS ARTICLE 10, 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 11

INDEMNIFICATION

11.1 Employees and Property. Each Party (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 Losses, arising from any claims or suits arising from (a) bodily injuries, including without limitation 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, in each case arising from or in connection with the performance of this Agreement or the practice or use of the rights conferred to an Indemnitor by this Agreement; except, in any such case, for Losses to the extent, and only to the extent, reasonably attributable to the gross negligence, recklessness or willful misconduct of the applicable Indemnitee.

11.2 Indemnification by Codexis. Codexis shall fully indemnify, defend and hold the Shell Indemnitees harmless from and against any and all Losses arising out of Third Party claims or suits (but not any Shell Facility claims or suits) arising from:

(a) breach by Codexis of any of its representations and warranties under this Agreement;

(b) failure to perform its obligations under this Agreement;

(c) the negligence or willful misconduct of Codexis or its Affiliates, and its or their directors, officers, agents, employees, sublicensees or consultants;

(d) bodily injuries, including without limitation fatal injury or disease, to the employees of such a Third Party, and/or damage to tangible, real or personal property of such a Third Party or employees of such a Third Party, in each case arising from or in connection with the practice or use of rights granted by Shell to Codexis under the terms of this Agreement and conferred by Codexis to such a Third Party, or

(e) breach of the covenant set forth in Section 2.7(b) of the Dyadic License as a result of any claim or suit brought by Codexis;

except in any such case under clause (a), (b), (c) or (d) 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 Agreement or the gross negligence, recklessness or willful misconduct of any Shell Indemnitee.

11.3 Indemnification by Shell. Shell shall fully indemnify, defend and hold the Codexis Indemnitees harmless from and against any and all Losses arising out of Third Party claims or suits arising from:

(a) breach by Shell of any of its representations and warranties under this Agreement;

(b) failure to perform its obligations under this Agreement;

(c) the negligence or willful misconduct of Shell or its Affiliates, and its or their directors, officers, agents, employees, sublicensees, or consultants;

(d) bodily injuries, including without limitation fatal injury or disease, to the employees of such a Third Party, and/or damage to tangible, real or personal property of such a Third Party or employees of such a Third Party, in each case arising from or in connection with the practice or use of rights granted by Codexis to Shell under the terms of this Agreement and conferred by Shell to such a Third Party, or

(e) for the avoidance of doubt, breach of Shell's covenant set forth inSchedule B;

except in any such case under clause (a), (b), (c) or (d) 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 Agreement or the gross negligence, recklessness or willful misconduct of any Codexis Indemnitee.

11.4 Intellectual Property.

(a) Indemnification by Codexis. Codexis shall fully indemnify, defend and hold the Shell Indemnitees harmless from and against any and all Losses arising out of Third Party claims or suits (but not any Shell Facility claims or suits) arising from (i) infringement of Third Party Patents of a Covered Use of a Sample by a Shell Indemnitee; or (ii) use by Codexis or its Affiliates of Program Patent Rights and Program Licensed Technology licensed by Shell to Codexis and its Affiliates pursuant to Section 4.1 of this Agreement; provided that Codexis' indemnification obligations pursuant to this Section 11.4(a) for any particular Loss shall be as follows:

(A) if an indemnified use is a use by Shell, independent of Codexis, Codexis' liability for such use shall be limited to [***] United States Dollars ($[***]), and the aggregate indemnification obligations of Codexis shall be capped for all Losses at [***] United States Dollars ($[***]);

[***] 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) if an indemnified use is a use by Shell, not independent of Codexis, and is a use by Codexis and Shell jointly in a joint venture or other similar enterprise, Codexis' liability for such use shall be limited to [***] United States Dollars ($[***]), and the aggregate indemnification obligations of Codexis shall be capped for all Losses at [***] United States Dollars ($[***]); and

(C) if an indemnified use is a use by Codexis, independent of Shell, [***];

provided, however, in each of (A) and/or (B), Codexis obligation under this Section 11.4(a) shall not extend to continued activities of the Shell Indemnitees, activities that gave rise to such Third Party claims or suits, after (1) receipt by Codexis of a Claim Notice in accordance with Section 11.6(b), and (2) a reasonable period of time for Codexis to provide the Shell Indemnitees an alternative, non-infringing technology for implementation by the Shell Indemnitees.

(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 Third Party claims or suits arising from (i) infringement of any Patents owned or otherwise controlled by such Third Party by any use by Shell or a Shell Affiliate or a Shell Facility of the Samples that is not a Covered Use; (ii) the use, other than a Covered Use, of any Sample by Shell or a Shell Affiliate or a Shell Facility in the Intermediate Field of Use; (iii) the use of any Shell Modified Sample by Shell or a Shell Affiliate or a Shell Facility, regardless of whether such use is inside or outside the Intermediate Field of Use; (iv) the use of any Sample by Shell or a Shell Affiliate or a Shell Facility, whether such use is a Covered Use or not a Covered Use, in combination with other technology not provided by Codexis and such claim or suit would not have arose by use of such Sample without such other technology; or (v) infringement of Patents 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 (at the time such intellectual property was provided), or to improvements made by Codexis or any Affiliate of Codexis to such intellectual property; except in each case of (i)-(v), to the extent such Losses are subject to indemnification by Codexis pursuant to Section 11.4(a).

11.5 Environmental. Notwithstanding any other indemnification obligation in this 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 (as such term is defined below); provided, however, that this indemnification shall not apply to the extent any such Losses result from the acts or omissions of personnel of the Indemnitee or its Affiliates which occur at any site of the Indemnitee or the site of any supplier of the Indemnitee.

[***] 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.

For purposes of this Section 11.5, "**Environment Matters**" shall mean:

(a) the operation by the Indemnitor, its Affiliates, sublicensees, or subcontractors of any site or facility in a manner that is not in compliance with and in violation of any applicable Environmental Law (as such term is defined below);

(b) any release of Hazardous Materials (as such term is defined below) into the environment by the Indemnitor, its Affiliates, sublicensees, or its subcontractors; or any Hazardous Materials that have been Disposed (as such term is defined in applicable Environmental Law) of at a site of the Indemnitor or any site of any supplier (other than Codexis as supplier) of the Indemnitor or other site or facility operated by the Indemnitor, its Affiliates or its subcontractors;

(c) any failure to obtain or maintain all permits and provide all notices required by any applicable Environmental Law for the lawful operation of any site of the Indemnitor or any site of any supplier of the Indemnitor or other facilities or sites operated by the Indemnitor, 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 Indemnitor or any site of any supplier of the Indemnitor or the handling or disposal of Hazardous Materials by the Indemnitor, its Affiliates, sublicensees, or its subcontractors at any other facility or site.

For purposes of this Section 11.5, "**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 11.5, "**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 known 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.

11.6 Notification of Claim; Conditions to Indemnification Obligations.

(a) Generally. Except with respect to Shell's right to receive indemnification under Section 11.4(a), as a condition to a Party's right to receive indemnification under this Section 10, that Party shall: (i) 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 Indemnitee except to the extent that the failure to give such prompt notice materially adversely affects the ability of the Indemnitor to defend the claim or suit); (ii) cooperate with the Indemnitor in the defense of such claim or suit, at the expense of the Indemnitor; and (iii) if the Indemnitor confirms in writing to the Indemnitee its intention to defend such claim or suit within fifteen (15) business days of receipt of the Claim Notice, permit the Indemnitor to control the defense of such claim or suit, including without limitation the right to select defense counsel; provided that if the

Indemnitor fails to (A) provide such confirmation in writing within the fifteen (15) business day period; or (B) 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 (A) and upon twenty (20) days' written notice to the Indemnitor in the case of (B), the Indemnitee may assume the defense of such claim or suit at the sole expense of the Indemnitor and may settle or compromise such claim or suit without the consent of the Indemnitor. In no event, however, may the Indemnitor compromise or settle any claim or suit in a manner which admits fault or negligence on the part of any Indemnitee or that otherwise materially affects such Indemnitee's rights under this Agreement or requires any payment by an Indemnitee without the prior written consent of such Indemnitee. Except as expressly provided above, the Indemnitor will have no liability under this Section 9 with respect to claims or suits settled or compromised without its prior written consent. The Indemnitee and, in the event of a valid assignment of this Agreement by Codexis to a Third Party in accordance with Section 14.2, the Assignee's Indemnitees, 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 Indemnitor and, in the event of a valid assignment of this Agreement by Codexis to a Third Party in accordance with Section 14.2, the Assignee's Indemnitor, of any of its obligations hereunder.

(b) Claims by Shell With Respect to Third Party Patents. As a condition to Shell's right to receive indemnification under Section 11.4(a), 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 11.4(a) (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 any Third Party Patent by reason of the manufacture, use, sale, offer for sale or importation of any Sample, including by providing information and assistance necessary to defend or settle any such suit, action or proceeding; and (iii) give to Codexis 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; provided, however, Codexis shall, upon the written request of Shell, 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 the Samples. Codexis shall give Shell prompt written notice of the commencement of any such suit, action or proceeding or claim of 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 12

CONFIDENTIALITY

12.1 Confidentiality Obligations. The Parties agree that, during the term of this 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 Agreement, and shall not be disclosed to any Third Party except to the extent necessary to enable the receiving Party to practice the rights granted to it pursuant to this Agreement; provided that such disclosure is made under obligations of confidentiality and non-use no less restrictive than the obligations contained 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 12. The obligations of confidentiality and non-use set forth in the first sentence of this Section 12.1 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 Agreement;

(d) was subsequently disclosed to the receiving Party or its Affiliates by a Third Party without (i) restriction as to confidentiality or use and (ii) violating any 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 (directly or indirectly) to Confidential Information of the disclosing Party or its Affiliates, as evidenced by competent evidence.

12.2 Each Party (the "first 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 (the "second 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 first Party, and such first Party shall and hereby does assign to the second Party, all inventions made by such person during the course of performing any tasks associated with the second 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 employee's employer Party.

12.3 Notwithstanding this Article 12, 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, including without limitation applicable securities laws, 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, except where impracticable, 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 12 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 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 13

TERM AND TERMINATION

13.1 Term. The term of this Agreement will commence on the Effective Date and, unless earlier terminated in accordance with Section 13.2, shall continue in effect until the later of (a) twenty (20) years after the Effective Date or (b) the date of the last to expire Program Patent Rights that claim a Biocatalyst and/ or a Microbe for use in the Intermediate Field of Use in the Territory.

13.2 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 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 the defaulting Party's rights under this 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 Agreement, and in addition to any other remedies available to it by law or in equity, to terminate the defaulting Party's rights under this Agreement by written notice of termination to the defaulting Party; provided, however, that if the defaulting Party presents evidence within five (5) days before the expiration of such sixty (60) day cure period of its diligent efforts to effect a cure within such sixty (60) days, but such a cure has not been effected, the non-defaulting Party may not terminate the defaulting Party's rights under this Agreement until such diligent efforts have ceased; provided further, 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 14.6; 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 Agreement, and in addition to any other remedies available to it by law or in equity, to terminate the defaulting Party's rights under this Agreement by written notice of termination to the Disputing Party. In the event that the non-defaulting Party terminates this Agreement in accordance with this Section 13.2, the rights of the non-defaulting Party, and the obligations of the defaulting Party, shall continue in full force and effect until the expiration of this Agreement.

13.3 Consequences of Expiration or Termination.

(a) The following Articles and Sections of this Agreement shall survive its termination or expiration: 1, 2, 4.1, 4.2(a) (including Schedule B), 4.2(b) (including Schedule B), 5, 6, 8.1 (including Schedule D) (solely to the extent payments thereunder remain unpaid at termination or expiration), 8.3 (for the period set forth therein), 8.4, 8.5, 8.6 (solely to the extent payments thereunder remain unpaid at termination or expiration), 10.2, 11 (including Schedule B), 12 (for the period set forth therein), 13.3 and 14.

(b) Notwithstanding Section 13.3(a), in the event of termination of this Agreement by Shell pursuant to Section 13.2, the license granted by Shell to Codexis pursuant to Sections 4.1 and 6 shall terminate.

(c) Notwithstanding Section 13.3(a), in the event of termination of this Agreement by Codexis pursuant to Section 13.2, the license granted by Codexis to Shell pursuant to Section 4.2(a) shall terminate.

(d) Termination of this Agreement shall be without prejudice to any other remedies which either Party may otherwise have, including each Party's rights to receive payments accrued under this Agreement prior to the effective date of such termination.

ARTICLE 14

GENERAL PROVISIONS

14.1 Relationship of the Parties. The Parties shall perform their obligations under this Agreement as independent contractors and nothing contained in this 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 Agreement shall not constitute a partnership for tax purposes. In the event, however, that this Agreement was 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.

14.2 Assignments. Neither Party may transfer or assign its rights and obligations under this Agreement without the prior written consent of the other Party; provided that, subject to Article 7 with respect to transfer or assignment by Codexis, either Party may transfer or assign its rights and obligations under this Agreement to an Affiliate of such Party or to a successor to all or substantially all of its business or assets relating to this 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 Agreement prior to the effective date of transfer or assignment of this Agreement and, thereafter, this Agreement shall be binding upon such transferee, assignee or successor. Any attempted transfer or assignment of this Agreement not in accordance with this Section 14.2 will be null and void.

14.3 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 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.

14.4 Captions. The captions to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement.

14.5 Governing Law. This 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.

14.6 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 Agreement including this clause) arising out of or related to this Agreement (including but not limited to any amendments, annexations, and extensions to this Agreement) 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 New York, New York. 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. 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.

14.7 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 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: 650-421-2388
Fax: 650-421-8102

with a copy to:

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Attention: General Counsel
Telephone: 650-421-8160
Fax: 650-421-8108

If to Shell, addressed to:

Shell Oil Products (US)
910 Louisiana Street
Houston, TX 77002
Attention: Fuel Development Program Manager (Americas)
Telephone: 713-241-1461
Fax: 713-241-9800

with a copy to:

Shell Oil Company
Associate General Counsel, Intellectual Property Services
910 Louisiana
Houston, TX 77002
Fax: 713-241-6617

14.8 No Consequential Damages. EXCEPT PURSUANT TO ARTICLE 11 OR 12, 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.

14.9 Waiver. A waiver by a 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 hereof. 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.

14.10 Entire Agreement. This Agreement, together with the attached schedules, the Research Agreement (as amended herein), the License Agreement (as amended herein), the Dyadic Letter and the IE/Codexis/Shell 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 the same. Except as expressly amended by this Agreement, the terms of the Research Agreement, the License Agreement, the Dyadic Letter and the IE/Codexis/Shell Agreement shall remain in full force and effect. In addition, nothing in this Agreement shall be interpreted as altering or otherwise amending any right or obligation of IE under the IE/Codexis/Shell Agreement. As between the Parties, in the event that any terms of this Agreement conflicts with the terms of Research Agreement, the License Agreement, the Dyadic Letter or the IE/Codexis/Shell Agreement, the terms of this Agreement shall control.

14.11 Severability. When 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 but only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or of this 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.

14.12 Counterparts. This 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.

14.13 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 Agreement.

14.14 Amendment. No amendment of any provision of this Agreement shall be binding on a Party to this Agreement unless consented to in writing and signed by such Party.

[Signature page follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized officers.

AGREED TO:	**AGREED TO:**
Codexis, Inc.	**Equilon Enterprises LLC**
By: /s/ John Nicols **Name:** John Nicols **Title:** President & CEO **Date:** August 31, 2012	**By:** /s/ Matias Sanchez Cane **Name:** Matias Sanchez Cane **Title:** Agent **Date:** August 31, 2012

SCHEDULE A

Definition of "Cost"

"**Costs**" shall mean, with respect to the Biocatalysts, the sum of the following (a-e); provided that to the extent that a particular cost could be counted in more than one of the following sections, such cost shall only be counted once:

a. The amounts paid by Codexis and/or its Affiliates to a Third Party for (i) providing the chemical and biological substances required for the manufacture of such Biocatalyst (for purposes of this definition, collectively, the "Raw Materials") and packaging materials for producing such Biocatalyst, (ii) formulation, manufacturing and/or finishing such Biocatalyst or any component thereof, (iii) distributing, transporting, storing, and insuring such Biocatalyst, and (iv) testing such Biocatalyst, including with respect to the foregoing, all sales and excise taxes and customs duty charges imposed by Government Authority with respect thereto to the extent actually paid by Codexis and/or its Affiliates and not reimbursed, credited, or refunded by a Third Party.

b. Direct Expenses shall mean those Direct Material Expenses, Direct Labor Expenses, and Direct Service Expenses captured in time sheets and invoices that are specific for such Biocatalyst.

   i. Direct Material Expenses shall mean the actual cost of Raw Materials, filters, manufacturing supplies, unrecoverable solvent, containers, container components, packaging, labels, and other printed materials actually consumed in the production of such Biocatalyst;

   ii. Direct Labor Expenses shall mean that portion of salaries and benefits actually paid for the labor hours of personnel directly involved in the manufacturing of such Biocatalyst, to the extent such labor hours are directly attributable to the manufacture of such Biocatalyst, and such labor hours have been properly documented by batch record and time sheets.

   iii. Direct Service Expenses shall mean actual out-of-pocket payments to Third Parties for services and/or license rights related to the manufacture of such Biocatalyst;

c. Indirect Expenses shall mean production overhead costs such as a reasonable allocation of expenses associated with line supervisory personnel overseeing the direct manufacturing of such Biocatalyst. Indirect Expenses can include labor and out-of-pocket costs for quality control, quality assurance, microbiology, document control, calibration/validation, and non-research and development expenses for process development and analytical methods development supporting manufacturing. The above expenses will also include interest expenses apportioned on such fixed assets used to manufacture Biocatalysts. However, any capital expenditures for facilities and equipment used to manufacture Biocatalysts will not be included; and

d. Overhead Expenses shall mean manufacturing costs with respect to such Biocatalyst that cannot be identified in a practical manner with specific units of production and, therefore, cannot be included as Direct Material Expenses or Direct Labor Expenses. Overhead Expenses include:

   i. Specific manufacturing overhead allocations, including but not limited to facilities support costs, utilities (including electricity, water, sewer, waste disposal), indirect materials and supplies, consumables (including maintenance and repair materials, tools, spare parts), plant management, engineering and development support, maintenance and repair of the production plant and production equipment, property taxes (excluding income taxes), materials management, inventory storage, information management services, and insurance, but shall exclude underutilized capacity; and

   ii. Depreciation and lease costs over the expected life of buildings and equipment specifically attributable to the actual pro rata use of such equipment to manufacture such Biocatalyst.

e. Delivery costs will be a component of "Costs" to the extent such delivery costs are not borne by a Third Party.

SCHEDULE B

Dyadic Agreement Provisions

To the extent that any rights granted by Codexis to Shell under Section 4.2(a) constitute a sublicense of any rights granted by Dyadic to Codexis under the Dyadic License:

1. In accordance with Section 2.1(c)(3), Shell acknowledges and agrees that:

   a. Shell shall not transfer any Dyadic Materials (as such term is defined in the Dyadic License), or any derivative or modification thereof, to any to permitted sublicensee under Section 4.2(a), other than under the terms of a sublicense agreement between Shell and such permitted sublicensee; and

   b. Shell and each of its permitted sublicensees hereunder shall not (A) make any derivatives or modifications of (1) any Production Strain (as such term is defined in the Dyadic License) transferred by Codexis to Shell or (2) any Dyadic Materials incorporated in such Production Strain, or (B) reverse engineer (1) any Production Strain transferred by Codexis to Shell or (2) any Dyadic Materials incorporated in such Production Strain. In addition, Shell acknowledges and agrees that, with respect to any Dyadic Material that is transferred by Codexis, directly or indirectly, to Shell, the terms of this Agreement are subordinate to the terms of the Dyadic License.

   c. For purposes of this Schedule B, "reverse engineering" means the identification, modification, derivatization or other manipulation of genetic material included in a Production Strain, including for example any gene, portion of any gene, promoter, regulator, inducer, metabolic pathway, metabolomics, trancriptomics, secretion signal, vector, plasmid, protein, compound, or other material in or of such Production Strain.

2. In accordance with Section 2.7(b) of the Dyadic License, Shell hereby covenants and agrees not to commence, aid, prosecute or cause to be commenced or prosecuted any legal action or other proceeding against Dyadic or any of its affiliates, or any of its or their successors and assigns, licensees, sublicensees, distributors or customers, wherein Shell alleges infringement (direct or contributory) or inducement of infringement of any Patent (as such term is defined in the Dyadic License) claiming any Improvement (as such term is defined in the Dyadic License) that was made by, or under the authority of Shell.

3. In accordance with Section 2.7(c) of the Dyadic License, Shell hereby acknowledges and agrees that Dyadic is a third party beneficiary with respect to Shell's covenant in subpart (2) of this Schedule B.

4. In the event that Dyadic requests that a copy of this Agreement, or any sublicense agreement entered into by Shell or its permitted sublicensees hereunder, be provided to an independent law firm pursuant to Section 2.1(c) of the Dyadic License, Codexis shall promptly notify Shell in writing. Codexis agrees not to use any law firm for this purpose that is objected to by Shell that Shell identifies in writing within two (2) business days of receipt of such notification from Codexis, provided that in such notice, Shell provides a reasonable basis for each such objection.

SCHEDULE C

Expenditures and Payments

The value of Assignee's expenditure on development of the Cellulase Technology shall be calculated by multiplying the number of FTEs dedicated to the development of Cellulase Technology by the Assignee and/or its Associated Companies by [***] United States Dollars ($[***]) per year for each FTE dedicated to such development after the effective date of the Assignment;

(a) If the Assignment occurs prior to the [***] anniversary of the Effective Date, Assignee will have a [***] period after the date of the Assignment to expend [***] United States Dollars ($[***]) on the development of Cellulase Technology; provided, however, that in the event Codexis, its Affiliates and/or Third Parties (i) have expended at least [***] United States Dollars ($[***]) as of the date of the Assignment, or (ii) at the time of the Assignment are on a pace to expend at least [***] United States Dollars ($[***]) by the [***] anniversary of the Effective Date, and in each case of (i) and (ii), to develop the Cellulase Technology, the Assignee's expenditure requirement will be reduced by an amount equivalent to the cumulative expenditure by Codexis, its Affiliates and/or Third Parties to develop the Cellulase Technology during the period beginning on the Effective Date and ending on the effective date of the Assignment, where such expenditure will be calculated by multiplying the number of FTEs assigned by Codexis and/or its Affiliates to develop the Cellulase Technology by [***] United States Dollars ($[***]) per year;

(b) If the Assignment occurs after the [***], and before the [***], anniversary of the Effective Date, the Assignee will have until the [***] anniversary of the Effective Date to expend [***] United States Dollars ($[***]) on the development of Cellulase Technology, provided, however, that in the event Codexis, its Affiliates and/or Third Parties have expended at least [***] United States Dollars ($[***]) to develop the Cellulase Technology within [***] after the Effective Date, the Assignee's expenditure requirement will be reduced by an amount equivalent to the cumulative expenditure by Codexis, its Affiliates and/or Third Parties to develop the Cellulase Technology during the period beginning on the Effective Date and ending on the effective date of the Assignment, where such expenditure will be calculated by multiplying the number of FTEs assigned by Codexis and/or its Affiliates to develop the Cellulase Technology during such period by [***] United States Dollars ($[***]) per year;

(c) If the Assignment occurs after the [***] anniversary of the Effective Date, the Assignee will be obligated to pay Shell [***] United States Dollars ($[***]); provided, however, that in the event Codexis, its Affiliates and/or Third Parties have expended at least [***] United States Dollars ($[***]) to develop the Cellulase Technology within [***] after the Effective Date, the Assignee's payment to Shell will be reduced by an amount equivalent to the cumulative expenditures by Codexis, its Affiliates and/or Third Parties to develop the Cellulase Technology during the period beginning on the Effective Date and ending on the effective date of the Assignment, where such expenditure will be calculated by multiplying the number of FTEs assigned by Codexis and/or its Affiliates to develop the Cellulase Technology during such period by [***] United States Dollars ($[***]) per year;

[***] 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.

For the avoidance of doubt, the table below describes the obligations of the Assignee pursuant to Section 7.1(a); provided, however, that in the event of a conflict between the table below and the provisions of sections (a), (b) or (c) in this Schedule C above, the provisions of sections (a), (b) or (c) in this Schedule C above shall control:

TIMING OF THIRD PARTY ASSIGNMENT (POST- EFFECTIVE DATE)	**ASSIGNEE OBLIGATION UNDER SECTION 7.1(a)**
[***]	$[***] towards Cellulase Technology development (calculated at $[***] per FTE per year) over the [***] period following the Assignment, minus any expenditure by Codexis, its Affiliates and/or Third Parties on development of Cellulase Technology (calculated at $[***] per FTE per year), provided Codexis, its Affiliates and/or Third Parties have spent or, at the time of Assignment, are on a pace to spend, [***] prior to the [***] anniversary of the Effective Date.
[***]	$[***] towards Cellulase Technology development (calculated at $[***] per FTE per year) prior to the [***] anniversary of the Effective Date minus any expenditure by Codexis, its Affiliates and/or Third Parties on development of Cellulase Technology (calculated at $[***] per FTE per year), provided Codexis, its Affiliates and/or Third Parties have spent $[***] prior to the [***] anniversary of the Effective Date.
[***]	$[***] payment to Shell minus any expenditure by Codexis, its Affiliates and/or Third Parties (calculated at $[***] per FTE per year) on development of Cellulase Technology that occurs between the Effective Date and the [***] anniversary of the Effective Date, provided Codexis, its Affiliates and/or Third Parties have spent $[***] prior to the [***] anniversary of the Effective Date.

By way of examples, not intended to be limiting, to further clarify the obligations of the Assignee pursuant to Section 7.1(a) and this Schedule C (all examples assume an Effective Date of August 31, 2012):

[***] 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.

Example 1: Assignment During [***] **Where Codexis Expenditure Offsets Assignee's Obligation.** If an Assignment were to occur on [***] and Codexis and/or its Affiliates had employed [***] FTEs, self-funded by Codexis, on the development of the Cellulase Technology beginning on the Effective Date, Codexis would have been deemed to have been spent $[***] FTEs [***] Year [***] $[***] on the development of the Cellulase Technology. This would qualify as Codexis being on pace to spend $[***] over a [***] period following the Effective Date, allowing the expenditure to offset the development obligation of an Assignee. Therefore, an Assignee would be obligated to spend $[***] minus Codexis' $[***] expenditure, or $[***], by employing a total of [***] FTEs ($[***] $[***]) on further development of the Cellulase Technology by [***] following the date of Assignment, or [***].

Example 2: Assignment During [***] **Where Codexis Expenditure Does Not Offset Assignee's Obligation.** If an Assignment were to occur on [***] and Codexis and/or its Affiliates had employed [***] FTEs, self-funded by Codexis, on the development of the Cellulase Technology beginning on the Effective Date, Codexis would have been deemed to have been spent $[***] FTEs [***] Year × $[***] on the development of the Cellulase Technology. This would not qualify Codexis being on pace to spend $[***] over a [***] period following the Effective Date, in which case an Assignee would be obligated to spend $[***] by employing a total of [***] FTEs ($[***] $[***]) on further development of the Cellulase Technology by [***] following the date of Assignment, or [***].

Example 3: Assignment During [***] **Where Codexis Expenditure Offsets Assignee's Obligation.** If an Assignment were to occur on [***] and Codexis and/or its Affiliates had employed [***] FTEs, funded by a Third Party at a rate of $[***] per FTE, on the development of the Cellulase Technology since the Effective Date, Codexis would have been deemed to have been spent $[***] FTEs [***] Years × $[***] on the development of the Cellulase Technology, of which $[***] FTEs [***] Years x $[***] is applicable towards the Codexis spending threshold of $[***] over a [***] period following the Effective Date. Because this is above Codexis' $[***] spending threshold, Codexis' full $[***] expenditure would be subtracted against the development obligation of an Assignee. Therefore, an Assignee would be obligated to spend $[***] minus Codexis' $[***] expenditure, or $[***], by employing a total of [***] FTEs ($[***] / $[***] on further development of the Cellulase Technology by [***] following the Effective Date, or [***].

Example 4: Assignment During [***] **Where Codexis Expenditure Does Not Offset Assignee's Obligation.** If an Assignment were to occur on [***] and Codexis and/or its Affiliates had employed [***] FTEs, funded by a Third Party at a rate of $[***] per FTE, on the development of the Cellulase Technology beginning on the Effective Date, Codexis would have been deemed to have been spent $[***] FTEs [***] Years × $[***] on the development of the Cellulase Technology, of which $[***] FTEs [***] Years × $[***] is applicable towards the Codexis spending threshold of $[***] a [***] period following the Effective Date. Because this is below Codexis' $[***] spending threshold, an Assignee would be obligated to spend the full $[***] by employing a total of [***] FTEs ($[***] / $[***] on further development of the Cellulase Technology by [***] following the Effective Date, or [***].

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Example 5: Assignment After [***] **Where Codexis Expenditure Offsets Assignee's Obligation.** If an Assignment were to occur on [***] and Codexis and/or its Affiliates had employed [***] FTEs, funded by a Third Party at a rate of $[***] per FTE, on the development of the Cellulase Technology beginning on the Effective Date and ending on [***] with no expenditures thereafter, Codexis would have been deemed to have been spent $[***] FTEs [***] Year × $[***] on the development of the Cellulase Technology. This would be over the threshold of Codexis spending $[***] over a [***] period following the Effective Date, allowing the expenditure to be offset against the development obligation of an Assignee, however it would not be sufficient to satisfy an Assignee's obligations to Shell under Article 7. Therefore, an Assignee would be obligated to pay directly to Shell $[***] minus Codexis' $[***] expenditure, or $[***], within 90 days after Assignment, or [***].

Example 6: Assignment After [***] **Where Codexis Expenditure Entirely Offsets Assignee's Obligation.** If an Assignment were to occur on [***] and Codexis and/or its Affiliates had employed [***] FTEs, funded by a Third Party at a rate of $[***] per FTE, on the development of the Cellulase Technology beginning on the Effective Date and ending on [***], with no expenditures thereafter, Codexis would have been deemed to have been spent $[***] FTEs [***] Years × $[***] on the development of the Cellulase Technology. This would be above the threshold of Codexis spending $[***] over a [***] period following the Effective Date, allowing the expenditure to be offset against the development obligation of an Assignee. Moreover, Codexis and/or its Affiliates would have been deemed to have expended $[***] by [***], (assuming consistent employment of [***] FTEs since the Effective Date) allowing Codexis to deliver notice that the obligations of Article 7 have been fulfilled pursuant to Section 7.4.

Example 7: Assignment After [***] **Where Codexis Expenditure Does Not Offset Assignee's Obligation.** If an Assignment were to occur on [***] and Codexis and/or its Affiliates had not employed any FTEs on the development of the Cellulase Technology beginning on the Effective Date, Codexis would have been deemed to have been spent $[***] FTEs [***] Years × $[***] on the development of the Cellulase Technology. This would be below the threshold of Codexis spending $[***] over a [***] period following the Effective Date, in which case an Assignee would be obligated to pay directly to Shell $[***] within 90 days after Assignment, or [***].

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE D

Example Calculations of Royalties Payments

By way of examples, not intended to be limiting, to further clarify Codexis' obligation to pay royalty payments to Shell pursuant to Section 8.1(a):

- If Codexis, [***] after the Effective Date and after the First Commercial Sale, sells [***] tons of Biocatalyst for use in the Intermediate Field of Use to Third Parties in the Territory for Net Sales amounting to $[***], Codexis is obliged to pay Shell a [***] % royalty on such sales in the amount of $[***].
- If Codexis, [***] after the Effective Date and after the First Commercial Sale, sells [***] tons of Biocatalyst for use in the Intermediate Field of Use to Third Parties in the Territory for Net Sales amounting to $[***] and utilizes [***] tons of Biocatalyst for its own Intermediate Field of Use, Codexis is obliged to pay Shell a [***] % royalty on such sales to Third Parties in the amount of $[***] and a [***] % royalty on its own use in the amount of $[***], indicated by the Third Party Net Sales price of $[***] per ton of Biocatalyst.
- In the case of a valid assignment of this agreement to a third-party Assignee 3 years after the Effective Date, if such Assignee utilizes [***] tons of Biocatalyst for its own Intermediate Field of Use but does not sell Biocatalyst for use in the Intermediate Field of Use to Third Parties in the Territory, Codexis is obliged to pay Shell a [***] % royalty on its own use, informed by a mutually agreed upon price per ton of Biocatalyst at that point in time.
- If Codexis, [***] after the Effective Date, forms a joint venture with a Third Party where Codexis is a [***] equity participant and the Third Party is a [***] equity participant, the joint venture will be considered a Codexis Affiliate, owing Shell a [***] % royalty obligation from a sale of any Biocatalyst for use in the Intermediate Field of Use in the Territory after the First Commercial Sale. If the Third Party involved in such a joint venture, with such [***] equity stake, is also obliged to pay Shell a [***] % royalty on from a sale of the same Biocatalyst from a separate agreement, then the joint venture would be deemed to owe Shell a weighted average royalty from the parties to the Other Agreement. This weighted average royalty would be calculated by adding the sum of [***] multiplied by [***] % and [***] multiplied by [***] %, equaling a [***] % royalty that the joint venture would owe to Shell upon a sale of any Biocatalyst for use in the Intermediate Field of Use in the Territory after the First Commercial Sale.
- If Codexis, [***] after the Effective Date, forms a joint venture with a Third Party where Codexis is a [***] equity participant and the Third Party is a [***] equity participant, the joint venture will be considered a Codexis Affiliate, owing Shell a [***] % royalty obligation from a sale of any Biocatalyst for use in the Intermediate Field of Use in the Territory after the First Commercial Sale. If the Third Party involved in such a joint venture, with such [***] equity stake, is also obliged to pay Shell a [***] % royalty on

[***] 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.

from a sale of the same Biocatalyst from a separate agreement, then the joint venture would be deemed to owe Shell a weighted average royalty from the parties to the Other Agreement. This weighted average royalty would be calculated by adding the sum of [***] multiplied by [***] % and [***] multiplied by [***] %, equaling a [***] % royalty that the joint venture would owe to Shell upon a sale of any Biocatalyst for use in the Intermediate Field of Use in the Territory after the First Commercial Sale

[***] 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 E

Most Favored Nation Pricing

The examples below, which are not intended to be limiting, assume that the Cost of manufacturing and sales price for Biocatalysts in the Intermediate Field of Use in the Territory are representative of the preceding 12 month period to any date indicated.

- Assume that Codexis, [***] after the Effective Date, manufactures its Biocatalysts for a [***] $[***] and that no individual Third Party customer of Codexis pays less than $[***] for the same Biocatalysts. In this scenario, [***] the [***] will provide Shell with a lower purchase price - $[***] - than [***] lower than the lowest price paid by [***] for a BioCatalyst in the Intermediate Field of Use in the Territory – $[***]. The purchase price is calculated by determining [***] that will result in Codexis' [***] with a Cost of $[***] per ton of Biocatalyst. In this scenario, [***] $[***] can be calculated by dividing the Cost of $[***] per ton by [***] minus a [***]. In this case the [***] $[***] divided by [***] $[***] would equal [***].
- Assume that Codexis, [***] after the Effective Date, manufactures its Biocatalysts for a [***] $[***] per ton and that the lowest price paid by [***] is $[***] per ton for the same Biocatalysts. If Codexis was to enter into a supply agreement with Shell for the same Biocatalysts in the Intermediate Field of Use in the Territory, Shell's purchase price would be equal to $[***] per ton because that would be [***] lower than the lowest price paid by [***] for a BioCatalyst in the Intermediate Field of Use in the Territory. In this scenario [***] would be equal to approximately $[***] per ton, calculated by setting the [***] per ton, divided by [***]. Shell would thus obtain a lower purchase price through opting for a price [***] lower than the lowest price paid by [***] than for [***].

[***] 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 10.3

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Tel: 650.421.8100
Fax: 650.421-8135
www.codexis.com

August 29, 2012

David O'Toole
[ADDRESS]

Dear David:

On behalf of Codexis, I am pleased to extend to you this offer of employment as Senior Vice President and Chief Financial Officer reporting to John Nicols. Your position is a full-time position located in Redwood City, California.

Your employment is subject to proof of your legal right to work in the United States, and to your completing the United States Citizenship and Immigration Service Employment Eligibility Verification Form I-9. Your employment is also subject to successful completion of your professional references, background and drug screening, as well as the execution of your Employee Confidential Information and Inventions Assignment Agreement, which is attached to this offer letter as Attachment A.

Compensation

If you accept this offer and you begin employment with Codexis, you will receive an initial base salary of $325,000 per year, payable semi-monthly, which will be subject to all applicable withholdings.

You will also be eligible to participate in the Codexis Executive Incentive Compensation Plan (the "Incentive Plan"). Your Incentive Plan target will be 40% of your Codexis base salary earnings. Any Incentive Plan payout you receive will be prorated based on your service during 2012 as a percentage of the full year; and no bonus will be paid unless you commence employment with Codexis on or before October 1, 2012, and you must be an employee of Codexis on the date the bonus is paid. The form of payout under the Incentive Plan, if any, can be equity, cash or a combination of equity and cash, at the sole discretion of our Board of Directors' (the "Board"). Any payout will be subject to all applicable withholdings. If Codexis meets all of its corporate goals for 2013, and you also perform well against your individual and group goals, to be established with your supervisor, you can expect to receive an Incentive Plan payout at or near the 40% target after our Board approval of our 2013 year-end financial statements. Based on Codexis' performance and your individual and group's goal performance, your actual bonus may be more or less than this target, and under certain circumstances there may be no payout. Please also note that the Incentive Plan does not constitute a contract of employment or alter the "at will" status of your employment. In addition, Codexis reserves the right to modify or terminate the Incentive Plan at any time and for any reason without your consent.

You will also receive a sign-on bonus of $50,000. The sign-on bonus will be subject to all applicable withholdings and will be paid out in your first 30 days of employment. If within one

Initial: DDT

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Tel: 650.421.8100
Fax: 650.421-8135
www.codexis.com

year of your employment start date (i) you choose to resign employment or (ii) your employment is terminated for Cause (as defined below), you will be required to repay this sign-on bonus within 30 days of your termination. The gross (before withholding) amount of the sign-on bonus that must be repaid will be determined by the following repayment guidelines, which are based on the amount of time that has lapsed between your employment start date and your termination date:

a) within six months of your employment start date : 100%

b) between six and twelve months: prorated monthly.

"Cause" shall mean: (i) the willful and continued failure to substantially perform your duties with Codexis (other than as a result of physical or mental disability) after a written demand for substantial performance is delivered to you by Codexis, which demand specifically identifies the manner in which Codexis believes that you have not substantially performed your duties and that has not been cured within fifteen (15) days following receipt by you of the written demand; (ii) commission of a felony (other than a traffic-related offense) that in the written determination of Codexis is likely to cause or has caused material injury to Codexis's business; (iii) dishonesty with respect to a significant matter relating to Codexis's business; or (iv) material breach of any agreement by and between you and Codexis, which material breach has not been cured within fifteen (15) days following receipt by you of written notice from Codexis identifying such material breach.

Equity Grants

Subject to approval by the Board or the Compensation Committee of the Board, you will be granted an option to purchase 200,000 shares of common stock of Codexis (the "Option") with a per share exercise price equal to the closing trading price per share of Codexis common stock on the date the option is granted. The shares subject to the Option will vest and become exercisable with respect to one fourth or 25% of the total number of shares subject to the Option on the first anniversary of your employment start date and thereafter will vest and become exercisable with respect to 1/48th of the total number of shares subject to the Option per month for the following 36 months until the option is 100% vested on the four-year anniversary of your employment start date. Vesting is contingent upon your continued employment through the applicable vesting date. Your Option will be subject to the terms of the plan pursuant to which it is granted and/or an option agreement to be entered into between you and Codexis.

Subject to approval by the Board or the Compensation Committee of the Board, you will be granted an award of 50,000 shares of restricted common stock of Codexis (the "Restricted Stock Award") on or as soon as administratively practicable after your employment start date. The Restricted Stock Award shall vest, and the restrictions thereon shall lapse, with respect to twenty five percent (25%) of the total number of shares of restricted stock subject thereto on each anniversary of your employment start date, such that the Restricted Stock shall be fully vested, and the restrictions thereon shall have fully lapsed, on the fourth (4th) anniversary of your employment start date, subject to your continuous service to Codexis through the applicable vesting date. The Restricted Stock Award shall otherwise be subject to the terms of the plan pursuant to which it is granted and/or an award agreement to be entered into between you and Codexis.

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Tel: 650.421.8100
Fax: 650.421-8135
www.codexis.com

Change of Control Benefits

You will be eligible for certain change of control benefits, which are set forth in the Change of Control Severance Agreement attached to this offer letter as Attachment B. Any change of control benefits will be subject to the terms and conditions of the Change of Control Severance Agreement and are conditioned on your entry into the Change of Control Severance Agreement with Codexis.

Relocation Assistance

To ensure that your transition to the Bay Area is as smooth as possible, Codexis will provide you relocation assistance. You must use this relocation assistance within six months of your employment start date. Please see the attached relocation document attached to this offer letter as Attachment C).

If within eighteen months of your employment start date (i) you choose to resign employment or (ii) your employment is terminated for Cause; you will be required to reimburse Codexis for the expenses related to your relocation, prorated by the number of full months of employment. The gross (before withholding) amount of the relocation that must be repaid will be determined by the following repayment guidelines, which are based on the amount of time that has lapsed between your employment start date and your termination date:

a) within six months of your employment start date : 100%

b) between six and eighteen months: prorated monthly.

Employee Benefits

As a full-time employee, you will be eligible for the Codexis employee benefit plans, which currently include medical, dental, vision, long-term disability and life insurance, as well as a 401(k) plan and flexible time off that allows full-time employees to accrue 20 days of flexible time off each year of employment. For employees working greater than or equal to 20 hours and less than 40 hours per week flexible time off is prorated. Codexis reserves the right to modify or terminate any of these plans and benefits at any time and for any reason.

Other Terms and Conditions of Employment

Your employment with Codexis is at will. “Employment at will” means that you are free to resign from your employment at any time, for any reason or no reason at all, with or without cause and with or without notice. Similarly, Codexis may terminate your employment at any time for any legal reason, with or without cause and with or without notice. By accepting this offer of employment, you agree that your employment is at will, and acknowledge that no one, other than the President and CEO of Codexis, has the authority to promise you, either orally or in writing, anything to the contrary. Any such agreement must be in writing and signed by both you and the CEO to be effective.

Initial: DDT

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Tel: 650.421.8100
Fax: 650.421-8135
www.codexis.com

Employment with any other entity or for yourself in competition with Codexis, or any direct or indirect subsidiary of Codexis, is not permitted. If you want to take an outside job, please discuss the opportunity with your manager and the Human Resources Department in advance so that a determination can be made if any actual or potential conflict of interest exists.

During the course of your employment you may create, develop or have access to confidential information belonging to Codexis, including technical, research, financial, business, commercial, personnel or operational information, and/or ideas, trade secrets, know-how, procedures, strategies or plans. You agree that as a condition of your employment with Codexis, you will sign and comply with the Codexis Employee Confidential Information and Inventions Assignment Agreement, a copy of which is attached to this letter as Attachment A.

Arbitration of Disputes

You agree that, except as described below, any dispute relating to your employment or the termination of your employment with Codexis, including any claims related to any bonus, relocation payments or other compensation, shall be finally settled by binding arbitration in San Mateo County, California conducted by Judicial Arbitration and Mediation Services, Inc. ("JAMS") under the applicable JAMS employment rules. Claims subject to arbitration will include, but will not be limited to, claims under Title VII of the Civil Rights Act of 1964 (as amended) and other civil rights statutes of the United States, the Age Discrimination in Employment Act, the Americans with Disabilities Act, the Family and Medical Leave Act, the Employee Retirement Income Security Act of 1974, the California Fair Employment and Housing Act, the California Labor Code, and any other federal, state or local statute or regulation, and the common law of contract and tort. However, this agreement to arbitrate will not apply to claims (a) for workers' compensation, (b) for unemployment compensation or (c) injunctive relief, pending arbitration, arising out of or related to misappropriation of trade secrets or misuse or improper disclosure of confidential information, unfair competition or breach of any non-competition or non-solicitation agreement between you and Codexis.

The arbitrator shall: (i) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; and (ii) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award. The arbitrator shall be authorized to award any or all remedies that you or Codexis would be entitled to seek in a court of law.

You understand that by this agreement, you and Codexis are waiving your respective rights to trial by jury, and that judgment upon any arbitration award may be entered in any court having jurisdiction of the matter. Any controversy or claim subject to arbitration will be waived and forever barred if arbitration is not initiated within one year following the date the controversy or claim first arose, or if statutory rights are involved, within the time limit established by the applicable statute of limitations.

With regard to statutory claims, you and Codexis will have the same remedies available in arbitration as those available had the claim been filed in a court of law, including, where authorized by statute, compensatory and punitive damages, injunctive relief and attorneys' fees.

Initial: DDT

Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063
Tel: 650.421.8100
Fax: 650.421-8135
www.codexis.com

Although Codexis will pay all costs of the JAMS and the arbitrator, you agree to pay all costs you would otherwise be required to pay were your claims litigated in a court of law, such as costs of your attorney, deposition transcripts and expert witness fees and expenses.

The terms described in this letter supersede and replace all prior agreements, understandings, and promises between Codexis and you concerning the terms and conditions of your employment with Codexis.

We hope that your association with Codexis will be mutually successful and rewarding, and we look forward to welcoming you aboard. Please indicate your acceptance of this offer by initialing each page and signing this letter below and returning the letter to me by 09/05/2012. A copy of the letter is enclosed for your records.

Sincerely,

Codexis, Inc.

By: /s/ John Nicols
John Nicols
President & CEO

I understand and agree to the foregoing terms and conditions of employment with Codexis.

/s/ David O'Toole

8/31/2012 / 9/1/2012
Date / Start Date

Exhibit 10.4

CODEXIS, INC.

DAVID O'TOOLE
STOCK OPTION GRANT NOTICE AND
STOCK OPTION AGREEMENT

Codexis, Inc., a Delaware corporation, (the "Company") hereby grants to the holder listed below ("Participant"), an option to purchase the number of shares of the Company's common stock ("Stock"), set forth below (the "Option"). This Option is subject to all of the terms and conditions set forth herein and the Stock Option Agreement attached hereto as Exhibit A (the "Stock Option Agreement"), which is incorporated herein by reference. Unless otherwise defined herein, the terms are defined in Article 1 of the Stock Option Agreement.

Participant:	David O'Toole
Grant Date:	September 10, 2012
Exercise Price per Share:	$2.72
Total Exercise Price:	$544,000.00
Total Number of Shares Subject to the Option:	200,000 shares
Expiration Date:	September 9, 2022
Vesting Schedule:	The shares subject to this Option shall vest and become exercisable as to 25% of the total number of shares subject to the Option on September 4, 2013, and 1/48th of the total number of shares subject to the Option shall vest and become exercisable monthly thereafter, such that the Option would be fully vested and exercisable on September 4, 2016, subject to Participant's continued service with the Company through each such vesting date.
Type of Option:	This Option is a Non-Qualified Stock Option

By executing this Grant Notice below, Participant agrees to be bound by the terms and conditions of the Stock Option Agreement and this Grant Notice. Participant has reviewed the Stock Option Agreement and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice and the Stock Option Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under this Grant Notice or the Stock Option Agreement.

CODEXIS, INC.:

By: /s/ Douglas T. Sheehy
Print Name: Douglas T. Sheehy
Title: Senior Vice President, General Counsel and Secretary
Address: [ADDRESS]

PARTICIPANT:

By: /s/ David O'Toole
Print Name: David O'Toole

Address: [ADDRESS]

EXHIBIT A

TO DAVID O'TOOLE STOCK OPTION GRANT NOTICE

STOCK OPTION AGREEMENT

Pursuant to the Stock Option Grant Notice (the "Grant Notice") to which this Stock Option Agreement (this "Agreement") is attached, Codexis, Inc., a Delaware corporation (the "Company"), has granted to Participant an Option to purchase the number of shares of Stock indicated in the Grant Notice.

ARTICLE 1.

DEFINED TERMS

Wherever the following terms are used in this Agreement, they shall have the meanings specified below.

1.1 "Administrator" shall mean the Committee.

1.2 "Board" shall mean the Board of Directors of the Company.

1.3 "Change in Control" shall mean and includes each of the following:

(a) A transaction or series of transactions (other than an offering of Stock to the general public through a registration statement filed with the Securities and Exchange Commission) whereby any "person" or related "group" of "persons" (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) (other than the Company, any of its parents or subsidiaries, an employee benefit plan maintained by the Company or any of its subsidiaries or a "person" that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, the Company) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company possessing more than 50% of the total combined voting power of the Company's securities outstanding immediately after such acquisition; or

(b) During any period of two consecutive years, individuals who, at the beginning of such period, constitute the Board together with any new director(s) (other than a director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in Section 1.2(a) or Section 1.2(c)) whose election by the Board or nomination for election by the Company's stockholders 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 the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

(c) The consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of the Company's assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

(i) Which results in the Company's voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the

Company's assets or otherwise succeeds to the business of the Company (the Company or such person, the "Successor Entity")) directly or indirectly, at least a majority of the combined voting power of the Successor Entity's outstanding voting securities immediately after the transaction, and

(ii) After which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; *provided, however,* that no person or group shall be treated for purposes of this Section 1.2(c)(ii) as beneficially owning 50% or more of combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction; or

(d) The Company's stockholders approve a liquidation or dissolution of the Company.

The Administrator shall have full and final authority, which shall be exercised in its discretion, to determine conclusively whether a Change in Control of the Company has occurred pursuant to the above definition, and the date of the occurrence of such Change in Control and any incidental matters relating thereto.

1.4 "Code" shall mean the Internal Revenue Code of 1986, as amended from time to time.

1.5 "Committee" shall mean the Compensation Committee of the Board.

1.6 "Consultant" shall mean any consultant or adviser engaged to provide services to the Company or any Subsidiary that qualifies as a consultant under the applicable rules of the Securities and Exchange Commission for registration of shares on a Form S-8 Registration Statement.

1.7 "Employee" shall mean any officer or other employee (as determined in accordance with Section 3401(c) of the Code and the Treasury Regulations thereunder) of the Company or of any Subsidiary.

1.8 "Equity Restructuring" shall mean a nonreciprocal transaction between the 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 number or kind of shares of Stock (or other securities of the Company) or the share price of Stock (or other securities) and causes a change in the per share value of the Stock underlying the Option.

1.9 "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended from time to time.

1.10 "Fair Market Value" shall mean, as of any given date, the value of a share of Stock determined as follows:

(a) If the Stock is listed on any established stock exchange (such as the New York Stock Exchange, the NASDAQ Global Market and the NASDAQ Global Select Market) or national market system, its Fair Market Value shall be the closing sales price for a share of Stock as quoted on such exchange or system for such date or, if there is no closing sales price for a share of Stock on the date in question, the closing sales price for a share of Stock on the last preceding date for which such quotation exists, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(b) If the Stock is not listed on an established stock exchange or national market system, but the Stock is regularly quoted by a recognized securities dealer, its Fair Market Value shall be

the mean of the high bid and low asked prices for such date or, if there are no high bid and low asked prices for a share of Stock on such date, the high bid and low asked prices for a share of Stock on the last preceding date for which such information exists, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

(c) If the Stock is neither listed on an established stock exchange or a national market system nor regularly quoted by a recognized securities dealer, its Fair Market Value shall be established by the Administrator in good faith.

1.11 "Non-Employee Director" shall mean a Director of the Company who is not an Employee.

1.12 "Non-Qualified Stock Option" shall mean a stock option not described in Sections 422(b) or 423(b) of the Code.

1.13 "Subsidiary" means any entity (other than the Company), whether domestic or foreign, in an unbroken chain of entities beginning with the Company if each of the entities other than the last entity in the unbroken chain beneficially owns, at the time of the determination, securities or interests representing more than 50% of the total combined voting power of all classes of securities or interests in one of the other entities in such chain.

1.14 "Termination of Service" shall mean the time when the employee-employer relationship between Participant and the Company or any Subsidiary is terminated for any reason, including, without limitation, a termination by resignation, discharge, death, disability or retirement; but excluding terminations where Participant simultaneously commences or remains in employment or service with the Company or any Subsidiary. The Administrator, in its sole discretion, shall determine the effect of all matters and questions relating to a Termination of Service, including, without limitation, the question of whether a Termination of Service resulted from a discharge for cause and all questions of whether particular leaves of absence constitute a Termination of Service.

ARTICLE 2.

GRANT OF OPTION

2.1 Grant of Option. In consideration of Participant's agreement to commence and continue in the employ of the Company or a Subsidiary and for other good and valuable consideration, effective as of the Grant Date set forth in the Grant Notice (the "Grant Date"), the Company grants to Participant the Option to purchase any part or all of an aggregate of the number of shares of Stock set forth in the Grant Notice, upon the terms and conditions set forth in this Agreement, subject to adjustments as provided in Section 5.1 hereof. This Option shall be a Non-Qualified Stock Option.

2.2 Exercise Price. The exercise price of the shares of Stock subject to the Option shall be as set forth in the Grant Notice, without commission or other charge; *provided*, *however*, that the price per share of the shares of Stock subject to the Option shall not be less than 100% of the Fair Market Value of a share of Stock on the Grant Date.

2.3 Consideration to the Company. In consideration of the grant of the Option by the Company, Participant agrees to render faithful and efficient services to the Company or any Subsidiary. Nothing in this Agreement shall confer upon Participant any right to continue in the employ of the Company or any Subsidiary or shall interfere with or restrict in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

ARTICLE 3.

PERIOD OF EXERCISABILITY

3.1 Commencement of Exercisability.

(a) Subject to Sections 3.2, 3.3, 5.10 and 5.15 hereof, the Option shall become vested and exercisable in such amounts and at such times as are set forth in the Grant Notice.

(b) No portion of the Option which has not become vested and exercisable at the date of Participant's Termination of Service shall thereafter become vested and exercisable, except as may be otherwise provided by the Administrator or as set forth in a written agreement between the Company and Participant.

(c) Notwithstanding Sections 3.1(a) hereof and the Grant Notice, but subject to Section 3.1(b) hereof, pursuant to Section 5.1 hereof, the Option shall become fully vested and exercisable with respect to all shares of Stock covered thereby in the event of a Change in Control, in connection with which the successor corporation does not assume the Option or substitute an equivalent right for the Option. Should the successor corporation assume the Option or substitute an equivalent right, then no such acceleration shall apply.

3.2 Duration of Exercisability. The installments provided for in the vesting schedule set forth in the Grant Notice are cumulative. Each such installment which becomes vested and exercisable pursuant to the vesting schedule set forth in the Grant Notice shall remain vested and exercisable until it becomes unexercisable under Section 3.3 hereof. The vesting of the Option may be accelerated by the Administrator at such times and in such amounts as it shall determine in its sole discretion, as otherwise provided for in this Agreement or as set forth in a written agreement between the Company and Participant.

3.3 Expiration of Option. The Option may not be exercised to any extent by anyone after the first to occur of the following events:

(a) The Expiration Date set forth in the Grant Notice, which shall in no event be more than ten (10) years from the Grant Date;

(b) The expiration of three (3) months from the date of Participant's Termination of Service, unless such termination occurs by reason of Participant's death or disability or the exercise period is extended by the Administrator until a date not later than the Expiration Date of the Option; or

(c) The expiration of one (1) year from the date of Participant's Termination of Service by reason of Participant's death or disability, unless the exercise period is extended by the Administrator until a date not later than the Expiration Date of the Option.

(d) Unvested Options shall terminate immediately upon Participant's Termination of Services.

3.4 Tax Indemnity.

(a) The Participant agrees to indemnify and keep indemnified the Company, any Subsidiary and his/her employing company, if different, from and against any liability for or obligation to pay any Tax Liability (a "Tax Liability" being any liability for income tax, withholding tax and any other employment related taxes or social security contributions in any jurisdiction) that is attributable to (1) the grant or exercise of, or any benefit derived by the Participant from, the Option, (2) the acquisition by the Participant of the Stock on exercise of the Option, or (3) the disposal of any Stock.

(b) The Option cannot be exercised until the Participant has made such arrangements as the Company may require for the satisfaction of any Tax Liability that may arise in connection with the exercise of the Option and/or the acquisition of the Stock by the Participant. The Company shall not be required to issue, allot or transfer Stock until the Employee has satisfied this obligation.

ARTICLE 4.

EXERCISE OF OPTION

4.1 Person Eligible to Exercise. During the lifetime of Participant, only Participant may exercise the Option or any portion thereof. After the death of Participant, any exercisable portion of the Option may, prior to the time when the Option becomes unexercisable under Section 3.3 hereof, be exercised by Participant's personal representative or by any person empowered to do so under the deceased Participant's will or under the then applicable laws of descent and distribution.

4.2 Partial Exercise. Any exercisable portion of the Option or the entire Option, if then wholly exercisable, may be exercised in whole or in part at any time prior to the time when the Option or portion thereof becomes unexercisable under Section 3.3 hereof.

4.3 Manner of Exercise. The Option, or any exercisable portion thereof, may be exercised prior to its expiration to the extent such Option is vested, solely by delivery to the Secretary of the Company (or any third party administrator or other person or entity designated by the Company), during regular business hours, of all of the following prior to the time when the Option or such portion thereof becomes unexercisable under Section 3.3 hereof:

(a) An exercise notice in a form specified by the Administrator, stating that the Option or portion thereof is thereby exercised, such notice complying with all applicable rules established by the Administrator. Such notice of exercise shall be executed and delivered by the person exercising such Options;

(b) The receipt by the Company of full payment for the shares of Stock with respect to which the Option or portion thereof is exercised, including payment of any applicable withholding tax, which shall be made by deduction from other compensation payable to Participant or in such other form of consideration permitted under Section 4.4 hereof that is acceptable to the Company;

(c) Any other written representations as may be required in the Administrator's reasonable discretion to evidence compliance with the Securities Act of 1933, as amended (the "Securities Act") or any other applicable law, rule or regulation; and

(d) In the event the Option or portion thereof shall be exercised pursuant to Section 4.1 hereof by any person or persons other than Participant, appropriate proof (satisfactory to the Company in its sole discretion) of the right of such person or persons to exercise the Option.

Notwithstanding any of the foregoing, the Company shall have the right to specify all conditions of the manner of exercise, which conditions may vary by country and which may be subject to change from time to time.

4.4 Method of Payment. Payment of the exercise price shall be by any of the following, or a combination thereof, at the election of Participant:

(a) Cash or check;

(b) With the consent of the Administrator, surrender of shares of Stock (including, without limitation, shares of Stock otherwise issuable upon exercise of the Option) held for such period of time as may be required by the Administrator in order to avoid adverse accounting consequences and having a Fair Market Value on the date of delivery equal to the aggregate exercise price of the Option or exercised portion thereof; or

(c) Other property acceptable to the Administrator (including, without limitation, through the delivery of a notice that Participant has placed a market sell order with a broker with respect to shares of Stock then issuable upon exercise of the Option, and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the Option exercise price; *provided* that payment of such proceeds is then made to the Company at such time as may be required by the Company, but in any event not later than the settlement of such sale).

4.5 Tax Withholding. Participant shall pay to the Company by one of the permitted payment methods under Section 4.4, promptly upon exercise of an Option or, if later, the date that the amount of such obligations becomes determinable, all applicable federal, state, local and foreign withholding taxes that the Administrator, in its discretion, determines to result upon exercise of an Option or from a transfer or other disposition of shares of Stock acquired upon exercise of an Option or otherwise related to an Option or shares of Stock acquired in connection with an Option. The Administrator may in its sole discretion and in satisfaction of the foregoing requirement withhold, or allow Participant to elect to have the Company withhold shares of Stock otherwise issuable under the Option (or allow the surrender of shares of Stock). Unless determined otherwise by the Administrator, the number of shares of Stock which may be so withheld or surrendered shall be limited to the number of shares which have a Fair Market Value on the date of withholding or repurchase no greater than the aggregate amount of such liabilities based on the minimum statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes that are applicable to such supplemental taxable income. The Administrator shall determine the fair market value of the Stock, consistent with applicable provisions of the Code, for tax withholding obligations due in connection with a broker-assisted cashless Option exercise involving the sale of shares to pay the Option exercise price or any tax withholding obligation.

4.6 Conditions to Issuance of Stock. The shares of Stock deliverable upon the exercise of the Option, or any portion thereof, may be either previously authorized but unissued shares of Stock or issued shares of Stock which have then been reacquired by the Company. Such shares of Stock shall be fully paid and nonassessable. The Company shall not be required to issue or deliver any shares of Stock purchased upon the exercise of the Option or portion thereof prior to fulfillment of all of the following conditions:

(a) The admission of such shares of Stock to listing on all stock exchanges on which such Stock is then listed;

(b) The completion of any registration or other qualification of such shares of Stock under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or of any other governmental regulatory body, which the Administrator shall, in its absolute discretion, deem necessary or advisable;

(c) The obtaining of any approval or other clearance from any state or federal governmental agency which the Administrator shall, in its absolute discretion, determine to be necessary or advisable;

(d) The receipt by the Company of a properly completed and executed notice of exercise, as specified in Section 4.3(a) above, and full payment for such shares of Stock, including payment of any applicable withholding tax, which may be in one or more of the forms of consideration permitted under Section 4.4 hereof; and

(e) The lapse of such reasonable period of time following the exercise of the Option as the Administrator may from time to time establish for reasons of administrative convenience.

4.7 Rights as Stockholder. The holder of the Option shall not be, nor have any of the rights or privileges of, a stockholder of the Company, including, without limitation, voting rights and rights to dividends, in respect of any shares of Stock purchasable upon the exercise of any part of the Option unless and until such shares of Stock shall have been issued by the Company and held of record by such holder (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment will be made for a dividend or other right for which the record date is prior to the date the shares of Stock are issued, except as provided in Section 5.1 hereof.

ARTICLE 5.

OTHER PROVISIONS

5.1 Changes in Stock or Assets of the Company, Acquisition or Liquidation of the Company and Other Corporate Events.

(a) In the event of any stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of the Company's stock or the share price of the Company's stock other than an Equity Restructuring, the Administrator may make equitable adjustments, if any, to reflect such change with respect to (i) the number and kind of shares of Stock (or other securities or property) subject to the Option; (ii) the terms and conditions of the Option; and (iii) the exercise price per share for the Option.

(b) In the event of any transaction or event described in Section 5.1(a) or any unusual or nonrecurring transactions or events affecting the Company, any affiliate of the Company, or the financial statements of the Company or any affiliate, or of changes in applicable laws, regulations or accounting principles, the Administrator, in its sole discretion, and on such terms and conditions as it deems appropriate, either by the terms of the Option or by action taken prior to the occurrence of such transaction or event and either automatically or upon Participant's request, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Agreement.

(i) To provide for either (A) termination of the Option in exchange for an amount of cash, if any, equal to the amount that would have been attained upon the exercise of the Option or realization of Participant's rights (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction or event described in this Section 5.1 the Administrator determines in good faith that no amount would have been attained upon the exercise of the Option or realization of Participant's rights, then the Option may be terminated by the Company without payment) or (B) the replacement of the Option with other rights or property selected by the Administrator in its sole discretion having an aggregate value not exceeding the amount that could have been attained upon the exercise of the Option or realization of Participant's rights had the Option been currently exercisable or payable or fully vested;

(ii) To provide that the Option be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by similar options, rights or awards covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices;

(iii) To make adjustments in the number and type of shares of the Company's stock (or other securities or property) subject to the Option and/or in the terms and conditions of (including the exercise price), and the criteria included in, the Option;

(iv) To provide that the Option shall be exercisable or payable or fully vested with respect to all shares covered thereby, notwithstanding anything to the contrary in the Agreement; and

(v) To provide that the Option cannot vest, be exercised or become payable after such event.

(c) In connection with the occurrence of any Equity Restructuring, and notwithstanding anything to the contrary in Sections 5.1(a) and 5.1(b), the number and type of securities subject to the Option and/or the exercise price hereof, if applicable, shall be equitably adjusted. The adjustments provided under this Section 5.1(c) shall be nondiscretionary and shall be final and binding on Participant and the Company.

(d) Notwithstanding any other provision herein, but subject to Section 5.1(e), in the event of a Change in Control, the Option shall be assumed or an equivalent award substituted by the successor corporation or a parent or subsidiary of the successor corporation.

(e) In the event that the successor corporation in a Change in Control refuses to assume or substitute for the Option upon a Change in Control, the Option shall become fully vested and, if applicable, exercisable and all forfeiture restrictions on the Option shall lapse, in each case, as of immediately prior to the consummation of such Change in Control. If the Option is exercisable in lieu of assumption or substitution in the event of a Change in Control, the Administrator shall notify Participant that the Option shall be fully exercisable for a period of fifteen (15) days from the date of such notice, contingent upon the occurrence of the Change in Control, and the Option shall terminate upon the expiration of such period.

(f) No such adjustment or action shall be authorized to the extent such adjustment or action would result in short-swing profits liability under Section 16 of the Exchange Act or violate the exemptive conditions of Rule 16b-3 of the Exchange Act unless the Administrator determines that the Option is not to comply with such exemptive conditions.

(g) The existence of the Grant Notice, Agreement and the Option shall not affect or restrict in any way the right or power of the Company or the stockholders of the Company to make or

authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company, any issue of stock or of options, warrants or rights to purchase stock or of bonds, debentures, preferred or prior preference stocks whose rights are superior to or affect the Stock or the rights thereof or which are convertible into or exchangeable for Stock, or the dissolution or liquidation of the company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

(h) No action shall be taken under this Section 5.1 which shall cause the Option to fail to comply with Section 409A of the Code or the Treasury Regulations thereunder, to the extent applicable to the Option.

(i) In the event of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of Stock or the share price of the Stock including any Equity Restructuring, for reasons of administrative convenience, the Company in its sole discretion may refuse to permit the exercise of the Option during a period of up to thirty (30) days prior to the consummation of any such transaction.

5.2 Administration. The Administrator shall have the power to interpret this Agreement and to adopt such rules for the administration, interpretation and application of this Agreement as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator in good faith shall be final and binding upon Participant, the Company and all other interested persons. No member of the Administrator shall be personally liable for any action, determination or interpretation made in good faith with respect to this Agreement or the Option.

5.3 Whole Shares. The Option may only be exercised for whole shares of Stock.

5.4 Option Not Transferable. Subject to Section 4.1 hereof, the Option may not be sold, pledged, assigned or transferred in any manner other than by will or the laws of descent and distribution, unless and until the shares of Stock underlying the Option have been issued, and all restrictions applicable to such shares of Stock have lapsed. Neither the Option nor any interest or right therein shall be liable for the debts, contracts or engagements of Participant or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect, except to the extent that such disposition is permitted by the preceding sentence.

5.5 Binding Agreement. Subject to the limitation on the transferability of the Option contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

5.6 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal office, and any notice to be given to Participant shall be addressed to Participant at Participant's last address reflected on the Company's records. By a notice given pursuant to this Section 5.6, either party may hereafter designate a different address for notices to be given to that party. Any notice which is required to be given to Participant shall, if Participant is then deceased, be given to the person entitled to exercise his or her Option pursuant to Section 4.1 hereof by written notice under this Section 5.6.

Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

5.7 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

5.8 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

5.9 Conformity to Securities Laws. Participant acknowledges that this Agreement is intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the Securities and Exchange Commission thereunder, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Option is granted and may be exercised, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by applicable law, this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

5.10 Amendments, Suspension and Termination. This Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator; *provided* that, except as may otherwise be provided herein, no amendment, modification, suspension or termination of this Agreement shall adversely affect the Option in any material way without the prior written consent of Participant.

5.11 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth in Section 5.4 hereof, this Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

5.12 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Option and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by applicable law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

5.13 Not a Contract of Employment. Nothing in this Agreement or in the Grant Notice shall confer upon the Participant any right to continue to serve as an employee or other service provider of the Company or any of its Subsidiaries.

5.14 Entire Agreement. The Grant Notice and this Agreement (including all Exhibits thereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

5.15 Section 409A. This Option is not intended to constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Code (together with any Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date hereof, "Section 409A"). However,

notwithstanding any other provision of the Grant Notice or this Agreement (or any Exhibits hereto), if at any time the Administrator determines that the Option (or any portion thereof) may be subject to Section 409A, the Administrator shall have the right in its sole discretion (without any obligation to do so or to indemnify Participant or any other person for failure to do so) to adopt such amendments to the Grant Notice or this Agreement (or any Exhibits hereto), or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Administrator determines are necessary or appropriate either for the Option to be exempt from the application of Section 409A or to comply with the requirements of Section 409A.

5.16 Limitation on Participant's Rights. The Option confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither this Agreement nor any underlying program, in and of itself, has any assets. Participant shall have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the Option, and rights no greater than the right to receive the Stock as a general unsecured creditor with respect to options, as and when exercised pursuant to the terms hereof.

5.17 Signature in Counterparts. This Agreement, if provided for acceptance on a paper copy, may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

Exhibit 10.5

CODEXIS, INC.
DAVID O'TOOLE
RESTRICTED STOCK GRANT NOTICE AND
RESTRICTED STOCK AGREEMENT

Codexis, Inc., a Delaware corporation, (the "***Company***"), hereby grants to the individual listed below ("***Participant***"), the number of shares (the "***Shares***") of the Company's common stock ("***Stock***") set forth below. These Shares are subject to all of the terms and conditions as set forth herein and in the Restricted Stock Agreement attached hereto as Exhibit A (the "***Restricted Stock Agreement***") (including without limitation the Restrictions on the Shares set forth in the Restricted Stock Agreement), which is incorporated herein by reference. Unless otherwise defined herein, the terms are defined in Article 1 of the Restricted Stock Agreement.

Participant's Name:	David O'Toole
Grant Date:	September 10, 2012
Total Number of Shares of Restricted Stock:	50,000 shares
Vesting Commencement Date:	September 4, 2012
Vesting Schedule:	The Shares subject to this Award shall vest and be released from the Restrictions (as defined in the Restricted Stock Agreement) as to 25% of the total number of Shares on each anniversary of the Vesting Commencement Date so that 100% of the Shares shall be released from such Restrictions on the fourth (4th) anniversary of the Vesting Commencement Date, subject to Participant continuing to provide services to the Company through each such vesting date.
Termination:	Subject to Section 2.2 of the Restricted Stock Agreement, if Participant ceases to be an Employee, Consultant or Director prior to the applicable vesting date, all Shares of Restricted Stock that have not become vested on or prior to the date of such Termination of Service (after taking into consideration any vesting that may occur in connection with such Termination of Service, if any) will thereupon be automatically forfeited by Participant without payment of any consideration therefor.

By executing this Grant Notice below, Participant agrees to be bound by the terms and conditions of the Restricted Stock Agreement and this Grant Notice. Participant has reviewed the Restricted Stock Agreement and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice and the Restricted Stock Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee upon any questions arising under this Grant Notice or the Restricted Stock Agreement. In addition, Participant agrees that the Company, in its sole discretion, may satisfy any withholding obligations in accordance with Section 2.2(d) of the Restricted Stock Agreement by (i) withholding Shares otherwise releasable to Participant upon vesting of the Shares, (ii) instructing a broker on Participant's behalf to sell shares of Stock otherwise releasable to Participant upon vesting of the Shares and submit the proceeds of such sale to the Company or (iii) using any other method permitted by Section 2.2(d) of the Restricted Stock Agreement. If Participant is married, his or her spouse has signed the Consent of Spouse attached to this Grant Notice as Exhibit B.

CODEXIS, INC.:

By: /s/ Douglas T. Sheehy
Print Name: Douglas T. Sheey
Title: Senior Vice President, General Counsel and Secretary

Address: [ADDRESS]

PARTICIPANT:

By: /s/ David O'Toole
Print Name: David O'Toole

Address: [ADDRESS]

EXHIBIT A

TO DAVID O'TOOLE RESTRICTED STOCK GRANT NOTICE

RESTRICTED STOCK AGREEMENT

Pursuant to the Restricted Stock Grant Notice (the "***Grant Notice***") to which this Restricted Stock Agreement (the "***Agreement***") is attached, Codexis, Inc., a Delaware corporation, (the "***Company***"), effective as of the Grant Date set forth in the Grant Notice, has granted to Participant an award (the "***Award***") consisting of the number of shares of restricted stock set forth in the Grant Notice (the "***Shares***"), subject to the restrictions and risk of forfeiture set forth herein.

ARTICLE I.

DEFINED TERMS

Wherever the following terms are used in this Agreement, they shall have the meanings specified below.

1.1 "***Administrator***" shall mean the Committee.

1.2 "***Board***" shall mean the Board of Directors of the Company.

1.3 "***Change in Control***" shall mean and includes each of the following:

(a) A transaction or series of transactions (other than an offering of Stock to the general public through a registration statement filed with the Securities and Exchange Commission) whereby any "person" or related "group" of "persons" (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) (other than the Company, any of its parents or subsidiaries, an employee benefit plan maintained by the Company or any of its subsidiaries or a "person" that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, the Company) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company possessing more than 50% of the total combined voting power of the Company's securities outstanding immediately after such acquisition; or

(b) During any period of two consecutive years, individuals who, at the beginning of such period, constitute the Board together with any new director(s) (other than a director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in Section 1.2(a) or Section 1.2(c)) whose election by the Board or nomination for election by the Company's stockholders 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 the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

(c) The consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of the Company's assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

(i) Which results in the Company's voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being

converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the Company's assets or otherwise succeeds to the business of the Company (the Company or such person, the "***Successor Entity***")) directly or indirectly, at least a majority of the combined voting power of the Successor Entity's outstanding voting securities immediately after the transaction, and

(ii) After which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; *provided, however,* that no person or group shall be treated for purposes of this Section 1.2(c)(ii) as beneficially owning 50% or more of combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction; or

(d) The Company's stockholders approve a liquidation or dissolution of the Company.

The Administrator shall have full and final authority, which shall be exercised in its discretion, to determine conclusively whether a Change in Control of the Company has occurred pursuant to the above definition, and the date of the occurrence of such Change in Control and any incidental matters relating thereto.

1.4 "***Code***" shall mean the Internal Revenue Code of 1986, as amended from time to time.

1.5 "***Committee***" shall mean the Compensation Committee of the Board.

1.6 "***Consultant***" shall mean any consultant or adviser engaged to provide services to the Company or any Subsidiary that qualifies as a consultant under the applicable rules of the Securities and Exchange Commission for registration of shares on a
Form S-8 Registration Statement.

1.7 "***Employee***" shall mean any officer or other employee (as determined in accordance with Section 3401(c) of the Code and the Treasury Regulations thereunder) of the Company or of any Subsidiary.

1.8 "***Exchange Act***" shall mean the Securities Exchange Act of 1934, as amended from time to time.

1.9 "***Fair Market Value***" shall mean, as of any given date, the value of a share of Stock determined as follows:

(a) If the Stock is listed on any established stock exchange (such as the New York Stock Exchange, the NASDAQ Global Market and the NASDAQ Global Select Market) or national market system, its Fair Market Value shall be the closing sales price for a share of Stock as quoted on such exchange or system for such date or, if there is no closing sales price for a share of Stock on the date in question, the closing sales price for a share of Stock on the last preceding date for which such quotation exists, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(b) If the Stock is not listed on an established stock exchange or national market system, but the Stock is regularly quoted by a recognized securities dealer, its Fair Market Value shall be the mean of the high bid and low asked prices for such date or, if there are no high bid and low asked prices for a share of Stock on such date, the high bid and low asked prices for a share of Stock on the last preceding date for which such information exists, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

(c) If the Stock is neither listed on an established stock exchange or a national market system nor regularly quoted by a recognized securities dealer, its Fair Market Value shall be established by the Administrator in good faith.

1.10 "***Non-Employee Director***" shall mean a Director of the Company who is not an Employee.

1.11 "***Subsidiary***" means any entity (other than the Company), whether domestic or foreign, in an unbroken chain of entities beginning with the Company if each of the entities other than the last entity in the unbroken chain beneficially owns, at the time of the determination, securities or interests representing more than 50% of the total combined voting power of all classes of securities or interests in one of the other entities in such chain.

1.12 "***Termination of Service***" shall mean the time when the employee-employer relationship between Participant and the Company or any Subsidiary is terminated for any reason, including, without limitation, a termination by resignation, discharge, death, disability or retirement; but excluding terminations where Participant simultaneously commences or remains in employment or service with the Company or any Subsidiary. The Administrator, in its sole discretion, shall determine the effect of all matters and questions relating to a Termination of Service, including, without limitation, the question of whether a Termination of Service resulted from a discharge for cause and all questions of whether particular leaves of absence constitute a Termination of Service.

ARTICLE II.

GRANT OF RESTRICTED STOCK

2.1 Grant of Restricted Stock.

(a) Award. In consideration of Participant's agreement to commence employment and continue in the employ of or service to the Company and for other good and valuable consideration which the Committee has determined exceeds the aggregate par value of the Shares, effective as of the Grant Date, the Company has issued to Participant the Shares. Participant is an Employee, Director or Consultant of the Company or a Subsidiary of the Company.

(b) Book Entry Form. At the sole discretion of the Company, the Shares will be evidenced by documenting the Shares in either (i) uncertificated form, with the Shares recorded in the name of Participant in the books and records of the Company's transfer agent with appropriate notations regarding the restrictions on transfer and risk of forfeiture imposed pursuant to this Agreement; or (ii) certificate form pursuant to the terms of Sections 2.1(c) and (d) hereof.

(c) Legend. Certificates representing Shares issued pursuant to this Agreement shall, until all Restrictions (as defined below) imposed pursuant to this Agreement lapse or shall have been removed and the Shares shall thereby have become vested or the Shares represented thereby have been forfeited hereunder, bear the following legend (or such other legend as shall be determined by the Committee):

"THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN VESTING REQUIREMENTS AND MAY BE SUBJECT TO FORFEITURE UNDER THE TERMS OF A RESTRICTED STOCK AGREEMENT BY AND BETWEEN CODEXIS, INC. AND THE REGISTERED OWNER OF SUCH SHARES, AND SUCH SHARES MAY NOT BE, DIRECTLY OR INDIRECTLY, OFFERED,

TRANSFERRED, SOLD, ASSIGNED, PLEDGED, HYPOTHECATED OR OTHERWISE DISPOSED OF UNDER ANY CIRCUMSTANCES, EXCEPT PURSUANT TO THE PROVISIONS OF SUCH AGREEMENT."

(d) Escrow. The Secretary of the Company or such other escrow holder as the Committee may appoint may retain physical custody of any certificates representing the Shares until all of the Restrictions imposed pursuant to this Agreement lapse or shall have been removed.

(e) Delivery of Certificates Upon Vesting. As soon as administratively practicable, and, in any event, within sixty (60) days, following the vesting of any Shares subject to the Award pursuant to Section 2.2(b) hereof, the Company shall, as applicable, either remove the notations on any Shares subject to the Award issued in book entry form which have vested or deliver to Participant a certificate or certificates evidencing the number of Shares subject to the Award which have vested. Participant (or the beneficiary or personal representative of Participant in the event of Participant's death or incapacity, as the case may be) shall deliver to the Company any representations or other documents or assurances required by the Company. The Shares with respect to which such notations have been so removed or certificates so delivered shall no longer be subject to the Restrictions hereunder. Notwithstanding the foregoing, in the event Shares cannot be issued pursuant to Section 2.2(e)(i), (ii) and (iii) hereof, then the Shares shall be issued pursuant to the preceding sentences as soon as administratively practicable after the Committee determines that Shares can be issued in accordance with Sections 2.2(e)(i), (ii) and (iii) hereof.

2.2 Restrictions.

(a) Forfeiture. Upon Participant's Termination of Service for any or no reason, any Shares subject to the Award that have not vested in accordance with this Agreement (after giving effect to any accelerated vesting pursuant to Sections 2.2.(b) or 2.2(c) hereof or any other written agreement or plan between Participant and the Company) will thereupon be automatically forfeited, terminated and cancelled as of the applicable termination date without payment of any consideration by the Company, and Participant, or Participant's beneficiary or personal representative, as the case may be, shall have no further rights hereunder. Subject to Sections 2.2(b) and 2.2(c) hereof or this Section 2.2(a), no portion of the Award which has not become vested as of the date on which Participant incurs a Termination of Service shall thereafter become vested. For purposes of this Agreement, "***Restrictions***" shall mean the restrictions on sale or other transfer set forth in Section 3.5 hereof and the exposure to forfeiture set forth in this Section 2.2(a).

(b) Vesting and Lapse of Restrictions. Subject to Sections 2.2(a) and 2.2(c) hereof, the Shares subject to the Award shall vest and Restrictions shall lapse in accordance with the vesting schedule set forth on the Grant Notice, contingent upon Participant's continued employment or services through such dates. The vesting of the Shares subject to the Award may be accelerated by the Administrator at such times and in such amounts as it shall determine in its sole discretion, as otherwise provided for in this Agreement or as set forth in a written agreement between the Company and Participant.

(c) Acceleration of Vesting. Notwithstanding Sections 2.2(a) and 2.2(b) hereof, if a Change in Control occurs and the Award is not assumed or substituted by a successor corporation in accordance with Section 3.1 hereof, then immediately prior to the consummation of such Change in Control, all forfeiture restrictions on the Award shall lapse in accordance with Section 3.1 hereof.

(d) Tax Withholding. Notwithstanding any other provision of this Agreement (including without limitation Section 2.1(b) hereof), no new certificate shall be delivered to Participant or

his or her legal representative and no notation on the books and records shall be removed unless and until Participant or his or her legal representative shall have paid to the Company the full amount of all federal and state withholding or other taxes applicable to the taxable income of Participant resulting from the grant of Shares or the lapse or removal of the Restrictions. Such payment shall be made in such form of consideration acceptable to the Company which may, in the sole discretion of the Company, include:

(i) Cash or check;

(ii) Surrender of shares of Stock (including, without limitation, shares of Stock subject to the Award that would otherwise be vesting) held for such period of time as may be required by the Committee in order to avoid adverse accounting consequences and having a Fair Market Value on the date of delivery equal to the aggregate payment required; or

(iii) Other property acceptable to the Company in its sole discretion (including, without limitation, through the delivery of a notice that Participant has placed a market sell order with a broker with respect to shares of Stock for which the Restrictions are then subject to lapse, and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of its withholding obligations; *provided* that payment of such proceeds is then made to the Company upon settlement of such sale).

The Company shall not be obligated to deliver any new certificate representing Shares to Participant or Participant's legal representative or enter such Share in book entry form unless and until Participant or Participant's legal representative shall have paid or otherwise satisfied in full the amount of all federal, state and local taxes applicable to the taxable income of Participant resulting from the grant of the Award or the issuance of Shares hereunder.

2.3 Conditions to Delivery of Stock. Subject to Section 2.1 hereof, the Shares issued under this Award, or any portion thereof, may be either previously authorized but unissued shares of Stock, treasury shares of Stock or issued shares of Stock which have been reacquired by the Company on the open market. Such Shares shall be fully paid and nonassessable.

2.4 Rights as Stockholder. The holder of the Award shall not be, nor have any of the rights or privileges of, a stockholder of the Company, including, without limitation, any dividend rights and voting rights, in respect of any Shares unless and until such Shares shall have been actually issued by the Company and held of record by such holder (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 3.1 hereof.

ARTICLE III.

OTHER PROVISIONS

3.1 Change in Control.

(a) In the event that the successor corporation in a Change in Control refuses to assume or substitute for the Award upon a Change in Control, the Award shall become fully vested and all Restrictions on the Award shall lapse, in each case, as of immediately prior to the consummation of such Change in Control.

(b) The existence of the Grant Notice, Agreement and the Award shall not affect or restrict in any way the right or power of the Company or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company, any issue of stock or of options, warrants or rights to purchase stock or of bonds, debentures, preferred or prior preference stocks whose rights are superior to or affect the Stock or the rights thereof or which are convertible into or exchangeable for Stock, or the dissolution or liquidation of the company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

3.2 Administration. The Committee shall have the power to interpret this Agreement and to adopt such rules for the administration, interpretation and application of this Agreement as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Committee in good faith shall be final and binding upon Participant, the Company and all other interested persons. No member of the Committee or the Board shall be personally liable for any action, determination or interpretation made in good faith with respect to this Agreement or the Award.

3.3 Tax Consultation. Participant understands that Participant may suffer adverse tax consequences in connection with the Shares issued pursuant to this Award (and the shares issuable with respect thereto). Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the Award and the issuance of Shares with respect thereto and that Participant is not relying on the Company for any tax advice.

3.4 Tax-Related Items. Participant agrees to indemnify and keep indemnified the Company, any Subsidiary and his/her employing company, if different, from and against any liability for or obligation to pay any liability for income tax, withholding tax and any other employment related taxes, employee's national insurance contributions or employer's national insurance contributions or equivalent social security contributions in any jurisdiction (collectively, "***Tax-Related Items***") that is attributable to (a) the grant, or any benefit derived by Participant from, the Award, (b) the issuance to Participant of the Shares or (c) the disposal of the Shares.

3.5 Restricted Stock Not Transferable. During the lifetime of Participant, until the Restrictions lapse, this Award and the rights and privileges conferred hereby will not be transferred, assigned, pledged or hypothecated in any way (whether by operation of law or otherwise) and will not be subject to sale under execution, attachment or similar process. Upon any attempt to transfer, assign, pledge, hypothecate or otherwise dispose of the Award, or any right or privilege conferred hereby, or upon any attempted sale under any execution, attachment or similar process, the Award and the rights and privileges conferred hereby immediately will become null and void. Notwithstanding anything herein to the contrary, this Section 3.5 shall not prevent transfers by will or applicable laws of descent and distribution.

3.4 Binding Agreement. Subject to the limitation on the transferability of this Award contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

3.5 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal office, and any notice to be given to Participant shall be addressed to Participant at Participant's last address reflected on the Company's records. By a notice given pursuant to this Section 3.7, either party may hereafter designate a different address for notices to be given to that party. Any notice shall be deemed

duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

3.6 Titles. Titles provided herein are for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

3.7 Governing Law; Severability. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

3.8 Conformity to Securities Laws. Participant acknowledges that this Agreement is intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the Securities and Exchange Commission thereunder, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Award is granted, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by applicable law, this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

3.9 Amendments, Suspension and Termination. This Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Committee or the Board, *provided,* that, except as may otherwise be provided herein, no amendment, modification, suspension or termination of this Agreement shall adversely effect the Award in any material way without the prior written consent of Participant.

3.10 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Participant and his or her heirs, executors, Committees, successors and assigns.

3.11 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Award, the Shares and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by applicable law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

3.12 Tax Withholding and Section 83(b) Election. Participant understands that Section 83(a) of the Internal Revenue Code taxes as ordinary income the difference between the amount, if any, paid for the Shares and the Fair Market Value of such Shares at the time the Restrictions on such Shares lapse. Participant understands that, notwithstanding the preceding sentence, Participant may elect to be taxed at the time of the Grant Date, rather that at the time the Restrictions lapse, by filing an election under Section 83(b) of the Code (an "***83(b) Election***") with the Internal Revenue Service within thirty (30) days of the Grant Date. In the event Participant files an 83(b) Election, Participant shall provide the Company a copy thereof prior to the expiration of such thirty (30) day period. Participant understands that in the event an 83(b) Election is filed with the Internal Revenue Service within such time period, Participant will recognize ordinary income in an amount equal to the difference between the amount, if any, paid for the Shares and the Fair Market Value of such Shares as of the Grant Date. Participant further understands that an additional copy of such 83(b) Election form should be filed with his or her federal income tax return for the calendar year in which the date of this Agreement falls. Participant acknowledges that the

foregoing is only a summary of the effect of United States federal income taxation with respect to the Award hereunder, and does not purport to be complete. PARTICIPANT FURTHER ACKNOWLEDGES THAT THE COMPANY IS NOT RESPONSIBLE FOR FILING PARTICIPANT'S 83(b) ELECTION, AND THE COMPANY HAS DIRECTED PARTICIPANT TO SEEK INDEPENDENT ADVICE REGARDING THE APPLICABLE PROVISIONS OF THE INTERNAL REVENUE CODE, THE INCOME TAX LAWS OF ANY MUNICIPALITY, STATE OR FOREIGN COUNTRY IN WHICH PARTICIPANT MAY RESIDE, AND THE TAX CONSEQUENCES OF PARTICIPANT'S DEATH.

PARTICIPANT HEREBY ASSUMES ALL RESPONSIBILITY FOR FILING PARTICIPANT'S 83(b) ELECTION AND PAYING ANY TAXES RESULTING FROM SUCH ELECTION OR FROM FAILURE TO FILE THE ELECTION AND PAYING TAXES RESULTING FROM THE LAPSE OF THE RESTRICTIONS ON THE UNVESTED SHARES.

PARTICIPANT UNDERSTANDS THAT PARTICIPANT MAY SUFFER ADVERSE TAX CONSEQUENCES AS A RESULT OF PARTICIPANT'S PURCHASE OR DISPOSITION OF THE SHARES AND PARTICIPANT REPRESENTS THAT PARTICIPANT IS NOT RELYING ON THE COMPANY FOR ANY TAX ADVICE.

3.14 Not a Contract of Employment. Nothing in this Agreement or in the Grant Notice shall confer upon Participant any right to continue to serve as an employee or other service provider of the Company or any of its Subsidiaries.

3.15 Entire Agreement. The Grant Notice and this Agreement constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

3.16 Limitation on Participant's Rights. This Award confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither this Agreement nor any underlying program, in and of itself, has any assets. Participant shall have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the Shares issuable hereunder.

EXHIBIT B

TO DAVID O'TOOLE RESTRICTED STOCK GRANT NOTICE

CONSENT OF SPOUSE

I, Marilyn O'Toole, spouse of David O'Toole, have read and approve the foregoing Agreement. In consideration of issuing to my spouse the shares of the common stock of Codexis, Inc. set forth in the Agreement, I hereby appoint my spouse as my attorney-in-fact in respect to the exercise of any rights under the Agreement and agree to be bound by the provisions of the Agreement insofar as I may have any rights in said Agreement or any shares of the common stock of Codexis, Inc. issued pursuant thereto under the community property laws or similar laws relating to marital property in effect in the state of our residence as of the date of the signing of the foregoing Agreement.

Dated: September 29, 2012

/s/ Marilyn O'Toole
Signature of Spouse

Exhibit 10.6

SIXTH AMENDMENT TO LEASE

This Sixth Amendment to Lease ("Amendment") is entered into, and dated for reference purposes, as of September 27, 2012 (the "Execution Date") by and between METROPOLITAN LIFE INSURANCE COMPANY, a New York corporation ("Metropolitan"), as Landlord ("Landlord"), and CODEXIS, INC., a Delaware corporation ("Codexis"), as Tenant ("Tenant"), with reference to the following facts ("Recitals"):

A. Landlord and Tenant are the parties to that certain written lease which is comprised of the following: that certain written Lease, dated as of October , 2003 [sic], by and between Landlord and Tenant (the "Original Lease") for certain premises described therein and commonly known as 501 Chesapeake Drive which is a part of Building 3 (the "501 Chesapeake Space") and all the rentable area of Building 4 (consisting of 200 and 220 Penobscot Drive (collectively, the "200 & 220 Penobscot Space", and together with the 501 Chesapeake Space are referred to collectively as the "Original Premises"), all as more particularly described in the Original Lease; as amended by that certain First Amendment to Lease, dated as of June 1, 2004, by and between Landlord and Tenant (the "First Amendment"); as amended by that certain Second Amendment to Lease, dated as of March 9, 2007, by and between Landlord and Tenant (the "Second Amendment"); as amended by that certain Third Amendment to Lease, dated as of March 31, 2008, by and between Landlord and Tenant (the "Third Amendment") for certain premises described therein and commonly known as 400 Penobscot Drive, which is the entire Building 2 (the "Building 2 Space"), all as more particularly described in the Third Amendment; as amended by that certain Fourth Amendment to Lease, dated as of September 17, 2010, by and between Landlord and Tenant (the "Fourth Amendment"); and as amended by that certain Fifth Amendment to Lease, dated as of March 16, 2011, by and between Landlord and Tenant (the "Fifth Amendment") for certain premises described therein and commonly known as 101 Saginaw Drive, which is part of Building 1 (the "101 Saginaw Space"); all as more particularly described in the Fifth Amendment. The Original Lease, as amended, is referred to for purposes of this Amendment as the "Existing Lease".

B. Landlord and Tenant desire to provide for extension of the Term of the 501 Chesapeake Space and other amendments of the Existing Lease as more particularly set forth below.

NOW, THEREFORE, in consideration of the foregoing, and of the mutual covenants set forth herein and of other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

Section 1. Scope of Amendment; Defined Terms. Except as expressly provided in this Amendment, the Existing Lease shall remain in full force and effect. Should any inconsistency arise between this Amendment and the Existing Lease as to the specific matters which are the subject of this Amendment, the terms and conditions of this Amendment shall control. The term "Existing Lease" defined above shall refer to the Existing Lease as it existed before giving effect to the modifications set forth in this Amendment and the term "Lease" as used herein and in the Existing Lease shall refer to the Existing Lease as modified by this Amendment, except as expressly provided in this Amendment. All capitalized terms used in this Amendment and not defined herein shall have the meanings set forth in the Existing Lease unless the context clearly requires otherwise.

Section 2. Confirmation of Term. Landlord and Tenant acknowledge and agree that notwithstanding any provision of the Existing Lease to the contrary: (a) as contemplated by the Existing Lease, the 501 Chesapeake Space Expiration Date is January 31, 2013; (b) as contemplated by the Existing Lease, the Building 2 Expiration Date is January 31, 2020; (c) as contemplated by the Existing Lease, the expiration date of the 101 Saginaw Space is January 31, 2020 (the "101 Saginaw Space Expiration Date", inadvertently referred to as January 30, 2020 in Section 6(c) of the Fifth Amendment); and (d) as contemplated by the Existing Lease, the Expiration Date of the Term of the Lease of the 200 & 220 Penobscot Space is January 31, 2020.

Section 3. Extension of Term for 501 Chesapeake Space. Landlord and Tenant agree that the Term for the 501 Chesapeake Space is hereby extended for the period of forty-eight (48) months (the "501 Chesapeake Second Extended Term") commencing on February 1, 2013 (the "501 Chesapeake Second Extension Commencement Date") and expiring January 31, 2017 (hereafter, the "501 Chesapeake Expiration Date"), unless sooner terminated pursuant to the terms of the Lease. Landlord and Tenant acknowledge and agree that this Amendment provides all rights and obligations of the parties with respect to extension of the current Term for the 501 Chesapeake Space only, whether or not in accordance with any other provisions, if any, of the Existing Lease regarding renewal or extension of such space.

Section 4. Amendment of Rent for 501 Chesapeake Second Extended Term. Notwithstanding any provision of the Existing Lease to the contrary, commencing on 501 Chesapeake Second Extension Commencement Date and continuing through the 501 Chesapeake Expiration Date, the amount of Monthly Base Rent due and payable by Tenant for the 501 Chesapeake Space shall be as follows:

Period from/to	Monthly Amount
February 1, 2013 to January 31, 2014	$ 18,968.60
February 1, 2014 to January 31, 2015	$ 19,537.66
February 1, 2015 to January 31, 2016	$ 20,123.79
February 1, 2016 to January 31, 2017	$ 20,727.50

Section 5. "AS IS" Condition. Tenant acknowledges and agrees that Tenant presently occupies and has occupied the 501 Chesapeake Space, and Tenant accepts the 501 Chesapeake Space in its AS-IS condition, without any express or implied representations or warranties of any kind by Landlord, its brokers, manager or agents, or the employees of any of them regarding the Premises. Landlord shall not have any obligation to construct or install any tenant improvements or alterations or to pay for any such construction or installation in any portion of the Premises.

Section 6. Negotiation Right.

(a) Landlord and Tenant confirms that the Negotiation Right with respect to 123 Saginaw Negotiation Space (as set forth in Section 11 of the Fifth Amendment) continues to be in effect. The following Negotiation Rights have terminated: (i) the Negotiation Right with respect to 525 Chesapeake Drive (as set forth in Section 6 of the Second Amendment); and (ii) the Negotiation Right with respect to the 600 Galveston Negotiation Space (as set forth in Section 7 of the Third Amendment, as amended by Section 7(b)(ii) of the Fifth Amendment)).

(b) Landlord hereby grants Tenant a one-time right to negotiate the lease of the 525 Chesapeake Negotiation Space (defined below) if and to the extent such space is Available (defined below) during the period beginning on the Execution Date of this Amendment and expiring twenty-four (24) months prior to the 501 Chesapeake Expiration Date (the "Negotiation Period"), upon and subject to the terms and conditions of this Section (the "Negotiation Right"), and provided that at the time of exercise of such right: (i) Tenant must be conducting regular, active, ongoing business in, and be in occupancy (and occupancy by a subtenant, licensee or other party permitted or suffered by Tenant shall not satisfy such condition) of the entire 501 Chesapeake Space, and (ii) there has been no material adverse change in Tenant's financial position from such position as of the date of execution of the Lease, as certified by Tenant's independent certified public accountants, and as supported by Tenant's certified financial statements, copies of which shall be delivered to Landlord with Tenant's written notice exercising its right hereunder. Without limiting the generality of the foregoing, Landlord may reasonably conclude there has been a material adverse change if Tenant's independent certified public accountants do not certify there has been no such change.

(c) The “525 Chesapeake Negotiation Space” shall mean the space with a street address of 525 Chesapeake Drive and Rentable Area of approximately 15,393 square feet. For purposes of this Negotiation Right, the term “Available” shall mean that the space in question is either: (1) vacant and free and clear of all “Prior Rights” (defined below); or (2) space as to which Landlord has received a proposal, or Landlord is making a proposal, for a lease or rights of any nature applicable in the future when such space would be free and clear of all Prior Rights. For purposes of this Negotiation Right, the term “Prior Rights” shall mean rights of other parties, including without limitation, a lease, lease option, or option or other right of extension, renewal, expansion, refusal, negotiation or other right, either: (i) pursuant to any lease or written agreement which is entered into within eighteen (18) months after the Execution Date; or (ii) pursuant to any extensions or renewal of any of the foregoing, whether or not set forth in such lease or written agreement, and Landlord shall be free at any time to enter such extension or renewal; or (iii) pursuant to any amendment or modification of any of the foregoing, and Landlord shall be free at any time to enter such amendment or modification.

(d) Nothing herein shall be deemed to limit or prevent Landlord from marketing, discussing or negotiating with any other party for a lease of, or rights of any nature as to, any part of the 525 Chesapeake Negotiation Space, but during the Negotiation Period before Landlord makes any written proposal to any other party (other than a party with Prior Rights) for any 525 Chesapeake Negotiation Space which becomes Available (including giving a written response to any proposal or offer received from another party), or contemporaneously with making any such proposal, and in any event within thirty (30) days after such space becomes vacant and free and clear of all Prior Rights, Landlord shall give Tenant written notice (“Landlord’s Notice”), which notice identifies the space Available and Landlord’s estimate of the projected date such space will be vacant and deliverable to Tenant. Notwithstanding any of the foregoing to the contrary, Tenant acknowledges that Landlord has disclosed that as of the date of execution of this Lease, Landlord is marketing the 525 Chesapeake Negotiation Space, and as set forth more fully in Subsection (b) above, if Landlord entered into a lease within eighteen (18) months after the Execution Date, Landlord shall remain free at any time to enter into an extension or renewal of such lease, whether or not any such right is set forth in such lease, and to enter into any amendment or modification of such lease, all of which constitute Prior Rights with respect to the 525 Chesapeake Negotiation Space. For a period of five (5) business days after Landlord gives Landlord’s Notice (the “Election Notice Period”), Tenant shall have the right to initiate negotiations in good faith for the lease of all (and not less than all) the space identified in Landlord’s Notice by giving Landlord written notice (“Election Notice”) of Tenant’s election to exercise its Negotiation Right to lease such space.

(e) If Tenant timely and properly gives the Election Notice, Landlord and Tenant shall, during the five (5) business day period (the “Second Period”) following Landlord’s receipt of the Election Notice, negotiate in good faith for the lease of the 525 Chesapeake Negotiation Space which is the subject of the Landlord Notice as set forth below. Any lease by Tenant pursuant to this Negotiation Right: (1) shall be for all (and not less than all) the 525 Chesapeake Negotiation Space which is the subject of the Landlord Notice; (2) the subject 525 Chesapeake Negotiation Space shall, upon delivery, be part of the Premises under this Lease, such that the term “Premises” thereafter shall include the subject 525 Chesapeake Negotiation Space; (3) starting on such delivery date, with respect to the subject 525 Chesapeake Negotiation Space Tenant shall additionally pay Tenant’s Share of Operating Expenses, with Tenant’s Share recalculated to reflect addition of the 525 Chesapeake Negotiation Space; (4) the number of parking spaces applicable to the subject 525 Chesapeake Negotiation Space shall be calculated at the rate of 3.3 spaces per 1000 square feet of Rentable Area of the subject 525 Chesapeake Negotiation Space, and the type of, location of and charge for such spaces shall be as otherwise provided in the Lease; and (5) such lease shall be upon and subject to all the other terms, covenants and conditions provided in the Lease, except that the following terms shall be subject to such negotiation and agreement of the parties: (aa) the amount of the Monthly Base Rent with respect to the 525 Chesapeake Negotiation Space; (bb) the term of the lease of the 525 Chesapeake Negotiation Space; (cc) any improvements or alterations to be done, or allowance therefor, if any, specifically agreed upon, and absent such agreement, Tenant shall accept the 525 Chesapeake Negotiation Space in its

then AS IS condition without any obligation of Landlord to repaint, remodel, improve or alter the subject 525 Chesapeake Negotiation Space for Tenant's occupancy or to provide Tenant any allowance therefor, but such space shall be delivered broom clean and free of all tenants or occupants (and their personal property); (dd) increase in the Security; and (ee) Landlord shall deliver the subject 525 Chesapeake Negotiation Space to Tenant in such AS IS condition no later than thirty (30) days after Landlord regains possession of such space, but in no event shall Landlord have any liability for failure to deliver the subject 525 Chesapeake Negotiation Space to Tenant on any projected delivery date due to the failure of any occupant to timely vacate and surrender such space or due to Force Majeure, and such failure shall not be a default under the Lease or impair its validity. The foregoing obligation of Landlord to negotiate is non-exclusive and nothing herein shall be deemed to prevent Landlord from negotiating with any other party for the 525 Chesapeake Negotiation Space, whether or not Landlord and Tenant are negotiating for the same, but any other such negotiation shall be subject to the aforesaid obligation to negotiate with Tenant in good faith.

(f) If Tenant either fails or elects not to exercise its Negotiation Right as to the 525 Chesapeake Negotiation Space covered by Landlord's Notice by not giving its Election Notice within the Election Notice Period, or if Tenant gives Tenant's Election Notice but Tenant and Landlord do not execute (1) a written letter of intent reflecting the significant business terms for the lease of the 525 Chesapeake Negotiation Space within five (5) business days after delivery of the Election Notice, and (2) a corresponding amendment prepared by Landlord within five (5) days after Landlord gives Tenant such proposed amendment, then in any such event Tenant's Negotiation Right shall terminate, and be null and void, as to the subject space identified in the applicable Landlord's Notice (but not as to any 525 Chesapeake Negotiation Space subject to this Negotiation Right which has not become Available and been included in a Landlord's Notice), and at any time thereafter Landlord shall be free to lease and/or otherwise grant options or rights to the subject space on any terms and conditions whatsoever free and clear of the Negotiation Right.

(g) During any period that Tenant does not occupy the entire Premises or that there is an uncured default by Tenant under the Lease, or any state of facts which with the passage of time or the giving of notice, or both, would constitute such a default, the Negotiation Right shall not apply and shall be ineffective and suspended, and Landlord shall not be obligated to give a Landlord's Notice as to any space which becomes Available during such suspension period, and Landlord shall not be obligated to negotiate (or enter into any amendment) with respect to any 525 Chesapeake Negotiation Space which was the subject of a pending Landlord's Notice for which an amendment has not been fully executed, and during such suspension period Landlord shall be free to lease and/or otherwise grant options or rights to such space on any terms and conditions whatsoever free and clear of the Negotiation Right. The Negotiation Right shall terminate upon any of the following: (1) the termination of the Lease, whether by Landlord upon the occurrence of a Tenant default or otherwise; or (2) the failure of Tenant timely to exercise, give any notices, perform or agree, within any applicable time period specified above, with respect to any 525 Chesapeake Negotiation Space which was the subject of any Landlord's Notice.

(h) The Negotiation Right is personal to Codexis and may not be used by, and shall not be transferable or assignable (voluntarily or involuntarily) to any person or entity.

Section 7. Option to Extend.

(a) Landlord and Tenant confirms that the Option to Extend with respect to the 200 & 220 Penobscot Space, Building 2 Space and 101 Saginaw Space (as set forth in Section 12 of the Fifth Amendment) continues to be in effect. Landlord and Tenant hereby agree to delete the Option to Extend with respect to the 501 Chesapeake Space as set forth in Section 26.21 of the Original Lease, as amended by Section 3 of the Fourth Amendment.

(b) Landlord hereby grants Tenant two (2) consecutive options to extend the Term of the Lease with respect to the 501 Chesapeake Space for an additional term of five (5) years per option pursuant to the

same terms and conditions of Section 12 of the Fifth Amendment. Accordingly, Section 12(b) of the Fifth Amendment is hereby amended by deleting and replacing the phrase "as to the portion of the Premises consisting of the 200 & 220 Penobscot Space, Building 2 Space and 101 Saginaw Space (all references in this Section 12 to the "Premises" shall instead be deemed to mean such space only)" with the following phrase: "as to the portion of the Premises consisting of the 200 & 220 Penobscot Space, Building 2 Space, 101 Saginaw Space and 501 Chesapeake Space (all references in this Section 12 to the "Premises" shall instead be deemed to mean such space only)".

Section 8. Time of Essence. Without limiting the generality of any provision of the Lease, time shall be of the essence with respect to all of the provisions of this Amendment.

Section 9. Brokers. Notwithstanding any other provision of the Existing Lease to the contrary, Tenant represents and warrants to Landlord that Cornish & Carey Commercial Newmark Knight Frank is the sole broker who negotiated and brought about the consummation of this Amendment and that no discussions or negotiations were had with any other broker concerning this Amendment. Based on the foregoing representation and warranty, Landlord has agreed to pay any commission or fee owed to such broker pursuant to Landlord's agreement between Landlord and such broker, and Tenant is not obligated to pay or fund any amount to such broker. Tenant hereby indemnifies and agrees to protect, defend and hold Landlord harmless from and against any claims of brokerage commissions arising out of any discussions or negotiations allegedly had by Tenant with any other broker in connection with the Building and the Premises. The foregoing obligations of Tenant shall survive the expiration or sooner termination of the Lease.

Section 10. Attorneys' Fees. Each party to this Amendment shall bear its own attorneys' fees and costs incurred in connection with the discussions preceding, negotiations for and documentation of this Amendment. In the event that either party brings any suit or other proceeding with respect to the subject matter or enforcement of this Amendment or the Lease, the parties acknowledge and agree that the provisions of Section 11.03 of the Existing Lease shall apply.

Section 11. Effect of Headings; Recitals: Exhibits. The titles or headings of the various parts or sections hereof are intended solely for convenience and are not intended and shall not be deemed to or in any way be used to modify, explain or place any construction upon any of the provisions of this Amendment. Any and all Recitals set forth at the beginning of this Amendment are true and correct and constitute a part of this Amendment as if they had been set forth as covenants herein. Exhibits, schedules, plats and riders hereto which are referred to herein are a part of this Amendment.

Section 12. Entire Agreement; Amendment. This Amendment taken together with the Existing Lease, together with all exhibits, schedules, riders and addenda to each, constitutes the full and complete agreement and understanding between the parties hereto and shall supersede all prior communications, representations, understandings or agreements, if any, whether oral or written, concerning the subject matter contained in this Amendment and the Existing Lease, as so amended, and no provision of the Lease as so amended may be modified, amended, waived or discharged, in whole or in part, except by a written instrument executed by all of the parties hereto.

Section 13. OFAC. Landlord advises Tenant hereby that the purpose of this Section is to provide to the Landlord information and assurances to enable Landlord to comply with the law relating to OFAC.

Tenant hereby represents, warrants and covenants to Landlord, either that (i) Tenant is regulated by the SEC, FINRA or the Federal Reserve (a "Regulated Entity") or (ii) neither Tenant nor any person or entity that directly or indirectly (a) controls Tenant or (b) has an ownership interest in Tenant of twenty-five percent (25%) or more, appears on the list of Specially Designated Nationals and Blocked Persons ("OFAC List") published by the Office of Foreign Assets Control ("OFAC") of the U.S. Department of the Treasury.

If, in connection with this Lease, there is one or more Guarantors of Tenant's obligations under this Lease, then Tenant further represents, warrants and covenants either that (i) any such Guarantor is a Regulated Entity or (ii) neither Guarantor nor any person or entity that directly or indirectly (a) controls such Guarantor or (b) has an ownership interest in such Guarantor of twenty-five percent (25%) or more, appears on the OFAC List.

Tenant covenants that during the term of this Lease to provide to Landlord information reasonably requested by Landlord including without limitation, organizational structural charts and organizational documents which Landlord may deem to be necessary ("Tenant OFAC Information") in order for Landlord to confirm Tenant's continuing compliance with the provisions of this Section. Tenant represents and warrants that the Tenant OFAC Information it has provided or to be provided to Landlord or Landlord's Broker in connection with the execution of this Lease is true and complete.

Section 14. Ratification. Tenant represents to Landlord, as of the Execution Date, that: (a) the Existing Lease is in full force and effect and has not been modified except as provided by this Amendment; (b) to Tenant's actual knowledge, there are no uncured defaults or unfulfilled obligations on the part of Landlord or Tenant; and (c) Tenant is currently in possession of the entire Premises as of the Execution Date, and neither the Premises, nor any part thereof, is occupied by any subtenant or other party other than Tenant. Landlord represents to Tenant, as of the Execution Date, that: (a) the Existing Lease is in full force and effect and has not been modified except as provided by this Amendment, and (b) to Landlord's actual knowledge, there are no uncured monetary defaults on the part of Tenant.

Section 15. Authority. Each person executing this Amendment represents and warrants that he or she is duly authorized and empowered to execute it, and does so as the act of and on behalf of the party indicated below. Each party represents and warrants to the other that it has full authority and power to enter into and perform its obligations under this Amendment, that the person executing this Amendment is fully empowered to do so, and that no consent or authorization is necessary from any third party. Landlord may request that Tenant provide Landlord evidence of due authorization and execution of this Amendment.

Section 16. Applicable Law. This Amendment shall be construed in accordance with the Laws of the State of California

Section 17. Counterparts. This Amendment may be executed in duplicates or counterparts, or both, and such duplicates or counterparts together shall constitute but one original of the Amendment. Each duplicate and counterpart shall be equally admissible in evidence, and each original shall fully bind each party who has executed it.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first set forth above.

TENANT:

CODEXIS, INC.,
a Delaware corporation

By: /s/ John J. Nicols
Print Name: John J. Nicols
Title: President and Chief Executive Officer

LANDLORD:

METROPOLITAN LIFE INSURANCE COMPANY,
a New York corporation

By: /s/ JA Denning
Print Name: JA Denning
Title: Director

Exhibit 31.1

CERTIFICATION

I, John Nicols, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Codexis, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2012

/s/ John Nicols

John Nicols
President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATION

I, David O'Toole, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Codexis, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2012

/s/ David O'Toole
David O'Toole
Senior Vice President and Chief Financial Officer
(principal financial and accounting officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Codexis, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended September 30, 2012, as filed with the Securities and Exchange Commission (the "Report"), John Nicols, President and Chief Executive Officer of the Company and David O'Toole, Senior Vice President and Chief Financial Officer of the Company, respectively, do each hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 7, 2012

/s/ John Nicols
John Nicols
President and Chief Executive Officer
(principal executive officer)

/s/ David O'Toole
David O'Toole
Senior Vice President and Chief Financial Officer
(principal financial and accounting officer)