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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 June 30, 2011

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 July 29, 2011, there were 35,905,134 shares of the registrant's Common Stock, par value $0.0001 per share, outstanding.

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Codexis, Inc.

Quarterly Report on Form 10-Q
For The Three Months Ended June 30, 2011

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Codexis, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(In Thousands)

	June 30, 2011	December 31, 2010
Assets		
Current assets:		
Cash and cash equivalents	$ 32,082	$ 72,396
Marketable securities	14,593	—
Accounts receivable, net of allowances of $58 at June 30, 2011 and December 31, 2010, respectively	11,306	10,620
Related party accounts receivable	—	4,713
Inventories	4,187	2,817
Prepaid expenses and other current assets	2,380	1,646
Total current assets	64,548	92,192
Restricted cash	1,512	1,466
Non-current marketable securities	25,769	1,650
Property and equipment, net	21,611	21,452
Intangible assets, net	18,301	20,158
Goodwill	3,241	3,241
Other non-current assets	1,153	1,141
Total assets	$ 136,135	$ 141,300
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 7,714	$ 9,208
Accrued compensation	5,019	8,107
Other accrued liabilities	7,406	5,630
Deferred revenues	386	455
Related party deferred revenues	4,084	4,084
Total current liabilities	24,609	27,484
Deferred revenues, net of current portion	1,579	1,671
Related party deferred revenues, net of current portion	1,361	3,403
Other long-term liabilities	1,800	1,381
Commitments and contingencies	—	—
Stockholders' equity:		
Common stock	4	4
Additional paid-in capital	283,028	275,540
Accumulated other comprehensive income (loss)	415	(34)
Accumulated deficit	(176,661)	(168,149)
Total stockholders' equity	106,786	107,361
Total liabilities and stockholders' equity	$ 136,135	$ 141,300

Codexis, Inc.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2011	2010	2011	2010
Revenues:				
Product	$ 8,397	$ 8,484	$ 21,329	$ 14,760
Related party collaborative research and development	14,847	14,653	29,670	30,695
Collaborative research and development	2,538	851	5,201	1,511
Government grants	273	492	889	3,214
Total revenues	26,055	24,480	57,089	50,180
Costs and operating expenses:				
Cost of product revenues	7,106	6,075	18,756	11,293
Research and development	14,965	13,004	28,715	25,986
Selling, general and administrative	9,276	8,652	18,289	17,252
Total costs and operating expenses	31,347	27,731	65,760	54,531
Loss from operations	(5,292)	(3,251)	(8,671)	(4,351)
Interest income	71	46	120	74
Interest expense and other, net	16	(654)	34	(1,012)
Loss before provision for income taxes	(5,205)	(3,859)	(8,517)	(5,289)
Provision (benefit) for income taxes	(165)	87	(6)	26
Net loss	$ (5,040)	$ (3,946)	$ (8,511)	$ (5,315)
Net loss per share of common stock, basic and diluted	$ (0.14)	$ (0.15)	$ (0.24)	$ (0.36)
Weighted average common shares used in computing net loss per share of common stock, basic and diluted	35,685	26,557	35,402	14,701

Codexis, Inc.

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

	Six Months Ended June 30,	
	2011	2010
Operating activities:		
Net loss	$ (8,511)	$ (5,315)
Adjustments to reconcile net loss to net cash used in operating activities:		
Amortization of intangible assets	1,858	302
Depreciation and amortization of property and equipment	3,760	3,438
Revaluation of redeemable convertible preferred stock warrant liability	—	677
Gain from extinguishment of asset retirement obligation	(124)	—
Loss on disposal of property and equipment	59	—
Stock-based compensation	4,856	3,951
Accretion of asset retirement obligation	29	—
Amortization of debt discount	—	104
Accretion (amortization) of premium/discount on marketable securities	51	183
Changes in operating assets and liabilities:		
Accounts receivable	4,027	(42)
Inventories	(1,370)	739
Prepaid expenses and other current assets	(735)	(3,126)
Other assets	(13)	2,395
Accounts payable	(1,493)	(1,413)
Accrued compensation	(3,088)	(1,477)
Related party payable	—	(1,046)
Other accrued liabilities	2,554	(5,133)
Deferred revenues	(2,203)	(12,950)
Net provided by (used in) in operating activities	(343)	(18,713)
Investing activities:		
Change in restricted cash	(46)	65
Purchase of property and equipment	(4,187)	(3,192)
Purchase of marketable securities	(38,152)	(49,051)
Proceeds from sale of marketable securities	—	1,605
Proceeds from maturities of marketable securities	—	21,960
Net provided by (used in) in investing activities	(42,385)	(28,613)
Financing activities:		
Principal payments on financing obligations	—	(2,681)
Payments in preparation for initial public offering	—	(3,106)
Proceeds from issuance of common stock on IPO	—	72,539
Proceeds from exercises of stock options	2,390	254
Net cash provided by (used in) financing activities	2,390	67,006
Effect of exchange rate changes on cash and cash equivalents	24	(52)
Net increase (decrease) in cash and cash equivalents	(40,314)	19,628
Cash and cash equivalents at the beginning of the period	72,396	31,785
Cash and cash equivalents at the end of the period	$ 32,082	$ 51,413
Reclassification of preferred stock warrant from liability to additional paid-in capital	$ —	$ 2,686
Conversion of preferred stock to common stock and additional paid-in capital	$ —	$ 179,672

Codexis, Inc.

Notes to Condensed Consolidated Financial Statements
(UNAUDITED)

1. Description of Business

Codexis, Inc. ("we" or "Codexis") is a developer of proprietary biocatalysts, which are enzymes or microbes that initiate or accelerate chemical reactions. We are currently selling our biocatalysts to customers in the pharmaceutical industry and are engaged in a multi-year research and development collaboration with Equilon Enterprises LLC dba Shell Oil Products US ("Shell") to develop biocatalysts for use in producing advanced biofuels. We are also pursuing opportunities in the bio-based chemicals market, including developing sustainable detergent alcohol for use in the household products market in collaboration with Chemtex, a wholly owned company of Italy's Gruppo Mossi & Ghisolfi ("M&G"). Additionally, we are using our technology platform to pursue biocatalyst-enabled solutions in other bioindustrial markets, including carbon management and water treatment. We were incorporated in Delaware in January 2002.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The accompanying interim condensed consolidated balance sheet as of June 30, 2011 and the interim condensed consolidated statements of operations for the three and six months ended June 30, 2011 and 2010 and cash flows for the six months ended June 30, 2011 and 2010 are unaudited. These interim 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 February 10, 2011. The December 31, 2010 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 June 30, 2011 and results of our operations for the three and six months ended June 30, 2011 and 2010, and cash flows for the six months ended June 30, 2011 and 2010. The interim results for the three and six months ended June 30, 2011 are not necessarily indicative of the results that may be expected for the year ending December 31, 2011.

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

Initial Public Offering (IPO)

On April 27, 2010, we completed our initial public offering of common stock ("IPO") selling 6,000,000 shares at an offering price of $13.00 per share, resulting in net proceeds of approximately $67.7 million, after deducting underwriting discounts, commissions and other related transaction costs.

Upon the closing of the IPO, our outstanding shares of redeemable convertible preferred stock were automatically converted into 25,307,446 shares of common stock, our outstanding preferred stock warrants were automatically converted into warrants to purchase a total of 288,438 shares of common stock and the related redeemable convertible preferred stock warrant liability was reclassified to additional paid-in capital.

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 accumulated other comprehensive income (loss) in the condensed consolidated balance sheets. Revenue and expense amounts are translated at average rates during the period. For the six months ended June 30, 2011 and 2010, we recorded a translation adjustment gain of $44,000 and loss of $66,000, respectively. For the three months ended June 30, 2011 and 2010, we recorded a translation adjustment gain of $8,000 and loss of $38,000, respectively. 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 with resulting foreign currency translation amounts recorded as part of interest expenses and other net in the condensed consolidated statements of operations.

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 or market and the instruments' complexity.

Cash, Cash Equivalents and Marketable Securities

We consider all highly liquid investments with maturity dates of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents consist of cash on deposit with banks and money market funds. The majority of our 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 primarily comprised of commercial paper and corporate bonds. Marketable securities included in non-current assets are primarily comprised of corporate bonds, government-sponsored enterprise securities and U.S. Treasury obligations that have a maturity date greater than 1 year. Our investment in common shares of CO_2 Solution, Inc. ("CO_2 Solution") is also included in non-current marketable securities.

Our investments in debt and equity securities are classified as available-for-sale and are carried at estimated fair value. Unrealized gains and losses are reported as a component of accumulated other comprehensive income (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 interest expense and other, net. 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 months and six months ended June 30, 2011 and 2010. At June 30, 2011, we did not have any other than temporary declines in the fair value of our marketable securities.

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.

Revenue Recognition

In October 2009, the Financial Accounting Standards Board ("FASB") amended the accounting standards for multiple-element revenue arrangements ("ASU 2009-13") to:

- provide updated guidance on whether multiple deliverables exist, how the elements in an arrangement should be separated, and how the consideration should be allocated;
- require an entity to allocate revenue in an arrangement using estimated selling prices ("ESP") of each element if a vendor does not have vendor-specific objective evidence of selling price ("VSOE") or third-party evidence of selling price ("TPE"); and
- eliminate the use of the residual method and require a vendor to allocate revenue using the relative selling price method.

In April 2010, the FASB amended the accounting standards for revenue recognition related to milestones ("ASU 2010-17") to:

- provide updated guidance on accounting for revenue using the milestone method, clarifying that the milestone method is a valid application of the proportional performance model when applied to research or development arrangements. We already applied a milestone method approach to its research or development arrangements, established the milestone method and provided guidance to the substantive nature of the milestone.

We adopted the above accounting guidance on January 1, 2011, for applicable arrangements entered into or materially modified after January 1, 2011 (the beginning of our fiscal year). We have determined that adoption of this new guidance did not have a material impact on our results of operations, cash flows or financial position. The potential future impact of the adoption of the ASU 2009-13 guidance will depend on the nature of any new arrangements or material modifications of existing arrangements that are entered into in the future.

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

For each source of collaborative research and development revenues, product revenues and grant 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 are 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 license mutually agreed upon third party technology for use in our research and development collaboration with Shell. We record the license payments to research and development expense and offset related reimbursements received from Shell. These payments made by Shell to us are direct reimbursements of our costs. We account 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 will recognize 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 grants. Government grants are agreements that generally provide us with cost reimbursement for certain types of expenditures in return for research and development activities over a contractually defined period. Revenues from government grants are recognized in the period during which the related costs are incurred, provided that the conditions under which the government grants were provided have been met and we have only perfunctory obligations outstanding.
- 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.

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") carryforwards, if it is more likely than not that the tax benefits will be realized. To the extent a deferred tax asset cannot be recognized under the preceding criteria, a valuation allowance is established. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled.

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 account for stock-based transactions based on the fair value of the stock awards granted. We use the straight-line method to allocate stock-based compensation expense to the appropriate reporting periods. 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 compensation expense during the period the related services are rendered.

Comprehensive Loss

Comprehensive loss consists of net loss, unrealized gain (loss) on marketable securities and foreign currency translation adjustments. The following table presents comprehensive loss (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2011	2010	2011	2010
Net loss	$ (5,040)	$ (3,946)	$ (8,511)	$ (5,315)
Currency translation adjustments	8	(38)	44	(66)
Unrealized gain on marketable securities	358	168	405	455
Comprehensive loss	$ (4,674)	$ (3,816)	$ (8,062)	$ (4,926)

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, less the weighted-average number of shares common stock that remain subject to our right to repurchase. 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 calculation of basic and diluted net loss per share of common stock (in thousands, except per share amounts):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2011	2010	2011	2010
Numerator:				
Net loss	$ (5,040)	$ (3,946)	$ (8,511)	$ (5,315)
Denominator:				
Weighted-average shares of common stock outstanding	35,685	26,561	35,402	14,706
Less: Weighted-average shares of common stock subject to repurchase	—	(4)	—	(5)
Weighted-average shares of common stock used in computing net loss per share of common stock, basic and diluted	35,685	26,557	35,402	14,701
Net loss per share of common stock, basic and diluted	$ (0.14)	$ (0.15)	$ (0.24)	$ (0.36)

The following table presents the securities not included in the net loss per share calculations for the three and six months ended June 30, 2011 and 2010 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2011	2010	2011	2010
Common stock subject to repurchase	—	3	—	3
Options to purchase common stock	8,020	8,463	8,020	8,463
Unvested restricted stock units	555	—	555	—
Warrants to purchase common stock	266	297	266	297
Total	8,841	8,763	8,841	8,763

Reclassifications

Certain amounts in prior period financial statements including our investment in CQ solution, asset retirement obligation and the composition of our deferred tax assets have been reclassified to conform to the current period presentation.

3. Collaborative Research and Development Agreements

Shell

In November 2006, we entered into a collaborative research agreement and a license agreement with Shell to develop biocatalysts and associated processes that use such biocatalysts.

In November 2007, we entered into a new and expanded five-year collaborative research agreement and a license agreement with Shell. In connection with the new and expanded collaborative research agreement and license agreement, Shell paid us a $20.0 million up-front exclusivity fee, purchased Series E redeemable convertible preferred stock for gross proceeds of $30.5 million, and agreed to pay us (1) research funding at specified rates per FTE working on the project during the research term, (2) milestone payments upon the achievement of milestones and (3) royalties on future product sales.

In March 2009, we amended our collaborative research agreement and license agreement with Shell. In connection with these amendments Shell purchased Series F redeemable convertible preferred stock for gross proceeds of $30.0 million and agreed to pay us (1) additional research funding at specified rates per FTE working on the project during the research term and (2) additional milestone payments upon the achievement of milestones. Shell has the right to reduce the number of funded FTEs, subject to certain limitations, with a required advance notice period ranging from 30 to 270 days and a subsequent period ranging from 90 to 360 days during which notices of further FTE reductions cannot be made by Shell. The length of these periods varies dependent on the number of funded FTEs reduced. In July 2011 we received notice from Shell that it was reducing the number of funded FTEs by 12, with such reductions to be effective in August 2011.

In accordance with our revenue recognition policy, the $20.0 million up-front exclusivity fee and the research funding fees to be received for FTE services are 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 to be earned under this agreement have been determined to be at risk at the inception of the arrangement and substantive and are expected to be recognized upon achievement of the applicable milestone and when collectability of such payment is reasonably assured. We recorded no milestone revenues during the three months ended June 30, 2011 and 2010, respectively. We recorded milestone revenues of zero and $1.4 million during the six months ended June 30, 2011 and 2010, respectively.

Under the agreements with Shell, we have the right to license technology from third parties that will assist us in meeting objectives under the collaboration. If third-party technology to be licensed is identified and mutually agreed upon by both parties, Shell is 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 did not reimburse us for any licensing costs during the three months ended June 30, 2011. Shell reimbursed us for licensing costs of $88,000 for the three months ended June 30, 2010. Shell reimbursed us for licensing costs of $65,000 and $175,000 for the six months ended June 30, 2011 and 2010, respectively. We record these reimbursements against the costs incurred.

Manufacturing Collaboration

Arch

Since October 2005, we have partnered with Arch Pharmalabs, Ltd. (“Arch”), a company based in India engaged in the manufacturing and sale of active pharmaceutical ingredients (“APIs”), and intermediaries to pharmaceutical companies worldwide.

In February 2010, we consolidated certain of the contractual terms in our agreements with 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 $159,000 and $135,000 for the three months ended June 30, 2011 and 2010, respectively and $321,000 and $162,000 for the six months ended June 30, 2011 and 2010, respectively.

4. Joint Development Agreement with CO_2 Solution

On December 15, 2009, we entered into an exclusive joint development agreement with CO_2 Solution, a company based in Quebec City, Quebec, Canada, whose shares are publicly traded in Canada on the TSX Venture Exchange. Under the agreement, we obtained a research license to CO_2 Solution's intellectual property and agreed to conduct research and development activities jointly with CO_2 Solution with the goal of advancing the development of carbon capture technology. We also purchased 10,000,000 common shares (approximately 16.6% of total common shares outstanding) of CO_2 Solution in a private placement subject to a four-month statutory resale restriction, which expired on April 15, 2010. In February of 2010, our Chief Executive Officer was appointed to the board of directors of CO_2 Solution.

The original joint development agreement with CO_2 Solution expired in January 2011, and at that time, we extended our joint development agreement with CO_2 Solution on essentially the same terms as the original agreement. The extended agreement will now expire on the later of June 30, 2012 or six months after the expiration of any third party collaborations.

We concluded that through June 30, 2011, we did not have the ability to exercise significant influence over CO_2 Solution's operating and financial policies. We consider our investment in CO_2 Solution 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, with changes in fair value recognized in accumulated other comprehensive income (loss). We have estimated the fair value of common shares using the fair value as of June 30, 2011, as determined by trading on the TSX Venture Exchange. Accordingly, we have classified our investment in CO_2 Solution as a level 1 investment as discussed in Note 6.

At December 31, 2010, the estimated fair value of our investment in CO_2 Solution common stock was $1.7 million and the unrealized gain was $334,000. At June 30, 2011, the estimated fair value of our investment in CO_2 Solution common stock was $2.2 million and the unrealized gain of $0.5 million with a related tax expense of $0.3 million recorded in accumulated other comprehensive income (loss). The unrealized gain for the three months ended June 30, 2011 was $0.5 million with a related tax expense of $0.2 million and was recorded in accumulated other comprehensive income (loss) on the condensed consolidated balance sheet.

5. Balance Sheets and Statements of Operations Details

Cash Equivalents and Marketable Securities At June 30, 2011, cash equivalents and marketable securities consisted of the following (in thousands):

	June 30, 2011				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Average Contractual Maturities (in days)
Money market funds	$ 23,247	$ —	$ —	$ 23,247	n/a
Commercial paper	7,494	—	—	7,494	105
Corporate bonds	23,605	39	(6)	23,638	400
U.S. Treasury obligations	997	4	—	1,001	458
Government-sponsored enterprise securities	7,005	14	—	7,019	190
Common shares of CO_2 Solution	1,316	894	—	2,210	n/a
Total	$ 63,664	$ 951	$ (6)	$ 64,609	

The total cash and cash equivalents balance of $32.1 million as of June 30, 2011 was comprised of money market funds of $23.2 million and $8.9 million held as cash with major financial institutions in North America.

At December 31, 2010, cash equivalents and marketable securities consisted of the following (in thousands):

	December 31, 2010				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Average Contractual Maturities (in days)
Money market funds	$ 64,956	$ —	$ —	$64,956	n/a
Common shares of CO_2 Solution	1,316	334	—	1,650	n/a
Total	$ 66,272	$ 334	$ —	$66,606	

Inventories

Inventories consisted of the following (in thousands):

	June 30, 2011	December 31, 2010
Raw materials	$1,959	$ 1,963
Work in process	42	38
Finished goods	2,186	816
Total inventories	$4,187	$ 2,817

Property and Equipment, net

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

	June 30, 2011	December 31, 2010
Laboratory equipment	$ 32,405	$ 29,931
Leasehold improvements	10,692	10,961
Computer equipment and software	3,906	3,050
Office equipment and furniture	871	865
Construction in progress (1)	1,594	838
	49,468	45,645
Less: accumulated depreciation and amortization	(27,857)	(24,193)
Property and equipment, net	$ 21,611	$ 21,452

(1) Construction in progress includes equipment received but not yet placed into service pending installation.

Due to the extension of the lease period for certain currently occupied facilities, we re-evaluated the depreciable lives of existing leasehold improvements, totaling $2.3 million in net book value at the time of reassessment in February 2011. Since leasehold improvements are typically depreciated over the lesser of the assets' useful life or the remaining lease period, the extension of contracted facilities leases through 2020 necessitated a change in our estimate of depreciable lives on leasehold improvements.

While some lives have been shortened under this reassessment with the vacating of a portion of our facilities, the majority of depreciable lives have been extended up to as much as 5 years from the assets' in service date, in accordance with our leasehold improvements' standard useful lives. The net effect of this reassessment is lower monthly depreciation being recognized on leasehold improvements over a longer period of time. These changes' net effect on depreciation expense recognized is not expected to be material on a quarterly or annual basis.

Intangible Assets

Intangible assets consisted of the following (in thousands):

	June 30, 2011			December 31, 2010		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	$ 3,098	$ (2,992)	$ 106	$ 3,098	$ (2,943)	$ 155
Developed and core technology	1,534	(1,334)	200	1,534	(1,212)	322
Noncompete agreements	90	(90)	—	90	(90.00)	—
Intellectual property	20,244	(2,249)	17,995	20,244	(563.00)	19,681
	$ 24,966	$ (6,665)	$ 18,301	$ 24,966	$ (4,808)	$ 20,158

Amortization expense for intangible assets totaled $1.9 million and $278,000 for the six months ended June 30, 2011 and 2010, respectively. Amortization expense for intangible assets totaled $928,000 and $93,000 for the three months ended June 30, 2011 and 2010, respectively.

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.

The following table presents our financial instruments that were measured at fair value on a recurring basis at June 30, 2011 by level within the fair value hierarchy (in thousands):

	June 30, 2011			
	Level 1	Level 2	Level 3	Total
Financial Assets				
Money market funds	$23,247	$ —	$ —	$23,247
Commercial paper	—	7,494	—	7,494
Corporate bonds	—	23,638	—	23,638
U.S. Treasury obligations	—	1,001	—	1,001
Government-sponsored enterprise securities	—	7,019	—	7,019
Common shares of CO_2 Solution	2,210	—	—	2,210
Total	$25,457	$39,152	$ —	$64,609

The following table presents our financial instruments that were measured at fair value on a recurring basis at December 31, 2010 by level within the fair value hierarchy (in thousands):

	December 31, 2010			
	Level 1	Level 2	Level 3	Total
Financial Assets				
Money market funds	$64,956	$ —	$ —	$64,956
Common shares of CO_2 Solution	1,650	—	—	1,650
Total	$66,606	$ —	$ —	$66,606

7. Other Related Party Transactions

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 and six months ended June 30, 2011, we recognized $105,000 and $330,000, respectively of revenue related to this arrangement, shown in our condensed consolidated statement of operations as collaborative research and development revenue. We did not recognize any revenue from Exela prior to 2011. As of June 30, 2011, we have no amounts owed from Exela.

8. Commitments and Contingencies

Operating Leases

Our headquarters are located in Redwood City, California where we occupy approximately 91,000 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, with options to extend for two additional five year periods. The Fifth Amendment provides a number of incentives to us including forgiveness of rent payments for the initial two months of the lease term, a tenant improvement allowance of $2.4 million of ("TIA") and additional special allowances for certain HVAC costs. We intend to apply TIA funds toward capital improvements to the expanded facility as well as upgrades and re-configuration 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, 2011 we have spent $1.2 million on capital improvements related to the facilities. We will request reimbursement from the landlord out of the TIA when construction is completed later in 2011. The TIA will be recognized on a straight-line basis over the term of the lease as a reduction in rent expense. Additionally, the Fifth Amendment waived our existing asset retirement obligations for the impacted buildings, resulting in a $0.3 million decrease in our obligation and a $0.1 million gain on extinguishment of asset retirement obligations recorded in our condensed consolidated statement of operation as sales, general and administrative expenses.

The lease of the Galveston Space on this property was not extended with the Fifth Amendment and will expire as per the original agreement in January 2013, with an option for an additional term of up to two years.

Rent payments under the Fifth Amendment will increase at an annual rate of approximately 3%, with rent expense recognized on a straight-line basis over the term of the lease. In accordance with the terms of the lease, we exercised our right to deliver a letter of credit in lieu of a security deposit. This letter of credit increased from $562,000 as of December 31, 2010 to $707,000 as of June 30, 2011 and is recorded as restricted cash on the consolidated balance sheets.

We also rent facilities in Singapore and Hungary. Rent expense is being recognized on a straight-line basis over the respective terms of these leases.

Future minimum payments under non-cancellable operating leases at June 30, 2011 are as follows (in thousands):

	Operating leases
Six months ending December 31, 2011:	$ 1,559
Years ending December 31, 2012:	3,232
2013	2,750
2014	2,431
2015	2,502
2016 and beyond	11,026
Total minimum payments	$ 23,500

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 are required to recognize a liability for the fair value of any obligations we assume upon the issuance of a guarantee. 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 for expenses 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 of the subsidiary, 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

No warrants were exercised during the six months ended June 30, 2011. At June 30, 2011, the following common stock warrants were issued and outstanding:

	June 30, 2011		
Issue Date	Shares Subject to Warrants	Exercise Price per Share	Expiration
October 25, 2005	6,066	$ 1.05	October 25, 2012
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' Deficit

In 2002, we adopted the 2002 Stock Plan (the "2002 Plan"), under which our board of directors may issue 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 six months ended June 30, 2011 an additional 1,393,142 shares were reserved under the 2010 plan as a result of this provision. As of June 30, 2011, we had a total of 10,038,342 shares of common stock reserved for issuance under our 2010 Plan and no shares available for issuance under the 2002 Plan.

We granted 559,799 restricted stock units ("RSU") during the three months ended March 31, 2011. We did not grant any RSUs in the three months ended June 30, 2011. The RSUs vest over four years with 25% of the RSUs vesting on each annual anniversary. The fair value of the RSUs was calculated based on the NASDAQ quoted stock price on the date of the grant with the expense recognized over the vesting period. For the three and six months ended June 30, 2011, we recorded $324,000 and $497,000, respectively of stock compensation expense related to the RSUs.

During the three and six months ended June 30, 2011, we issued 456,260 and 1,042,585 common shares for stock options exercised, respectively.

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 publically traded entity prior to April 2010, company-specific historical volatility data is not available. As a result, we estimate the expected volatility based on the historical volatility of a group of unrelated public companies within our industry. We will continue to consistently apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available. Due to our limited history of grant activity, the expected life of options granted to employees is calculated using the "simplified method" permitted by 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 June 30,		Six Months Ended June 30,	
	2011	2010	2011	2010
Research and development	951	879	1,801	1,568
Sales, general and administrative	1,598	1,417	3,056	2,383
	$ 2,549	$ 2,296	$ 4,857	$ 3,951

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 June 30,		Six Months Ended June 30,	
	2011	2010	2011	2010
Revenues				
Americas(1)	$ 17,417	$ 17,003	$ 35,135	$ 33,534
Europe	3,721	1,548	5,356	4,594
Asia	4,917	5,929	16,598	12,052
	$ 26,055	$ 24,480	$ 57,089	$ 50,180

(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):

	June 30, 2011	December 31, 2010
Long-lived assets		
Americas(1)	$34,230	$ 35,373
Europe	4,059	3,980
Asia	2,775	3,398
	$41,064	$ 42,751

(1) Primarily United States

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, 2010 included in our Annual Report on Form 10-K filed with the SEC on February 10, 2011. 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

Our proprietary technology platform enables the creation of optimized biocatalysts that make existing industrial processes faster, cleaner and more efficient than current methods and has the potential to make new industrial processes possible on a commercial scale. We have focused our biocatalyst development efforts on large and rapidly growing markets, including pharmaceuticals, advanced biofuels and bio-chemicals. We have commercialized our biocatalysts in the pharmaceutical industry and are developing biocatalysts for use in producing advanced biofuels under a multi-year research and development collaboration with Shell and for use in sustainable detergent alcohols under a collaboration with M&G. We have enabled biocatalyst-based drug manufacturing processes at commercial scale and have delivered biocatalysts and drug products to some of the world's leading pharmaceutical companies. In our research and development collaboration with Shell, we are developing biocatalysts for use in producing advanced biofuels from renewable sources of non-food plant materials, known as cellulosic biomass. We are also pursuing opportunities in the bio-based chemicals market, including developing sustainable detergent alcohols for use in the household products market in collaboration with M&G. Additionally, we are using our technology platform to pursue biocatalyst-enabled solutions in other bioindustrial markets, including carbon management and water treatment.

Biocatalysts are enzymes or microbes that initiate or accelerate chemical reactions. Manufacturers have historically used naturally occurring biocatalysts to produce many goods used in everyday life. However, inherent limitations in naturally occurring biocatalysts have restricted their commercial use. Our proprietary technology platform is able to overcome many of these limitations, allowing us to evolve and optimize biocatalysts to perform specific and desired chemical reactions at commercial scale.

To date, we have generated revenues primarily from collaborative research and development funding, pharmaceutical product sales and government grants. Our revenues have increased in each of the last three fiscal years, growing from $50.5 million in 2008, to $82.9 million in 2009 to $107.1 million in 2010. Our revenues increased from $50.2 million for the six months ended June 30, 2010 to $57.1 million for the six months ended June 30, 2011. As of June 30, 2011, we had an accumulated deficit of $176.7 million. We incurred net losses of $45.1 million, $20.3 million and $8.5 million in the years ended December 31, 2008, 2009 and 2010, respectively and a net loss of $8.5 million for the six months ended June 30, 2011.

Most of our revenues since inception have been derived from collaborative research and development arrangements, which accounted for 66%, 78% and 66% of our revenues in 2010, 2009 and 2008, respectively. Collaborative research and development arrangements accounted for 61% and 64% of our revenues for the six months ended June 30, 2011 and 2010, respectively. Related party collaborative research and development received from Shell accounted for 62%, 76% and 60% of our revenues in 2010, 2009 and 2008, respectively. Related party collaborative research and development received from Shell accounted for the 52% and 61% of our revenues for the six months ended June 30, 2011 and 2010, respectively.

Our product sales accounted for 31%, 22% and 33% of our revenues in 2010, 2009 and 2008, respectively. Product sales accounted for 37% and 29% of our revenues for the six months ended June 30, 2011 and 2010, respectively. Our product sales on a dollar basis have increased in each of the last three fiscal years, from $16.9 million in 2008 to $18.6 million in 2009 and to $32.8 million in 2010. Our product sales increased from $14.8 million for the six months ended June 30, 2010 to $21.3 million for the six months ended June 30, 2011.

Notwithstanding our revenue growth, we continue to experience significant losses as we have invested heavily in research and development and administrative infrastructure in connection with the growth of our business. In light of the growth in market acceptance of our products and services to date, we currently intend to increase our investment in research and development, such that we do not expect to achieve profitability on an annual basis prior to at least 2012.

Our revenue stream is diversified across various industries, which should mitigate our exposure to cyclical downturns or fluctuations in any one market. Revenues during 2008, 2009 and 2010 were derived from the pharmaceuticals and biofuels markets, and consisted of collaborative research and development revenues, product sales and government grants, which are separately identified in our consolidated statements of operations. Based on our existing arrangements, we believe that revenues from both our pharmaceutical and biofuels customers should be predictable over the near term. The revenues that we expect to recognize from our collaborative research agreement with Shell should provide a high degree of visibility into our aggregate revenues for the foreseeable future.

Revenues and Operating Expenses

Revenues

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

- Collaborative research and development revenues include license, technology access and exclusivity fees, FTE payments, milestones, royalties, and optimization and screening fees. We report our collaborative research and development revenues under two categories consisting of revenues (i) from related parties and (ii) from all other collaborators. Related party collaborative research and development revenues consist of revenues from Shell.
- Product revenues consist of sales of biocatalysts, intermediates, APIs and Codex Biocatalyst Panels and Kits.
- Government grants consist of payments from government entities. The terms of these grants generally provide us with cost reimbursement for certain types of expenditures in return for research and development activities over a contractually defined period. Historically, we have received government grants from Germany, Singapore and the United States. We expect to receive additional grants 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, facility costs, supplies, depreciation of facilities, and laboratory equipment and amortization of acquired technologies, as well as research consultants and the cost of funding research at universities and other research institutions, and are expensed as incurred. As a result of our purchase of the directed evolution intellectual property assets from Maxygen, Inc. (“Maxygen”) (“Maxygen IP”) in 2010, our obligation to pay biofuels royalties to Maxygen terminated. License and royalty fees paid to Maxygen prior to our acquisition of the Maxygen IP fluctuated depending on the timing and type of consideration received in connection with our biofuels research and development collaboration with Shell. Costs to acquire technologies that are utilized in research and development and that have no alternative future use are expensed when incurred.

Selling, General and Administrative Expenses

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

Shell

In June 2011, Equilon Enterprises LLC, a wholly owned subsidiary of Shell completed the transfer of all of its equity interests in us, together with its right to appoint one member to our board of directors, to Raízen. Following the transfer, Raízen became our largest shareholder with an ownership interest of approximately 15.5%. Raízen's primary business is the production of ethanol, sugar and power, and the supply, distribution and retail of transportation fuels. Notwithstanding the above, our collaborative research agreement continues directly with Shell and was not included in transfer to Raízen.

Critical Accounting Policies and Estimates

The interim condensed consolidated financial statements have been prepared in conformity with GAAP 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.

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 June 30,		% of Total Revenues		Six Months Ended June 30,		% of Total Revenues	
	2011	2010	2011	2010	2011	2010	2011	2010
Revenues:								
Product	$ 8,397	$ 8,484	32%	35%	$ 21,329	$ 14,760	37%	30%
Related party collaborative R&D	14,847	14,653	57%	60%	29,670	30,695	52%	61%
Collaborative R&D	2,538	851	10%	3%	5,201	1,511	9%	3%
Government grants	273	492	1%	2%	889	3,214	2%	6%
Total Revenues	26,055	24,480	100%	100%	57,089	50,180	100%	100%
Costs and operating expenses:								
Cost of product revenues	7,106	6,075	27%	25%	18,756	11,293	33%	23%
Research and development	14,965	13,004	57%	53%	28,715	25,986	50%	52%
Selling, general and administrative	9,276	8,652	36%	35%	18,289	17,252	32%	34%
Total costs and operating expenses	31,347	27,731	120%	113%	65,760	54,531	115%	109%
Loss from operations	(5,292)	(3,251)	nm	nm	(8,671)	(4,351)	nm	nm
Interest income	71	46	0%	0%	120	74	0%	0%
Interest expense and other, net	16	(654)	0%	nm	34	(1,012)	0%	nm
Loss before provision for income taxes	(5,205)	(3,859)	nm	nm	(8,517)	(5,289)	nm	nm
Provision (benefit) for income taxes	(165)	87	nm	0%	(6)	26	0%	0%
Net loss	$ (5,040)	$ (3,946)	nm	nm	$ (8,511)	$ (5,315)	nm	nm

Three months ended June 30, 2011 compared to three months ended June 30, 2010.

Revenues

(In Thousands)	Three Months Ended June 30, 2011	2010	Change $	%
Product	$ 8,397	$ 8,484	$ (87)	-1%
Related party collaborative R&D	14,847	14,653	194	1%
Collaborative R&D	2,538	851	1,687	198%
Government grants	273	492	(219)	-45%
Total revenues	$ 26,055	$ 24,480	$1,575	6%

Revenues increased during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to increased revenues from collaborative research and development projects and our related party collaborative research and development projects which was partially offset by declines in revenues from product sales and government grants.

Product revenues decreased $0.1 million during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to the timing of innovation product orders between quarters partially offset by increased product sales to our generics customers in the three months ended June 30, 2011.

Related party collaborative research and development revenues increased $0.2 million during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 due to the contractual increases in the billing rates for the FTEs engaged in our research and development collaboration with Shell. We had an average of 128 FTEs in this collaboration during the three months ended June 30, 2011 and June 30, 2010.

Collaborative research and development revenues increased $1.7 million during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to our expanded activities in our collaborations in carbon management and collaborations with pharmaceuticals customers.

Government grant revenues decreased $0.2 million during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to fact that we recognized a grant from the Singapore Economic Development Board (“EDB”) for $0.5 million in the three months ended June 30, 2010 with no similar EDB grant revenue in the three months ended June 30, 2011. The decrease in government grant revenues was partially offset by a $0.3 million grant received from the U.S. Department of Energy during the three months ended June 30, 2011 under the ARPA-E Recovery Act program.

Our top five customers accounted for 76% and 88% of our total revenues for the three months ended June 30, 2011 and 2010, respectively. Shell accounted for 57% and 60% of our total revenues for the three months ended June 30, 2011 and 2010, respectively.

Cost of Product Revenues

(In Thousands)	Three Months Ended June 30, 2011	2010	Change $	%
Cost of revenues:				
Product	$ 7,106	$ 6,075	$ 1,031	17%
Gross profit:				
Product	$ 1,291	$ 2,409	$(1,118)	-46%
Product gross margin %	15%	28%		

Our cost of product revenues increased $1.0 million during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 while our gross margins decreased from 28% to 15% in the three months ended June 30, 2010 and 2011, respectively. This shift was primarily due to a change in the weighting of the sales mix from high margin innovator products in 2010 toward lower margin generic product sales in the second quarter of 2011.

Operating Expenses

(In Thousands)	Three Months Ended June 30, 2011	2010	Change $	%
Research and development	$ 14,965	$ 13,004	$1,961	15%
Selling, general and administrative	9,276	8,652	624	7%
Total operating expenses	$ 24,241	$ 21,656	$2,585	12%

Research and Development. Research and development expenses increased $2.0 million during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to the $0.8 million increase in amortization expense related to our acquisition of the Maxygen IP. We incurred a $0.3 million increase in compensation costs related to an increase in headcount and stock-based compensation, a $0.2 million increase in travel costs, a $0.2 million increase in facility costs related to our expanded facilities in Redwood City California, a $0.3 million increase in costs for lab supplies related to our lab expansion and a $0.2 million increase in costs for software and system support. This was partially offset by a $0.2 million decrease in royalty fees paid to Maxygen as a consequence of our acquisition of the Maxygen IP and related termination of the IP license agreement. Research and development expenses included stock-based compensation expense of $1.0 million and $0.9 million during the three month periods ended June 30, 2011 and 2010, respectively.

Selling, General and Administrative. Selling, general and administrative expenses increased $0.6 million during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily due to a $0.4 million increase in compensation costs related to increased headcount and stock-based compensation. We increased spending on outsides services and consultants by $0.6 million. We also increased spending on travel costs by $0.2 million. This was partially offset by $0.4 million decrease in legal costs in the three months ended June 30, 2011. Selling, general and administrative expenses included stock-based compensation expense of $1.6 million and $1.4 million during the three months ended June 30, 2011 and 2010, respectively.

Other Income (Expense), net

(In Thousands)	Three Months Ended June 30, 2011	2010	Change $	%
Interest income	$ 71	$ 46	$ 25	54%
Interest expense and other, net	16	(654)	670	-102%
Total other income (expense), net	$ 87	$ (608)	$695	-114%

Interest Income. Interest income increased due to higher average returns on our of cash, cash equivalents and marketable securities on hand during the three months ended June 30, 2011 compared to the three months ended June 30, 2010.

Interest Expense and Other, Net. Interest expense and other, net, decreased $0.6 million during the three months ended June 30, 2011 compared to the three months ended June 30, 2010 primarily related to decreased interest expense of $0.1 million due to the payoff of our debt obligation on a loan from the General Electric Capital Corporation and the Oxford Finance Corporation (“GE Capital Loan”), the recognition of an increase in the fair value of our redeemable convertible preferred stock warrant liability in 2010 of $0.3 million and decreased foreign exchange losses of $0.4 million. The preferred stock warrants converted to common stock warrants upon our IPO and subsequently no longer impact other expenses.

Provision (benefit) for Income Taxes. The tax provision (benefit) for the three months ended June 30, 2011 and 2010 primarily consisted of income taxes attributable to foreign operations.

Restructuring Charges. There was no change in our restructuring accruals during the three months ended June 30, 2011.

Six months ended June 30, 2011 compared to six months ended June 30, 2010.

Revenues

(In Thousands)	Six Months Ended June 30, 2011	2010	Change $	%
Product	$ 21,329	$ 14,760	$$6,569	45%
Related party collaborative R&D	29,670	30,695	(1,025)	-3%
Collaborative R&D	5,201	1,511	3,690	244%
Government grants	889	3,214	(2,325)	-72%
Total revenues	$ 57,089	$ 50,180	$ 6,909	14%

Revenues increased during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to increased revenues from product sales and collaborative research and development projects which was partially offset by declines in revenues from government grants and our related party collaborative research and development projects.

Product revenues increased $6.6 million during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to increased sales to Merck and increased product sales to our generics customers.

Related party collaborative research and development revenues decreased $1.0 million during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 due to a milestone payment of $1.4 million received in the six months ended June 30, 2010. The decrease in related party collaborative research and development revenues in 2011 was partially offset by the contractual increases in the billing rates for the FTEs engaged in our research and development collaboration with Shell. We had an average of 128 FTEs in this collaboration during the six months ended June 30, 2011 and June 30, 2010.

Collaborative research and development revenues increased $3.7 million during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to expanded activities in our collaborations in carbon management and collaborations with new and existing pharmaceuticals customers.

Government grant revenues decreased $2.3 million during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to the recognition of a grant from the EDB for $2.7 million in the six months ended June 30, 2010 with no similar EDB grant revenue in the six months ended June 30, 2011. The decrease in government grant revenues was partially offset by a $0.9 million grant we received from the U.S. Department of Energy during the six months ended June 30, 2011 under the ARPA-E Recovery Act program.

Our top five customers on a year to date basis accounted for 79% and 87% of our total revenues for the six months ended June, 30, 2011 and 2010, respectively. Shell accounted for 52% and 61% of our total revenues for the six months ended June 30, 2011 and 2010, respectively.

Cost of Product Revenues

(In Thousands)	Six Months Ended June 30, 2011	2010	Change $	%
Cost of revenues:				
Product	$ 18,756	$ 11,293	$7,463	66%
Gross profit:				
Product	$ 2,573	$ 3,467	$ (894)	-26%
Product gross margin %	12%	23%		

Our cost of product revenues increased $7.5 million during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to the $6.6 million increase in our product sales. Gross margins decreased from 23% to 12% in the six months ended June 30, 2010 and 2011, respectively, due to a change in sales mix towards lower margin product sales in the first half of 2011.

Operating Expenses

(In Thousands)	Six Months Ended June 30, 2011	2010	Change $	Change %
Research and development	$ 28,715	$ 25,986	$2,729	11%
Selling, general and administrative	18,289	17,252	1,037	6%
Total operating expenses	$ 47,004	$ 43,238	$3,766	9%

Research and Development. Research and development expenses increased $2.7 million during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to the $1.7 million increase in amortization expense related to our acquisition of the Maxygen IP. We incurred additional expenses of $0.2 million for depreciation and amortization expense due to leasehold improvements and capital equipment acquisitions, $0.4 million due to increased travel costs and $0.5 million in increased stock compensation costs. This was partially offset by a $0.7 million decrease in royalty fees paid to Maxygen as a consequence of our acquisition of the Maxygen IP and related termination of the IP license agreement. Research and development expenses included stock-based compensation expense of $1.8 million and $1.6 million during the periods ended June 30, 2011 and 2010, respectively.

Selling, General and Administrative. Selling, general and administrative expenses increased $1.0 million during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily due to a $1.3 million increase in compensation costs related to headcount and stock-based compensation. We also increased spending on travel costs by $0.3 million and outside services and consultants for $0.3 million. This was partially offset by $0.9 million decrease in legal costs in the six months ended June 30, 2011 as we decreased our dependence on outside legal firms. Selling, general and administrative expenses included stock-based compensation expense of $3.1 million and $2.4 million during the six months ended June 30, 2011 and 2010, respectively.

Other Income (Expense), net

(In Thousands)	Six Months Ended June 30, 2011	2010	Change $	Change %
Interest income	$ 120	$ 74	$ 46	62%
Interest expense and other, net	34	(1,012)	1,046	-103%
Total other income (expense), net	$ 154	$ (938)	$1,092	-116%

Interest Income. Interest income increased due to higher average returns on our cash, cash equivalents and marketable securities on hand during the six months ended June 30, 2011 compared to the six months ended June 30, 2010.

Interest Expense and Other, Net. Interest expense and other, net, decreased $0.4 million during the six months ended June 30, 2011 compared to the six months ended June 30, 2010 primarily related to decreased interest expense of $0.3 million due to the payoff of our debt obligation on the GE Capital Loan, decreased foreign exchange losses of $0.3 million compared to 2010, the recognition of an increase in the fair value of our redeemable convertible preferred stock warrant liability in 2010 of $0.7 million and decreased other income of $0.4 million due to contractual arrangements with Arch. The preferred stock warrants converted to common stock warrants upon our IPO and subsequently no longer impact other expenses.

Provision (benefit) for Income Taxes. The tax provision (benefit) for the six months ended June 30, 2011 and 2010 primarily consisted of income taxes attributable to foreign operations.

Restructuring Charges. There was no change in our restructuring accruals during the six months ended June 30, 2011

Liquidity and Capital Resources

(In Thousands)	Six Months Ended June 30, 2011	2010
Net cash used in operating activities	$ (343)	$ (18,713)
Net cash used in investing activities	(42,385)	(28,613)
Net cash provided by financing activities	2,390	67,006
Effect of foreign exchange rates on cash and cash equivalents	24	(52)
Net increase in cash and cash equivalents	$ (40,314)	$ 19,628

(In Thousands)	June 30, 2011	December 31, 2010
Cash and cash equivalents	$32,082	$ 72,396
Marketable securities (1)	14,593	—
Accounts receivable, net	11,306	15,333
Accounts payable, accrued compensation and other accrued liabilities	20,139	22,945
Working capital (2)	39,939	64,708

(1) Includes only the current portion of our marketable securities.
(2) Working capital consists of total current assets less total current liabilities.

Cash Flows from Operating Activities

Operating activities used $0.3 million of net cash during the six months ended June 30, 2011. We incurred a net loss of $8.5 million in the six months ended June 30, 2011, which included non-cash share-based compensation expense of $4.9 million and depreciation and amortization of $5.6 million. Changes in operating asset and liability accounts used $2.3 million of net cash during the six months ended June 30, 2011.

Operating activities used $18.7 million of net cash during the six months ended June 30, 2010. We incurred a net loss of $5.3 million in the six months ended June 30, 2010, which included non-cash share-based compensation expense of $4.0 million and depreciation and amortization of $3.7 million. Changes in operating asset and liability accounts used $22.1 million of net cash during the six months ended June 30, 2010.

Cash Flows from Investing Activities

Cash flows from investing activities primarily relate to capital expenditures to support our growth and our investments in marketable securities.

Cash used by investing activities totaled $42.4 million during the six months ended June 30, 2011 and consisted of capital expenditures of $4.2 million primarily due to the purchase of lab equipment, improvements to our facilities in Redwood City, California and an increase of marketable securities of $38.2 million due to the investment of our cash and cash equivalents.

Cash used in investing activities totaled $28.6 million during the six months ended June 30, 2010 and consisted of capital expenditures of $3.2 million primarily related to the purchase of manufacturing and lab equipment and an increase in marketable securities of $25.5 million.

Cash Flows from Financing Activities

Cash provided by financing activities totaled $2.4 million during the six months ended June 30, 2011 consisting of proceeds from the exercise of stock options.

Cash provided by financing activities totaled $67.0 million during the six months ended June 30, 2010 including gross proceeds received related to our IPO of $72.5 million offset by payments in preparation for our IPO of $3.1 million and payments on financing obligations of $2.7 million.

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. As a result of our amended lease we increased our restricted cash balance by $145,000 in March 2011. The following table summarizes the future commitments arising from our contractual obligations at June 30, 2011 (in thousands):

	Operating leases
Six months ending December 31, 2011:	$ 1,559
Years ending December 31, 2012:	3,232
2013	2,750
2014	2,431
2015	2,502
2016 and beyond	11,026
Total minimum payments	$ 23,500

Off-Balance Sheet Arrangements

As of June 30, 2011, 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 six months ended June 30, 2011. This is discussed in further detail in our Annual Report on Form 10-K filed with the SEC on February 10, 2011.

Equity Price Risk

As described in Note 4 to the condensed consolidated financial statements, we have an investment in common shares of CO_2 Solution, whose shares are publicly traded in Canada on the TSX Venture Exchange. This investment is exposed to fluctuations in both the market price of CO_2 Solution'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 June 30, 2011 would have been an unrealized loss of approximately $221,000, recognized as a component of other comprehensive income (loss) in stockholders' deficit on the condensed consolidated balance sheets. The effect of a 10% adverse change in the exchange rates between the U.S. dollar and the Canadian dollar as of June 30, 2011 would have been an unrealized loss of approximately $221,000, recognized as a component of interest expense and other, net on the condensed consolidated statements of operations.

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 and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures and internal controls, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable, and not absolute, assurance of achieving the desired control objectives. In reaching a reasonable level of assurance, management necessarily was required to apply its judgment in evaluating the cost benefit relationship of possible controls and procedures and internal controls.

Management, including 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 June 30, 2011 at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There has been no significant change in our internal control over financial reporting during the three months ended June 30, 2011 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. Internal control over financial reporting means a process designed 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.

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 early 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 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 relationships with and dependence on collaborators in our principal markets;
- our dependence on Shell for the development and commercialization of biofuels;
- the feasibility of producing and commercializing biofuels derived from cellulose;
- our dependence on a limited number of customers;
- our dependence on a limited number of contract manufacturers of our biocatalysts and suppliers for our pharmaceutical intermediates and APIs;
- our dependence on a limited number of products in our pharmaceutical business;
- our ability to manage our growth;
- our ability to develop and successfully commercialize new products for the pharmaceuticals market;
- our ability to commercialize our technology in other bioindustrial markets;
- our ability to maintain license rights for commercial scale expression systems for cellulases;
- fluctuations in the price of and demand for petroleum-based fuels;
- the availability of renewable biomass sources;
- reductions or changes to existing fuel regulations and policies;
- our potential bio-based chemical products might not be approved or accepted by our customers;
- the existence of government subsidies or regulation with respect to carbon dioxide emissions;
- our ability to obtain and maintain governmental grants;

- risks associated with the international aspects of our business;
- our ability to integrate any businesses we may acquire with our business;
- potential issues related to our ability to accurately report our financial results in a timely manner;
- our dependence on, and the need to attract and retain, key management and other personnel;
- 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;
- our ability to obtain additional capital that may be necessary to expand our business;
- 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; 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, and we may not achieve or maintain profitability.

We have incurred net losses since our inception, including losses of $45.1 million, $20.3 million and $8.5 million in 2008, 2009 and 2010, respectively, and net loss of $8.5 million for the six months ended June 30, 2011. As of June 30, 2011, we had an accumulated deficit of $176.7 million. We expect to incur losses and negative cash flow from operating activities for the foreseeable future. To date, we have derived a substantial portion of our revenues from research and development agreements with our collaborators and expect to derive a substantial portion of our revenues from these sources for the foreseeable future. If we are unable to extend our existing agreements or enter into new agreements upon the expiration or termination of our existing agreements, our revenues could be adversely affected. In addition, some of our collaboration agreements provide for milestone payments and future royalty payments, the payment of which are uncertain as they are dependent on our and our collaborators' abilities and willingness to successfully develop and commercialize products. We expect to spend significant amounts to fund the development of additional pharmaceutical and potential bioindustrial products, including biofuels and bio-based chemicals. As a result, we expect that our expenses will exceed revenues for the foreseeable future and we do not expect to achieve profitability prior to at least 2012, if ever. If we fail to achieve profitability, or if the time required to achieve profitability is longer than we anticipate, we may not be able to continue our business. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis.

We 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
- consolidation in our target markets limits the number of potential collaborators.

Additionally, our business could be negatively impacted if any of our collaborators or suppliers undergoes a change of control or were to otherwise assign the rights or obligations under any of our agreements. For example, under our license agreement with Shell, Shell may assign the agreement without our consent to controlled affiliates or in connection with a change of control. If Shell or any of our other collaborators were to assign these agreements to a competitor of ours or to a third party who is not willing to work with us on the same terms or commit the same resources as the current collaborator, our business and prospects could be harmed.

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

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

We cannot control the financial resources Shell devotes to our programs under the collaborative research agreement. Currently, we receive bi-monthly payments from Shell that are based on the number of full-time employee equivalents, or FTEs, that work on our research collaboration with Shell. The number of FTEs that work on the program, and the payments from Shell for these FTEs, are specified in our collaborative research agreement. Shell has the right to reduce the number of funded FTEs, with any one reduction not to exceed 98 funded FTEs, following advance written notice. The required notice period ranges from 30 to 270 days. Following any such reduction, Shell is subject to a standstill period of between 90 and 360 days during which period Shell cannot provide notice of any further FTE reductions. The notice and standstill periods are dependent on the number of funded FTEs reduced, with the length of notice and standstill periods increasing commensurate with the number of FTEs reduced. Any such reduction could have a material adverse impact on our revenues and business plan for biofuels. In July 2011, we received notice from Shell that it was reducing the number of funded FTEs by 12, with such reductions to be effective in August 2011. Moreover, disputes may arise between us and Shell, which could delay the programs on which we are working or could prevent the commercialization of products developed under our research and development collaboration. If that were to occur, we may have to use funds, personnel, equipment, facilities and other resources that we have not budgeted to undertake certain activities on our own. Disagreements with Shell could also result in expensive arbitration or litigation, which may not be resolved in our favor. Performance issues, program delay or termination or unbudgeted use of our resources may have a material adverse effect on our business and financial condition. Even if we successfully develop commercially viable technologies, our ability to derive revenues from those technologies will be dependent upon Shell's willingness and ability to commercialize them. Shell has the right, but not the obligation, to commercialize these technologies. If Shell decides to commercialize our technology, we would need to rely on Shell, or other parties selected by Shell, to design, finance and construct commercial scale biofuel facilities, and operate commercial scale facilities at costs that are competitive with traditional petroleum-based fuels and other alternative fuel technologies that may be developed. Shell could merge with or be acquired by another company or experience financial or other setbacks unrelated to our research collaboration agreement that could adversely affect us.

We have agreed to work exclusively with Shell until November 2012 in the field of converting cellulosic biomass into fermentable sugars that are used in the production of fuels and related products as well as the conversion of these sugars into fuels and related products. However, Shell is not required to work exclusively with us, and could develop or pursue alternative technologies that it decides to use for commercialization purposes instead of the technology developed under our collaborative research agreement with Shell. For example, Shell is currently working with Virent Energy Systems to develop a thermo-chemical approach to developing biogasoline and biodiesel. Even if Shell decides to commercialize products based on our technologies, they have no obligation to purchase their biocatalyst supply from us. If Shell does not pursue the commercialization of any cellulosic sugars, biofuels or related products that may be developed under our collaborative research agreement, our exclusive arrangement would prevent us from licensing any technology developed under the collaboration for the patent life of such technology, which could place us at a significant competitive disadvantage in the biofuels market.

We cannot guarantee that our relationship with Shell will continue. Shell can terminate its collaborative research agreement with us for any or no reason by providing us with nine months' notice. Each party also has the right to terminate the license agreement and the collaborative research agreement in the case of an uncured breach by the other party, and to terminate the collaborative research agreement if that party believes the other party has assigned the collaborative research agreement to a direct competitor of the terminating party. Furthermore, Shell recently transferred all of its equity interests in us, together with its right to appoint one member to our board of directors, to Raízen Energia S.A., or Raízen, a Brazil-based biofuels joint venture between Shell and Cosan S.A., and it is unknown at this time what impact, if any, this transfer will have on our collaboration with Shell. If our collaboration with Shell were to fail, we would likely need to find another collaborator to provide the financial assistance and infrastructure necessary for us to develop and commercialize our products and execute our strategy with respect to biofuels. Failure to maintain this relationship would have a material adverse effect on our business, financial condition and prospects.

The success of our cellulosic ethanol program may be dependent on the performance of other parties.

In connection with our research and development collaboration with Shell, we entered into a multiparty collaborative research and license agreement with Iogen and Shell in July 2009, which is focused on developing technology to convert cellulosic biomass to ethanol for commercial scale production. Either Shell or Iogen may fail to perform their obligations under this collaboration, may breach or terminate the collaboration agreement or otherwise fail to conduct their collaborative activities successfully and in a timely manner. Further, they may not devote sufficient resources to the development of technology to convert cellulosic biomass to ethanol or may fail to develop the technology altogether. Moreover, disagreements or conflicts amongst the parties could develop and could negatively impact our development efforts or our relationships with Shell and Iogen. Disagreements with Iogen or Shell could also result in expensive arbitration or litigation, which may not be resolved in our favor. If any of these events occur, or if we fail to maintain this collaboration with Shell and Iogen, we may be unable to develop technology for use in the production of cellulosic ethanol at commercial scale, which would have an adverse impact on our ability to grow our business. In addition, the collaborative research and license agreement with Iogen and Shell terminates in the event (i) our separate license agreements with Shell terminate or (ii) Iogen's separate technology license agreement with Shell terminates. In addition, Shell can terminate the collaborative research and license agreement for any or no reason by providing us and Iogen with 30 days notice. Any unilateral action by Shell to terminate either its separate license agreements with us or Iogen will prevent any further research and development activities under the multi-party collaboration. As a result, our ability to pursue research and development activities relating to the conversion of cellulosic biomass and our biofuels programs may be adversely impacted.

We do not yet know what impact, if any, our relationship with Raízen will have on our business.

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. Following the transfer, Raízen became our largest stockholder with an ownership interest of approximately 15.5%. Raízen's primary business is the production of ethanol, sugar and power, and the supply, distribution and retail of transportation fuels. We do not know yet what commercial benefits, if any, we will derive from our relationship with Raízen.

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

We are developing biocatalysts for use in producing two advanced biofuels, cellulosic ethanol and biohydrocarbon diesel, 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 non-food renewable biomass sources into a commercially viable biofuel or bio-based chemicals is still unproven, and we do not know whether this can be done commercially or at all. To date, there has been limited private and government funding for research and development in advanced biofuels relative to the scope of the challenges presented by this development effort. Furthermore, there have been only a few well-directed public policies emphasizing investment in the research and development of, and providing incentives for the commercialization of and transition to, biofuels.

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. 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, different biocatalysts may need to be developed for use in different geographic locations to convert the cellulosic biomass available in each locale into sugars that can be used in the production of these biofuels or bio-based chemicals. This will make the development of biofuels or bio-based chemicals derived from cellulose more challenging and expensive. Moreover, substantial development of infrastructure will be required for the ethanol market to grow. Areas requiring expansion include, but are not limited to, additional rail capacity, additional storage facilities for ethanol, increases in truck fleets capable of transporting ethanol within localized markets, expansion of refining and blending facilities to handle ethanol, logistics for the collection and storage of biomass and growth in the fleet of end user vehicles capable of using ethanol blends. Substantial investments required for infrastructure changes and expansions may not be made on a timely basis or at all. Any delay or failure in making the changes to or expansion of infrastructure could harm demand or prices for ethanol and impose additional costs that would hinder its commercialization. Finally, if existing tax credits, subsidies and other incentives in the United States and foreign markets are phased out or reduced, the overall cost of commercialization of cellulosic biofuels will increase.

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, 2009, our top five customers accounted for 90% of our total revenues, with Shell accounting for 76% of our total revenues. 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 six months ended June 30, 2011, our top five customers accounted for 79% of our total revenues, with Shell accounting for 52% of our total revenues. We expect a limited number of customers to continue to account for a significant portion of our revenues for the foreseeable future. This customer concentration increases the risk of quarterly fluctuations in our revenues and operating results. The loss or reduction of business from one or a combination of our significant customers could 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, 2010, we derived 87% of our product revenue from three pharmaceutical product families: statins, hepatitis C therapies and anti-diabetics. 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 our biocatalysts.

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

We rely on several contract manufacturers, including Lactosan GmbH & Co. KG, or Lactosan, to manufacture substantially all of the biocatalysts used in our pharmaceutical business. Our pharmaceutical business, therefore, faces risks of difficulties with, and interruptions in, performance by these contract manufacturers, the occurrence of which could adversely impact the availability, launch and/or sales of our enzymes in the future. The failure of any manufacturers that we may use to supply manufactured product on a timely basis or at all, or to manufacture our biocatalysts 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. For example, in 2008, we were required to secure an alternative source of certain biocatalysts when viruses infected one of our contract manufacturer's facilities. If this or any similar event disrupts the operations of any of our suppliers in the future, 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 have a supply agreement with Lactosan, but we do not currently have a long-term supply contract with any other contract manufacturers. Other than Lactosan, our contract manufacturers are under no obligation to manufacture our biocatalysts 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 capacity, it could take a year or longer before our facility is able to produce commercial volumes of our biocatalysts. 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 rely on Arch to market our products in certain regions, and Arch may not be able to effectively market our products.

Using our biocatalysts, Arch manufactures certain specified APIs, and intermediates used in the manufacture of APIs, that we then purchase and have the right to sell to innovator pharmaceutical companies worldwide, generic pharmaceutical companies in the United States, Canada, Europe and Israel, and certain pharmaceutical companies in India. Arch has the exclusive right to manufacture market and sell such APIs and intermediaries to generic pharmaceutical companies in countries other than the United States, Canada, Europe and Israel, and certain other pharmaceutical companies in India. We must therefore rely on Arch for their financial resources and their marketing expertise for the commercialization of such APIs and intermediates in these regions. We cannot control Arch's level of activity or expenditure relating to the marketing of such products relative to the rest of their products or marketing efforts. Arch may fail to effectively market our products in these regions. 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 products. If we are unable to effectively leverage Arch's marketing capabilities or Arch does not successfully promote such products in the designated territories as our sole marketing partner, this could harm our business, our revenues and operating results, and our ability to bring such products to the marketplace.

The accuracy and timeliness of our financial reporting may be adversely affected if we are unable to implement and maintain effective internal control over financial reporting in the future.

Based on the procedures performed as of December 31, 2010, we noted no control deficiencies in our internal control over financial reporting. We have not performed an evaluation of our internal control over financial reporting, such as required by Section 404 of the Sarbanes-Oxley Act, nor have we engaged our independent registered public accounting firm to perform an audit of our internal control over financial reporting as of any balance sheet date or for any period reported in our financial statements. Had we performed such an evaluation or had our independent registered public accounting firm performed an audit of our internal control over financial reporting, control deficiencies, including material weaknesses and significant deficiencies, in addition to those discussed above, may have been identified.

We have taken numerous steps to enhance our internal control over financial reporting, including the development and implementation of policies, improved processes and documented procedures, the retention of third-party experts and contractors, and the hiring of additional accounting and finance personnel with technical accounting, inventory accounting and financial reporting experience. We cannot assure you 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. If other deficiencies are discovered 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, 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.

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

Our business has grown rapidly and we expect this growth to continue. Overall, we have grown from approximately 40 employees at the end of 2002 to approximately 322 employees as of June 30, 2011. Currently, we are working simultaneously on multiple projects targeting several markets. Furthermore, we are conducting our business across several countries, including countries in North America, South America, Europe and Asia. These diversified, global operations place increased demands on our limited resources and require us to substantially expand the capabilities of our administrative and operational resources and to attract, train, manage and retain qualified management, technicians, scientists and other personnel. As our operations expand domestically and internationally, we will need to continue to manage multiple locations and additional relationships with various customers, collaborators, suppliers and other third parties. Our ability to manage our operations, growth, and various projects effectively will require us to make additional investments in our infrastructure to continue to improve our operational, financial and management controls and our reporting systems and procedures and to attract and retain sufficient numbers of talented employees, which we may be unable to do effectively. As a result, we may be unable to manage our expenses in the future, which may negatively impact our gross margins or operating margins in any particular quarter. In addition, we may not be able to successfully improve our management information and control systems, including our internal control over financial reporting, to a level necessary to manage our growth and we may discover deficiencies in existing systems and controls that we may not be able to remediate in an efficient or timely manner.

Our business could be adversely affected if the processes used by our customers to manufacture their final pharmaceutical products fail to be approved.

Our biocatalysts are used in the manufacture of intermediates and APIs which are then used in the manufacture of final pharmaceutical products by our existing and potential branded drug customers. 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 biocatalysts does not receive approval by the appropriate regulatory body or if customers decide not to pursue approval, our business could be adversely affected.

Our 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. We do not expect product gross margins for our current generic products to improve in the near or long term, which 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 pharmaceutical products. These efforts are subject to numerous risks, including the following:

- pharmaceutical companies may be reluctant to adopt new manufacturing processes that use our biocatalysts;
- we may be unable to successfully develop the biocatalysts 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 the contract manufacturers that we may use for commercial scale production;

- 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 from us on favorable terms, if at all;
- we may face product liability litigation, unexpected safety or efficacy concerns and 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 successfully commercialize our technology in biofuels or bio-based chemicals, we may be unable to grow our business.

We expect to invest a significant amount of our future research and development efforts in the bio-based chemicals market and potentially, the biofuels market. We have limited financial and managerial resources, we will be required to prioritize our application of resources to particular development and commercialization efforts. Any resources we expend on one or more of these efforts could be at the expense of other potentially profitable opportunities. If we focus our efforts and resources on one or more of these areas and they do not lead to commercially viable products, our revenues, financial condition and results of operations could be adversely affected.

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 that is capable of producing the necessary biocatalysts for the commercialization of products derived from cellulose, including biofuels and bio-based chemicals. 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. We also obtained access to specified materials of Dyadic relating to such Dyadic technology. Our license is sublicenseable to 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, Danisco A/S, which was recently acquired by 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 petroleum-based products may reduce demand for biofuels and bio-based chemicals.

Biofuels and some bio-based chemicals are anticipated to be marketed as an alternative to petroleum-based products. Therefore, if the price of 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 petroleum-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 fluctuate if the price of oil is variable.

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

Our biofuel and bio-based chemical business opportunities may be limited by the availability or cost of renewable 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, as well as the biofuels royalties that we collect from Shell, 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 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.

Reductions or changes to existing fuel 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. For example, 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. In the United States and in a number of other countries, these regulations and policies have been modified in the past and may be modified again in the future. Any reduction in mandated requirements for fuel alternatives and additives to gasoline may cause demand for biofuels to decline and deter investment in the research and development of biofuels. Market uncertainty regarding future policies may also affect our ability to develop new biofuels products or to license our technologies to third parties. Any inability to address these requirements and any regulatory or policy changes could have a material adverse effect on our biofuels business, financial condition and operating results. Our other potential bioindustrial products may be subject to additional regulations.

We cannot assure you that our potential bio-based chemical products will be approved or accepted by customers.

We intend to enter the market for chemical products used by large consumer products or chemical companies. In entering these markets, we intend to sell our products 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 molecules 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 other benefits to them, we will not be successful in entering these markets and our business will be adversely affected.

If governmental incentives or other actions targeted at limiting carbon emissions are not adopted, a broad market for carbon management solutions may not develop.

Our strategy with respect to carbon management, although still in the research phase, would likely require an expansion of the market for the management of carbon dioxide emissions prior to us being able to recognize significant revenues from our research and continuing expenditures of resources. The development of a significant market will likely depend on the adoption of government subsidies or other government regulation requiring companies to limit their carbon emissions. In the United States, for example, there is no current market for carbon. The establishment of a carbon market in the United States could take years to develop, if ever. The United States Senate, for example, failed to pass carbon regulating legislation in 2010. In the absence of such additional government subsidies or regulation in major markets, this carbon management market may not develop and we would not be able to generate significant revenues from our carbon management operations. Even if a carbon market is established, we will not be able to commercialize our potential carbon solutions if the price of carbon is below the cost to deploy our solutions. In addition, the development of transportation and storage infrastructure for carbon dioxide will be necessary to deploy our carbon capture technology in certain markets.

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

We have received various government grants to complement and enhance our own resources. We may seek to obtain government grants and subsidies 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 grants or subsidies. Any of our existing grants or new grants 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 grants contracts. The auditor may review our performance, cost structures and compliance with applicable laws, regulations and standards. Funds available under grants must be applied by us toward the research and development programs specified by the granting 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 and legal proceedings including tax, 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;
- economic or political instability in foreign countries;
- difficulties in staffing and managing foreign operations; and
- the need to comply with a variety of U.S. laws applicable to the conduct of overseas operations, including export control laws and the Foreign Corrupt Practices Act.

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

If we engage in any acquisitions, we will incur a variety of costs and may potentially face numerous 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.

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

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, including our Chief Executive Officer, Alan Shaw, or the failure to attract or retain other key employees who possess the requisite expertise for the conduct of our business, could prevent us from developing and commercializing our products for our target markets and entering into collaborations or licensing arrangements to execute on our business strategy. 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 biofuels and bio-based chemicals area, or due to the availability of personnel with the qualifications or experience necessary for our business. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that will adversely affect our ability to meet the demands of our collaborators 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. Additionally, we would be in breach of certain agreements, including our collaborative research agreement with Shell, if we fail to maintain a specified number of personnel.

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 June 30, 2011, we owned approximately 260 issued patents and approximately 255 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 our methods and products which support our business in the pharmaceuticals and bioindustrials 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, 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. Additional uncertainty may result from potential passage of patent reform legislation by the United States Congress, legal precedent as handed down by the United States Federal Circuit 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. 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 management 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 India, where we manufacture pharmaceutical intermediates and APIs through contract manufacturers, 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 bioindustrials 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. We are aware that other companies, including Royal DSM N.V., or DSM, DuPont, Novozymes, and Vercipia Biofuels, an affiliate of BP, 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 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 the biofuels industry to be extremely competitive, with competition coming from ethanol producers as well as other providers of alternative and renewable fuels. Significant competitors include companies such as: Novozymes, which has partnered with a number of companies and organizations on a regional basis to develop or produce biofuels, including partnering with Gruppo Mossi & Ghosolfi, or M&G, in Italy to be the cellulose supplier to a commercial scale cellulosic ethanol plant being built by M&G, and opening a biofuel demonstration plant with Inbicon A/S of Denmark; DuPont which is marketing a line of cellulases to convert biomass into sugar; DuPont Danisco Cellulosic Ethanol, or DDCE, which is developing facilities to produce cellulosic ethanol; DSM, which recently acquired C5 Yeast Company B.V. enhancing DSM's position in the second generation biofuel sector; Mascoma Corporation, which has entered into a letter of intent with Valero Energy Corporation in January 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. In addition, other companies are attempting to develop non-ethanol biofuels. DuPont has announced plans to develop and market biobutanol through Butamax Advanced Biofuels LLC, a joint venture with BP, and Virent Energy Systems Inc. is collaborating with Shell to develop thermochemical catalytic routes to produce biogasoline and biodiesel directly from sugars. Some or all of these competitors or other competitors, as well as academic, research and government institutions, are developing or may develop technologies for, and are competing or may compete with us in, the production of alternative fuels or biofuels.

As we pursue opportunities in other bioindustrial markets, including bio-based chemicals, we expect to face competition from numerous companies focusing on developing biocatalytic and other solutions for these markets, including a number of the companies described above. In October 2010, we purchased the directed evolution intellectual property assets from Maxygen, which eliminated certain constraints on our ability to enter the bio-based chemicals market. This sector will be a new market for us, and there are a number of competitors who have been active in this marketplace for several years. Our ability to compete in this market may be limited by our relatively late start.

Our ability to compete successfully will depend on our ability to develop proprietary products that reach the market in a timely manner and are technologically superior to and/or are less expensive than other products on the market. Many of our competitors have substantially greater production, financial, research and development, personnel and marketing resources than we do. 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. 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 and the reduction of carbon emissions, two of our target markets. 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.

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 and expand our biocatalyst discovery and development process. Although we believe that, based on our current level of operations and anticipated growth, 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, continued funding from Shell for our biofuels program, our spending to develop and commercialize our products, the effect of any acquisitions of other businesses, technologies or facilities that we may make in the future, our spending on new market opportunities, including bio-based chemicals, and the filing, prosecution and enforcement 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 continue to incur losses, our ability to fund our operations, take advantage of strategic opportunities, develop products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate research or development programs or the commercialization of products resulting from our technologies, curtail or cease operations or obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we will not be able to successfully execute our business plan or continue our business.

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. Furthermore, Shell may terminate our collaborative research agreement if a force majeure event interrupts our collaboration activities for more than ninety days.

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

Some of our products and processes are genetically engineered or involve the use of genetically engineered products or genetic engineering technologies. If we and/or our collaborators are not able to overcome the ethical, legal, and social concerns relating to genetic engineering, our products and processes may not be accepted. Any of the risks discussed below could result in 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 biofuels and chemicals, 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, our products and technologies may 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 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, and local 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 conform 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.

We may be sued for product liability.

The design, development, manufacture and sale of our products involve an inherent risk of product liability claims and the associated adverse publicity. We may be named directly in product liability suits relating to drugs that are produced using our biocatalysts or that incorporate our intermediates and APIs. The 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 pharmaceutical intermediates and APIs, such as 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 manufacturers will have 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 on our balance sheet, 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 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. These provisions may also frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, who are responsible for appointing the members of our management team. Furthermore, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits, with some exceptions, stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us. Finally, our charter documents establish advanced notice requirements for nominations for election to our board of directors and for proposing matters that can be acted upon at stockholder meetings. Although we believe these provisions together provide for an opportunity to receive higher bids by requiring potential acquirers to negotiate with our board of directors, they would apply even if an offer to acquire our company may be considered beneficial by some stockholders.

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

Based on the number of shares outstanding as of June 30, 2011, our officers, directors and existing stockholders who hold at least 5% of our stock together beneficially own approximately 45% 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 June 30, 2011, Raízen, Biomedical Sciences Investment Fund Pte Ltd, CMEA Ventures and FirstMark Capital beneficially owned approximately 15.5%, 9.4%, 8.4% and 6.1% of our common stock, respectively. A sale by any of them of all or a significant portion of their shares of our common stock could depress our stock price.

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 changes in Shell's biofuels strategy or timelines, or in our relationship with Shell, including any decision by Shell to terminate our collaboration or reduce the number of FTEs funded by Shell under our collaborative research agreement;
- any announcements or developments from Raízen, the Shell-Cosan joint venture;
- 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 patents, litigation matters 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, and the adoption or failure to adopt carbon emissions regulation;
- 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, commencing in 2011, 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 will require that we incur substantial accounting expense and expend significant management time on compliance-related issues. Moreover, if we are not able to comply with the requirements of Section 404 in a timely manner, our stock price could decline, and we could face sanctions, delisting or investigations by The NASDAQ Global Market, or other material 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) Sales of Unregistered Securities

None.

(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 gross 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 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 our 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 our Quarterly Report on Form 10-Q for the quarter ended March 31, 2010, filed on May 28, 2010).
4.1	Specimen Stock Certificate (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form S-1/A No. 333-164044, filed on March 31, 2010).
10.1	Manufacture and Supply Agreement by and between Codexis, Inc. and Lactosan GmbH & Co. KG dated as of May 16, 2011.*
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 June 30, 2011, formatted in Extensible Business Reporting Language (XBRL) includes: (i) Condensed Consolidated Balance Sheets at June 30, 2011 and December 31, 2010, (ii) Condensed Consolidated Statements of Income for the Three and Six Months Ended June 30, 2011 and 2010, (iii) Condensed Consolidated Statements of Cash Flows for the Three and Six Months Ended June 30, 2011 and 2010, 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: August 3, 2011

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

Date: August 3, 2011

By: /s/ ROBERT LAWSON
Robert Lawson
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.

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[*] 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

MANUFACTURE AND SUPPLY AGREEMENT

THIS MANUFACTURE AND SUPPLY AGREEMENT (this "**Agreement**"), effective as of May 16, 2011 (the "**Effective Date**"), is made and entered into by and between **Codexis, Inc.**, a Delaware corporation, having a place of business at 200 Penobscot Drive, Redwood City, California 94063, USA ("**Codexis**"), and **Lactosan GmbH & Co. KG**, a corporation organized and existing under the laws of Austria, having a place of business at Industriestrasse West 5, A-8605 Kapfenberg, Austria ("**Company**"). Codexis and Company each may be referred to herein individually as a "**Party**," or collectively as the "**Parties**."

WHEREAS, Codexis owns proprietary rights in certain chemical synthesis and biocatalysis process technology, and possesses certain valuable business and/or technical knowledge, information, and/or expertise relating to manufacturing processes for certain enzymes;

WHEREAS, Company has expertise and facilities for the manufacture of enzymes on a commercial scale; and

WHEREAS, Codexis would like Company to manufacture and supply certain enzymes to Codexis and/or its customers, and provide related documentation for or on behalf of Codexis, and Codexis has agreed to disclose and license its biocatalyst and biocatalyst process to Company for such purpose, in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and obligations set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Codexis and Company agree as follows:

1. DEFINITIONS

As used in this Agreement, the following terms are defined as indicated:

1.1 "Ad-Hoc Enzyme" shall have the meaning set forth in Section 3.2(c).

1.2 "Affiliate" shall mean any entity that is controlled by, controls, or is under common control with a Party, as the case may be. For purposes of this Section 1.2, the term "control" means (a) direct or indirect ownership of more than fifty percent (50%) of the voting interest in the entity in question, or more than fifty percent (50%) interest in the income of the entity in question; provided, however, that if local law requires a minimum percentage of local ownership, control will be established by direct or indirect beneficial ownership of one hundred percent (100%) of the maximum ownership percentage that may, under such local law, be owned by foreign interests; or (b) possession, directly or indirectly, of the power to direct or cause the direction of management or policies of the entity in question (whether through ownership of securities or other ownership interests, by contract or otherwise).

1.3 "Applicable Law" shall mean all laws, statutes, ordinances, codes, rules, and regulations that have been enacted by a Governmental Authority and are in force as of the Effective Date or come into force during the Term, in each case to the extent that the same are applicable to the performance by the Parties of their respective obligations under this Agreement.

1.4 "Batch" shall mean, on an Enzyme-by-Enzyme basis, a specific quantity of Enzyme intended to be of uniform character and quality and produced during the same cycle of manufacture, as defined by the master batch record for such Enzyme, and which is manufactured in accordance with the terms of this Agreement.

1.5 "Codexis Know-How" shall mean, on an Enzyme-by-Enzyme basis, technology, information, expertise, know-how, and/or trade secrets Controlled by Codexis relating to the use of Codexis Materials in the manufacture of Enzyme that are not within the Codexis Patent Rights but are necessary for the use of Codexis Materials in the manufacture of Enzyme.

1.6 "Codexis Materials" shall mean, on an Enzyme-by-Enzyme basis, the materials to be supplied on or behalf of Codexis to Company, as may be set forth in the applicable Work Order.

1.7 "Codexis Patent Rights" shall mean, on an Enzyme-by-Enzyme basis, any and all rights under patents and pending patent applications Controlled by Codexis related to Codexis Enzymes and/or the use of Codexis Materials as set forth in this Agreement.

1.8 "Confidential Information" shall mean any information of a confidential and proprietary nature, including but not limited to the know-how, information, invention disclosures, patent applications, proprietary materials and/or technologies, economic information, business or research strategies, trade secrets, and material embodiments thereof, disclosed by a Party to the other Party in written form or in oral form if summarized in a writing marked "confidential" and delivered to the receiving Party within thirty (30) days after such oral disclosure. For purposes of this Agreement, any and all Codexis Know-How, Codexis Materials, Inventions and/or Codexis Patent Rights shall be deemed to be Confidential Information of Codexis.

1.9 "Control" shall mean, with respect to an item or an intellectual property right, possession of the ability, whether arising by ownership or license, to grant a license or sublicense as provided for in this Agreement under such item or right without violating the terms of any written agreement with any Third Party and without requiring the payment of compensation to any Third Party (other than payments made by Codexis to its employees or consultants in respect of intellectual property they create and assign to Codexis).

1.10 "Enzyme" shall mean Established Enzyme, First-Make Enzyme, and Ad-Hoc Enzyme.

1.11 "Established Enzyme" shall have the meaning set forth in Section 3.2(a).

1.12 "First-Make Enzyme" shall have the meaning set forth in Section 3.2(b).

1.13 "Governmental Authority" shall mean any supranational, national, regional, state or local government, court, governmental agency, authority, board, bureau, instrumentality, or regulatory body.

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1.14 "Invention" shall mean any discovery, invention, contribution, method, finding, or improvement, whether or not patentable, and all related know-how, that is conceived, reduced to practice, or otherwise developed by Company, either solely or jointly with Codexis and/or a Third Party, during the Term that relate to Enzyme, Codexis Patent Rights, Confidential Information of Codexis, Codexis Know-How, and/or Codexis Materials.

1.15 "Manufacturing Facility" shall mean any site or plant in which Company manufactures Enzyme pursuant to this Agreement.

1.16 "Purchase Order(s") shall have the meaning set forth in Section 5.3.

1.17 "Quality Agreement" shall have the meaning set forth in Section 5.10.

1.18 "Specification" shall mean, on an Enzyme-by-Enzyme basis, the specifications for Enzyme as provided by Codexis to Company in the applicable Work Order.

1.19 "Term" shall have the meaning set forth in Section 12.1.

1.20 "Third Party" shall mean any party other than Codexis, Company, or an Affiliate of either Codexis or Company.

1.21 "Work Order(s)" shall have the meaning set forth in Section 3.1.

2. LICENSE GRANTS

2.1 Grant of Rights. Subject to the terms and conditions of this Agreement, Codexis hereby grants to Company a non-exclusive, non-transferable and non-sublicensable license, under the Codexis Patent Rights and Codexis Know-How, solely to use Codexis Materials to manufacture Enzyme for and on behalf of Codexis and/or its Affiliates.

2.2 No Other Rights. Except as expressly provided herein, no right, title, or interest is granted by Codexis to Company in, to, or under the Codexis Patent Rights, Codexis Know-How, or Codexis Materials.

3. WORK ORDERS; ENZYME TYPE

3.1 Acceptance of Work Order(s). On an Enzyme-by-Enzyme basis, Codexis shall issue a work order to Company for the supply of Enzyme by Company to Codexis in a form substantially similar to Exhibit 3.1 (each, a "**Work Order**"). Such Work Order shall include the following information: (a) applicable Enzyme; (b) type of Enzyme (i.e., Established Enzyme, First-Make Enzyme, or Ad-Hoc Enzyme); (c) any further work required to be performed by Company; and (d) any additional technical and/or business terms. Company shall have ten (10) days from the date of issuance by Codexis to accept or reject a Work Order and if Company does not respond within such ten (10) day period, then the Work Order is deemed rejected. A Work Order shall have no force or effect unless it is mutually agreed upon and executed by both Parties. The Work Order may be amended from time to time by the Parties, but such amendment shall have no force or effect unless it is executed by both Parties.

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3.2 Enzyme Type. Each Work Order shall specify the type of Enzyme in accordance with the following categories:

(a) **Established Enzyme(s)** shall be those Enzyme(s) for which the manufacturing process is established and known by Company, and manufactured using Company's commercial kit at [*] scale. The Company shall establish and maintain an Established Enzyme inventory balance such that, for each month, the inventory of Established Enzyme, on an Enzyme-by-Enzyme basis, shall always be greater than the Rolling Forecast quantity of such Enzyme for the next [*] or as mutually agreed by the Parties.

(b) **First-Make Enzyme(s)** shall be those Enzyme(s) for which the manufacturing process it not yet established and/or known by Company, and manufactured using Company's commercial kit at [*] scale. On a First-Make Enzyme-by-First-Make Enzyme basis, in the event that Company produces [*] of such Enzyme in conformance with the terms and conditions of the applicable Work Order, including without limitation, the applicable Specification and any other requirements, then upon the mutual agreement of the Parties, such First-Make Enzyme shall become an Established Enzyme and Codexis shall issue a new Work Order for such Enzyme, specifying that it is an Established Enzyme.

(c) **Ad-Hoc Enzyme(s)** shall be all Enzyme(s) other than Established Enzyme(s) and First-Make Enzyme(s), for which Codexis submits and Company accepts the applicable Work Order.

4. CODEXIS MATERIALS AND TECHNOLOGY TRANSFER

4.1 Codexis Materials Supply; Technology Transfer. On an Enzyme-by-Enzyme basis, Codexis may (a) supply to Company a quantity of Codexis Materials and/or (b) provide Company with access to the Codexis Know-How, if and to the extent specified in the applicable Work Order. Upon fulfillment of Codexis' order for Enzyme, termination of this Agreement, and/or upon Codexis' request, Company shall return all unused Codexis Materials to Codexis.

4.2 Use of Codexis Materials; Enzyme. Except as expressly set forth in this Agreement, Company will not, and will not allow any Third Party to, without the prior written consent of Codexis, (a) extract information from, reverse engineer, deconstruct, disassemble, sequence or in any way determine, or attempt to extract information from, reverse engineer, deconstruct, disassemble, sequence or in any way determine, the biological, chemical or physical structure or composition of any of the Codexis Materials and/or Enzymes or, in each case, its components; (b) copy, alter, modify or otherwise design or create any derivative of any of the Codexis Materials and/or Enzymes or, in each case, its components; and/or (c) transfer any of the Codexis Materials and/or Enzymes or, in each case, its components, or sequence information pertaining to the Codexis Materials and/or Enzymes or derivatives thereof or, in each case, its components, to a Third Party.

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4.3 Inventory Transaction Reports; Audits. During the Term and for a period of three (3) years thereafter, Company shall maintain adequate records with respect to inventory of each Enzyme, which records shall include without limitation information specifying how such Enzyme is used, stored, transferred, or otherwise disposed. On an Enzyme-by-Enzyme basis, following the first manufacture of a Batch of such Enzyme, Company shall deliver to Codexis a written report (the timing and details of such written report to be mutually agreed) describing the Company's inventory balances relating to the manufacture of such Enzyme. Codexis shall have the right to, at Codexis' expense, visit (or have a representative visit) Company's manufacturing facilities once per month for purposes of collecting data regarding inventory of Enzyme. Such visits shall be on or around the last day of each month.

5. ENZYME SUPPLY

5.1 Manufacture and Supply; Purchase Orders. On a Work Order-by-Work Order basis, Company shall manufacture and supply Codexis' requests for Enzyme in strict accordance with this Agreement, the applicable Work Order, and the applicable Purchase Order(s).

5.2 Rolling Forecasts. Codexis shall provide good faith forecasts as set forth in this Section 5.2. During the Term, at least fifteen (15) days prior to the start of each calendar month, Codexis will provide Company with a non-binding, rolling written forecast of Codexis' expected requirements for Enzyme during the following twelve (12) calendar month term, broken down by calendar month (each, a "**Rolling Forecast**"). The first six (6) calendar months shall include the forecasted quantity required for each Established Enzyme as well as the total capacity reserving quantity of all Enzyme. The second six (6) calendar months shall only indicate the total capacity reserving quantity of all Enzyme forecasted to be required in such calendar months. Company shall confirm receipt of each such Rolling Forecast by stating in writing that Company has sufficient storage and capacity for the demand set forth in each calendar quarter of such Rolling Forecast within five (5) business days of receipt of such Rolling Forecast.

5.3 Purchase Orders. The timing and delivery of Enzyme supply shall be consistent with the applicable written or electronic purchase order (or by any other means agreed to by the Parties), the initial form of which is attached as Exhibit 5.3 ("**Purchase Order**") and shall also be reasonably consistent with the amount forecasted in accordance with Section 5.2. Enzymes shall be ordered by Codexis through the submission of and acceptance of Purchase Orders by Company. As long as any Purchase Order amounts are consistent with the amounts forecasted in accordance with Section 5.2, then the Company shall be obligated to accept such Purchase Order. Company shall deliver to Codexis or its Third designee (per Codexis' instructions to Company) the amount of Enzyme specified in each Purchase Order in Batches no later than the dates specified therein.

5.4 Terms of Delivery. Except as otherwise set forth in a Purchase Order, all Enzyme shall be shipped by Company FCA Lactosan (Incoterms 2000) or as set forth in the applicable Purchase Order, which shall include shipments of Enzyme to Company's storage facility for Enzymes stored by Company pursuant to Section 5.13. Title to Enzyme shall transfer to Codexis upon shipment of such Enzyme, at the point of shipping. A Batch of Enzyme shall only be shipped to Codexis after acceptance of the applicable Batch sample by Codexis and/or a Codexis

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Affiliate pursuant to Section 5.5 below or upon Codexis' written request. Company shall package and ship Enzyme (i) under appropriate packaging and storage conditions, including, for example, using envirotainers or similar temperature-control equipment for shipments, and (ii) in conformance with Codexis' written instructions, including without limitation the requirements set forth in the Quality Agreement (as defined in Section 5.10). The documentation set forth on Exhibit 5.4, which shall be provided by Codexis, shall be included in each shipment of Enzyme.

5.5 Inspection of Enzyme. Acceptance by Codexis of all or part of each shipment of Batch of Enzyme delivered by Company shall be subject to compliance of such Batch with the Specification as determined by such acceptance inspection. Prior to shipment of any Batch of Enzyme, Company shall send to Codexis and/or a Codexis Affiliate within five (5) business days after the date of manufacture of such Batch, a Batch sample sufficient to test and inspect such Batch and to enable Codexis and/or a Codexis Affiliate, to determine whether such Batch and manufacture of such Batch conforms to the applicable Specification and the Quality Agreement (as defined in Section 5.10), within forty-five (45) days of receipt of such Batch sample. If Codexis fails to notify Company of a rejection within such forty-five (45) day period or such other time period as set forth in the applicable Purchase Order, the Batches of Enzyme shall be deemed accepted by Codexis; provided, however, in the case of any Enzymes having latent defects which, upon diligent examination by Codexis could not have been discovered, Codexis must give notice of its rejection immediately after discovery of such defects. In any event, Codexis shall pay for each such Batch of Enzyme as otherwise provided herein and shall be entitled to, at its sole discretion, a credit or refund of the applicable fees paid for properly rejected Enzymes at the time they are ultimately rejected in accordance with Sections 5.7 and 5.8 herein. Company shall not proceed with any shipment of any Enzyme unless Codexis has instructed Company to do so in writing. For clarity, even if a Batch is accepted by Codexis, Company shall not ship any Batch of Enzyme unless Codexis instructs Company to do so in writing.

5.6 Batch Documentation. Company will maintain original batch documentation for each Batch as set forth in the Quality Agreement.

5.7 Replacement of Defective Enzyme. In the event that Company receives a notice of rejection from Codexis, the Parties will discuss in good faith the basis for and cause(s) for such rejection and determine the Party(ies) and/or Third Party(ies) responsible for defective Enzyme. In the event that the Parties determine that Company is responsible for such rejection, Company shall, at Codexis' request, and at the sole cost and expense of Company, replace any shipment or portion thereof of such rejected Enzyme, including without limitation disposal of such rejected Enzyme, within thirty (30) days or other time period as set forth in the applicable Purchase Order after receiving Codexis' written notice of rejection. For clarity, the foregoing right shall not limit any other remedy available at law or in equity. To the extent Company has already shipped Enzyme that was rejected, Codexis shall keep such defective Enzyme at the premises of Codexis, a Codexis Affiliate, or a Third Party, as applicable, until receipt of Company's instruction to return such defective Enzyme.

5.8 Disputes. If following the good faith discussions set forth in Section 5.7, Company disputes Codexis' right to reject all or part of any shipment of any Enzyme, Company shall notify Codexis within ten (10) days after receipt of Codexis' written notice of such

rejection. Such dispute shall be resolved by a Third Party with expertise in the areas of quality control and quality assurance for the production of pharmaceutical grade enzymes (not to Good Manufacturing Practice standards), the identity of whom shall be mutually agreed upon by the Parties, and the appointment of whom shall not be unreasonably withheld, delayed or conditioned by either Party. The determination of such Third Party with respect to all or part of any shipment of any Enzyme shall be final and binding upon the Parties, but only as to the reasons given by Codexis or its Third Party designee in rejecting the Enzyme or part thereof and shall have no effect on any matter for which such Third Party did not make a determination. The fees and expenses of such Third Party shall be paid by the Party against which the determination is made. Notwithstanding anything to the contrary in this Section 5.8, Company shall continue delivering Enzyme(s), including without limitation replacement of any defective Enzymes, pursuant to the terms of this Agreement during the dispute resolution process set forth in this Section 5.8 upon Codexis' written request; provided, that Company shall have no further liability for such continued production if and only to the extent any subsequent Batch of Enzyme is rejected for the same unidentified defect.

5.9 Manufacturing Facility. Prior to the manufacture of any Enzyme, on an Enzyme-by-Enzyme basis, the Parties shall agree upon the Manufacturing Facility for manufacture of such Enzyme. All such Enzyme shall be manufactured at such agreed upon Manufacturing Facility, and Company shall not, without Codexis' prior written consent, not to be unreasonably withheld, manufacture such Enzyme at any facility other than such Manufacturing Facility. Prior to the delivery of any Batch of such Enzyme to Codexis or its Third Party designee, all such Batches shall be stored in accordance with the Quality Agreement and the applicable Specification, or as otherwise instructed in writing by Codexis, and at such Manufacturing Facility. Codexis and/or its Third Party designee shall have the right to inspect the Manufacturing Facilities and/or documentation related to the manufacture of Enzyme as set forth in the Quality Agreement.

5.10 Manufacturing Standards and Procedures. Unless otherwise agreed to in writing by Codexis, on an Enzyme-by-Enzyme basis, all Enzymes supplied hereunder and the manufacture thereof shall comply with appropriate quality standards depending on the intended market. Upon the Effective Date, the Parties will enter into a separate quality agreement ("**Quality Agreement**"), which will address, among other things, mechanisms to ensure compliance, additional audit rights, and maintenance of records. In the event of a conflict specific to an issue of quality between the provisions of the Quality Agreement, the applicable Work Order, the applicable Purchase Order, and any provisions of this Agreement, the following order of precedence shall apply: the applicable Purchase Order shall govern, followed by the applicable Work Order, followed by the provisions of the Quality Agreement, followed by the provisions of this Agreement. The Quality Agreement may be amended from time to time by written mutual consent of the Parties in light of changing regulatory requirements or other circumstances. Company shall adopt and maintain quality assurance procedures and perform quality control tests designed to ensure that all Enzymes manufactured under this Agreement conform to and are manufactured in accordance with this Agreement and the Quality Agreement.

5.11 Third-Party Customer Terms. On an Enzyme-by-Enzyme and Purchase Order-by-Purchase Order basis, in the event a Third Party customer of Codexis has additional and/or different terms and conditions regarding the supply of Enzyme, Codexis shall forward such terms

and conditions to Company in the applicable Purchase Order. Company shall consider such terms and conditions in good faith, but may reject such terms and conditions within thirty (30) days of receipt of such terms and conditions. After such thirty (30)-day period or in the event Company accepts such terms and conditions within the thirty (30) day period, such terms and conditions shall be in addition to and shall take precedence over any conflicting terms and conditions in this Agreement solely for such Purchase Order.

5.12 Excess Enzymes. In the event Company manufactures Enzyme in excess of the quantity ordered by Codexis pursuant to such Purchase Order ("**Excess Enzyme**"), Company will store Excess Enzyme at Company's sole cost and title shall remain with Company. Excess Enzyme may be applied to future applicable Purchase Order(s) upon Codexis' prior written consent based upon assessment of the Enzyme's quality as set forth in the Specification. For the avoidance of doubt, Codexis is under no obligation to purchase or agree to be supplied with any Excess Enzyme.

5.13 Storage. During the Term, Codexis may, from time to time, request Company to store Enzyme at Company's facilities, at Codexis' cost, as specified in the applicable Work Order. Title to Enzyme shall transfer to Codexis upon Company's acceptance of such request.

6. REGULATORY

6.1 Regulatory Filings. Company will give reasonable support in connection with any regulatory or any other Governmental Authority filings and approvals requested by Codexis or its Third Party designee in relation to Enzyme, including without limitation, preparing and maintaining all necessary supporting documentation requested by Codexis or such Third Party, such as certificates or other administrative documents required for reference in any regulatory filing, if necessary, in a format requested by Codexis or such Third Party at the cost of Codexis.

6.2 Incidents. On an Enzyme-by-Enzyme basis, each Party shall promptly inform the other of any material safety or health incidents related to any Enzyme, including the use or manufacture of any of the foregoing. During the Term, each Party shall promptly inform the other upon becoming aware of any unusual or unexpected reactions or events, malfunctions, safety or efficacy of or attributable to any Enzyme and/or any Governmental Authority action related thereto.

6.3 Reporting Obligations. On an Enzyme-by-Enzyme basis, each Party shall advise the other Party of any regulatory action of which it is aware, which would affect any Enzyme in any country.

7. INVOICES; PAYMENTS

7.1 Price. In exchange for the manufacture and supply of Enzyme under this Agreement, Codexis shall pay Company the amount(s) specified in the applicable Purchase Order, subject to the following terms and conditions:

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(a) **Established Enzyme Pricing; Discounts.** Notwithstanding anything to the contrary in this Agreement, the price for Established Enzyme shall be [*] of Established Enzyme. At the start of each calendar quarter, a volume discount will be applied at the time of invoicing to all Purchase Orders for Established Enzyme for which the delivery date occurs during such calendar quarter. The volume discount will be based upon the total amount of Enzyme ordered by Codexis for which the delivery date set forth on the applicable Purchase Order occurs during the previous four (4) calendar quarters in accordance with the following table:

Amount of Enzyme ordered during the [*]	Price for Established Enzymes delivered in the current calendar quarter [*]
[*]	[*]
[*]	[*]
[*]	[*]
[*]	[*]

For the avoidance of doubt, the total amount of Enzyme used in the calculation of the volume discount shall include Established Enzymes, First-Make Enzymes, and Ad-Hoc Enzymes; however, the volume discount shall only apply to Purchase Orders for Established Enzymes. Further, for the [*] of the Term, the calculation of the volume discount will include enzyme ordered by Codexis from Company during the [*] prior to the Effective Date, as applicable.

(b) **First-Make Enzyme Pricing.** Notwithstanding anything to the contrary in this Agreement, the price for First-Make Enzyme shall be [*] of First-Make Enzyme; provided, that in the event a Batch of First-Make Enzyme is (i) less than [*] and/or (ii) does not meet the activity criteria set forth in the applicable Work Order and Company can establish that the Batch was run according to Codexis' written protocols and/or instructions, then, in either of (i) or (ii), Codexis shall pay Company a lump sum of [*] with respect to the applicable Purchase Order and Codexis may elect to have such Enzyme delivered to Codexis.

(c) **Ad-Hoc Enzyme Pricing.** The pricing for Ad-Hoc Enzyme shall be set forth in the applicable Work Order and the applicable Purchase Order.

7.2 Invoices. On an Enzyme-by-Enzyme basis, Company shall provide an invoice to Codexis upon delivery of applicable Enzyme to Codexis or its Third Party designee.

7.3 General Payment Terms. All payments made under this Agreement shall be made in U.S. dollars, and such payments shall be made by check or wire transfer to one or more bank accounts to be designated in writing by the Party entitled to such payment within thirty (30) days of the invoice date; provided, that during the Term, Company may, upon written notice to

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Codexis, request pricing and payments made by Codexis to Company to be expressed and made in the local currency of euros and Codexis shall, within six (6) months as of the date of receipt of such notice, select a date within such six (6) month period on which such switch shall be made (the "**Switch Date**") by providing Company notice thereof on such date. After the Switch Date during the rest of the Term, all pricing and payments made by Codexis to Company shall be expressed and made in the local currency of euros, using the applicable exchange rate in effect as of the Switch Date, as published on the OANDA website at www.oanda.com (median bid rate).

7.4 Insurance. Company shall maintain, at its sole cost and expense, at a minimum the following types of insurance: (a) commercial general liability of at least Six Million U.S. Dollars ($6,000,000 US) and (b) product liability of at least Two Million U.S. Dollars ($2,000,000 US). Codexis shall be named as an additional insured under such insurance policies (to the extent allowed under such policies). Company shall provide copies of such insurance upon Codexis' written request within thirty (30) days of such request. Insurance coverage shall not in any way limit the liability of Company.

8. CONFIDENTIALITY

8.1 In General. The Parties have provided to each other prior to the Effective Date, and in connection with this Agreement may in the future provide to each other, Confidential Information, including but not limited to each Party's know-how, invention disclosures, patent applications, proprietary materials and/or technologies, economic information, business or research strategies, trade secrets, and material embodiments thereof.

8.2 Non-Disclosure and Non-Use. The receiving Party shall maintain the Confidential Information of the disclosing Party in confidence, shall not disclose such Confidential Information to any Third Party, and shall not use such Confidential Information for any purpose except as expressly permitted under the terms and conditions of this Agreement. Notwithstanding the previous sentence, the receiving Party may disclose the Confidential Information of the disclosing Party to its employees, agents, consultants, and professional, scientific, medical, and legal advisors who have a reasonable need to know such Confidential Information; provided, that any such person to whom disclosure is made is bound by obligations of non-disclosure and non-use no less restrictive than those set forth herein. The receiving Party shall take the same degree of care that such Party uses to protect its own confidential and proprietary information of a similar nature and importance, but in no event shall such care be less than reasonable care.

8.3 Exceptions. The obligations of non-disclosure and non-use under Section 8.2 will not apply as to particular Confidential Information of a disclosing Party to the extent that such Confidential Information: (a) is at the time of receipt, or thereafter becomes, through no fault of the receiving Party, published or publicly known or available; (b) is already known by the receiving Party or its Affiliates at the time of receiving such information, as evidenced by written records; (c) is hereafter furnished to the receiving Party or its Affiliates by a Third Party on a non-confidential basis and without breach of a duty to the disclosing Party; or (d) is independently discovered or developed by the receiving Party or its Affiliates without use of, application of, access to, or reference to Confidential Information of the disclosing Party, as evidenced by written records.

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8.4 Disclosure Required by Law. Disclosure of Confidential Information shall not be precluded if such disclosure (a) is in response to a valid order of a court or other governmental body or (b) is required by law or regulation; provided, however, that the receiving Party shall, to the extent practicable, first have given reasonable prior notice to the disclosing Party and shall have made a reasonable effort to obtain a protective order, or to cooperate with the disclosing Party's efforts, as applicable, to obtain a protective order limiting the extent of such disclosure and requiring that the Confidential Information so disclosed be used only for the purposes for which such order was issued or as required by such law or regulation. Such required disclosure shall in no way alter the confidential nature of such Confidential Information for any other purpose.

8.5 Remedies. The receiving Party agrees that its obligations under this Article 8 are necessary and reasonable to protect the disclosing Party's business interests and that the unauthorized disclosure or use of Confidential Information of a disclosing Party will cause irreparable harm and significant injury, the degree of which may be difficult to ascertain. The receiving Party further acknowledges and agrees that in the event of any actual or threatened breach of this Article 8, the disclosing Party may have no adequate remedy at law and, accordingly, that the disclosing Party will have the right to an immediate injunction enjoining any breach or threatened breach of this Article 8, as well as the right to pursue any and all other rights and remedies available at law or in equity for such breach or threatened breach.

8.6 Agreement Terms. The existence of, and the terms and conditions of this Agreement shall be Confidential Information of the Parties, and subject to the terms of this Article 8; provided, however, that (a) each Party may disclose this Agreement, in confidence, (i) to legal, scientific and financial advisors and (ii) in connection with any proposed legal transaction involving the disclosing Party in the form of mergers, offerings, acquisitions, fundings and investments; and (b) each Party may disclose this Agreement, in its entirety or with portions redacted, as may be required by Applicable Law, including but not limited to filing of this Agreement with the Securities and Exchange Commission (and, for the avoidance of doubt, if any such disclosure or filing is made on a non-confidential basis then the portions disclosed or filed shall no longer be deemed Confidential Information).

8.7 Survival. All obligations of non-disclosure and non-use imposed pursuant to the terms and conditions of this Article 8 shall survive termination of this Agreement and continue in full force and effect for a period of seven (7) years after the effective date of such termination.

9. INTELLECTUAL PROPERTY

9.1 Ownership.

9.1.1 As between the Parties, subject only to the license set forth in Article 2, Codexis shall retain all right, title and interest in, to and under the Enzymes, Codexis Patent Rights, Confidential Information of Codexis, Codexis Know-How, and Codexis Materials. As between the Parties, Company shall retain all right, title and interest in, to and under any

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discovery, contribution, method, finding, or improvement, whether or not patentable, and all related intellectual property that is individually or jointly conceived, invented, reduced to practice, or developed by Company and/or its Affiliates in connection with this Agreement which do not relate to any Enzyme, Codexis Patent Rights, Confidential Information of Codexis, Codexis Know-How and/or Codexis Materials.

9.1.2 As between the Parties, Codexis shall own all right, title and interest in, to and under the Inventions and Company hereby assigns all of its right, title and interest in, to and under the Inventions to Codexis. Company shall promptly provide written notice to Codexis of any and all Inventions.

9.2 Filing, Prosecution, and Maintenance. Codexis, at Codexis' expense, shall have the sole right, but not the obligation, to file applications for and to control the prosecution and maintenance of the Inventions. Company agrees to cooperate with Codexis, at Codexis' expense, as reasonably required for the preparation and prosecution of any patent application claiming any subject matter within the Inventions, including the execution of related assignment documents and declarations or as required for the enforcement of any patents issued or granted on such patent applications.

9.3 Enforcement.

9.3.1 At any time during the Term, if Company becomes aware that a Third Party is or may be infringing any patent, or may have misappropriated any other right, within the Codexis Patent Rights, Codexis Know-How, and/or Inventions, if any, Company shall promptly provide written notice to Codexis thereof.

9.3.2 Codexis, at Codexis' expense, shall have the right, but not the obligation, to enforce all rights related to any and all Inventions.

9.3.3 In the event that Codexis enforces a right pursuant to this Section 9.3, Company and its Affiliates, if applicable, shall cooperate fully with Codexis in such enforcement at Codexis' expense, including without limitation by joining as a party plaintiff and executing such documents as Codexis may reasonably request.

10. REPRESENTATIONS AND WARRANTIES, AND COVENANTS

10.1 Representations and Warranties of Codexis. Codexis hereby represents and warrants that as of the Effective Date:

10.1.1 Codexis is a corporation organized under the laws of Delaware and is authorized to do business to the extent necessary to fulfill its obligations hereunder;

10.1.2 Codexis has the full right and authority to enter into this Agreement, and no consent or authorization not obtained prior to the Effective Date is necessary to be obtained; and

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10.1.3 Codexis has obtained all licenses, authorizations, and permissions, in each case as necessary to be obtained from any Governmental Authority under Applicable Law for meeting and performing its obligations under this Agreement and all such licenses, authorizations, and permissions are in full force and effect.

10.2 Representations and Warranties of Company. Company hereby represents and warrants that as of the Effective Date:

10.2.1 Company is a corporation organized under the laws of Austria and is authorized to do business to the extent necessary to fulfill its obligations hereunder;

10.2.2 Company has the full right and authority to enter into and perform its obligations under this Agreement, and no consent or authorization not obtained prior to the Effective Date is necessary to be obtained;

10.2.3 Company has obtained all licenses, authorizations, and permissions, in each case as necessary to be obtained from any Governmental Authority under Applicable Law for meeting and performing its obligations under this Agreement and all such licenses, authorizations, and permissions are in full force and effect; and

10.2.4 Company's Manufacturing Facilities and all manufacturing facilities utilized by it are registered with the appropriate Governmental Authorities and in compliance with all applicable Governmental Authority standards and Applicable Law.

10.3 Covenants of Company. Company hereby covenants that:

10.3.1 On an Enzyme-by-Enzyme basis, all Enzyme supplied by Company to Codexis and/or its Third Party designee under this Agreement shall (a) be manufactured, tested and stored in accordance with the Specification and Quality Agreement and shall at the time of delivery to the facility designated in writing by Codexis conform to the Specification; (b) be manufactured and supplied in accordance with Applicable Law; and (c) be free of defects in materials or workmanship under normal use and service and be fit for the purpose for which such Enzymes are intended; provided, that in the event and solely to the extent Company's breach of this Section 10.3.1 is caused by the provision of defective Codexis Materials by Codexis to Company, Codexis shall cover Company's actual direct losses in an amount not to exceed [*];

10.3.2 Company will use Codexis Materials solely for the purpose of manufacturing Enzyme and will not supply Codexis Materials to any Third Party;

10.3.3 Company will not supply Enzyme to any Third Party except as otherwise expressly designated in writing by Codexis;

10.3.4 Company will not use the Inventions otherwise than as required for the manufacture of Enzyme for and on behalf of Codexis;

10.3.5 As long as Company or its successor is manufacturing Enzymes for Codexis, on an Enzyme-by-Enzyme basis, each Manufacturing Facility and all manufacturing facilities utilized by it will be registered with the appropriate Governmental Authorities and in compliance with all applicable Governmental Authority standards and Applicable Law; and

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

10.3.6 Company will keep all licenses, authorizations, and permissions necessary under Applicable Law for the meeting and performing of its obligations under this Agreement in full force and effect during the Term.

10.3.7 Company will comply with all legal requirements that are applicable to this Agreement. Without limiting the foregoing, Company will comply with all such laws, rules and regulations in the use of and disclosure or transfer of the Confidential Information of Codexis to the extent that such use, disclosure and/or transfer is subject to U.S. and E.U. export controls laws (as applicable) and agrees to pay any and all taxes and import duties, charges, assessments, or other fees to governmental authorities (both United States and foreign) that may be assessed in the provision of such data and Confidential Information any third party.

10.4 Limitation of Warranties. EXCEPT AS SPECIFICALLY SET FORTH IN THIS ARTICLE 10, NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ANY WARRANTY OF NON-INFRINGEMENT, OR ANY OTHER STATUTORY WARRANTY. CODEXIS AND COMPANY HEREBY DISCLAIM ANY AND ALL IMPLIED WARRANTIES.

11. INDEMNIFICATION

11.1 Company Indemnification. Company shall indemnify, defend and hold Codexis, its directors, officers, employees, agents, and Affiliates harmless from and against all third party claims, demands, damages, liabilities, losses, costs, and expenses, including without limitation attorney's fees (collectively, "**Claims**") resulting from or arising out of (a) any material breach by Company of any of Company's representations, warranties or covenants under Article 10; (b) the use or other disposition of any Enzyme and/or Codexis Materials by Company or any Affiliate of Company not in conformance with the provisions of this Agreement; (c) the delivery of any Enzyme hereunder that fails to meet the applicable Specification; and/or (d) Company's negligence or willful misconduct; provided, however, that Company's indemnification obligations under this Section 11.1 shall not apply to the extent such Claim is the responsibility of Codexis under Section 11.2.

11.2 Codexis Indemnification. Codexis shall indemnify, defend, and hold Company, its directors, officers, employees, agents, and Affiliates harmless from and against all Claims resulting from or arising out of (a) any material breach by Codexis of any of Codexis' representations or warranties under Article 10; and/or (b) Codexis' negligence or willful misconduct; provided, however, that Codexis' indemnification obligations under this Section 11.2 shall not apply to the extent such Claim is the responsibility of Company under Section 11.1.

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11.3 Procedure. For purposes of this Article 11, the indemnified Party shall give prompt written notice to the indemnifying Party of any suits, claims, or demands by Third Parties or the indemnified Party that may give rise to any Claim for which indemnification may be required under this Article 11; provided, however, that failure to give such notice shall not relieve the indemnifying Party of its obligation to provide indemnification hereunder except if and to the extent that such failure materially affects the ability of the indemnifying Party to defend the applicable suit, claim, or demand. The indemnifying Party shall be entitled to assume the defense and control of any such suit, claim, or demand of any Third Party at its own cost and expense; provided, however, that the indemnified Party shall have the right to be represented by its own counsel at its own cost in such matters. In the event that the indemnifying Party declines to or fails to timely assume control of any such suit, claim, or demand, the indemnified Party shall be entitled to assume such control, conduct the defense of, and settle such suit, claim, or action, all at the sole cost and expense of the indemnifying Party. Neither the indemnifying Party nor the indemnified Party shall settle or dispose of any such matter in any manner that would adversely affect the rights or interests of the other Party without the prior written consent of the other Party, which shall not be unreasonably withheld or delayed. Each Party shall cooperate with the other Party and its counsel in the course of the defense of any such suit, claim, or demand, such cooperation to include without limitation using reasonable efforts to provide or make available documents, information, and witnesses.

12. TERM AND TERMINATION

12.1 Term. The term of this Agreement shall commence on the Effective Date and shall continue in full force and effect for three (3) years from the Effective Date (the "**Initial Term**"), and shall automatically renew thereafter for one (1)-year periods (each, a "**Renewal Term**"), unless either Party sends the other Party a notice of non-renewal twelve (12) months before the end of the Initial Term or the then current Renewal Term (the Initial Term and any Renewal Term(s), collectively, the "**Term**"), subject to early termination in accordance with Sections 12.2 or 12.3.

12.2 Termination for Insolvency. To the extent permitted under Applicable Law, a Party may terminate this Agreement upon written notice to the other Party on or after the occurrence of any of the following events: (a) the appointment of a trustee, receiver or custodian for all or substantially all of the property of the other Party, or for any lesser portion of such property, if the result materially and adversely affects the ability of the other Party to fulfill its obligations hereunder, which appointment is not dismissed within sixty (60) days; (b) the determination by a court or tribunal of competent jurisdiction that the other Party is insolvent such that a Party's liabilities exceed the fair market value of its assets; (c) the filing of a petition for relief in bankruptcy by the other Party on its own behalf, or the filing of any such petition against the other Party if the proceeding is not dismissed or withdrawn within sixty (60) days thereafter; (d) an assignment by the other Party for the benefit of creditors; or (e) the dissolution or liquidation of the other Party.

12.3 Termination for Cause. If a Party materially breaches any term or condition of this Agreement or a Purchase Order, the other Party may notify the breaching Party in writing of such breach, setting forth the nature of the breach in reasonable detail. If the breaching Party fails to cure such breach (if curable) within thirty (30) days after the receipt of the foregoing notice from the non-breaching Party, the non-breaching Party may terminate this Agreement or the applicable Purchase Order effective immediately upon a second written notice to the breaching Party.

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

12.4 Effect of Expiration or Termination.

12.4.1 Upon termination or expiration of this Agreement by Codexis for any reason, all rights and licenses granted by Codexis to Company under this Agreement shall terminate and Company shall cease use of all Confidential Information of Codexis, Codexis Patent Rights, Codexis Know-How, Codexis Materials and Inventions.

12.4.2 Termination or expiration of this Agreement for any reason shall not (a) release any Party from any obligation that has accrued prior to the effective date of such termination or expiration (including the obligation to pay amounts accrued and due under this Agreement prior to the termination or expiration date but which are unpaid or become payable thereafter); (b) preclude any Party from claiming any other damages, compensation, or relief that it may be entitled to upon such termination or expiration; and/or (c) terminate any right to obtain performance of any obligation provided for in this Agreement that shall survive termination or expiration.

12.4.3 Upon termination or expiration of this Agreement by Codexis for any reason, each Party shall promptly return, or destroy and provide written certification of such destruction, any and all Confidential Information of the other Party in such first Party's possession or control at the time of such termination or expiration, including without limitation, in the case of Codexis, any and all cell banks provided by Codexis to Company.

12.5 Survival. Articles 1, 7 (solely with respect to any payment accrued prior to termination or expiration of this Agreement), 8 (for the period set forth in Section 8.7), 9, 11, and 13 and Sections 2.2, 4.2, 4.3 (for the period set forth therein), 5.6 (for the period set forth in the Quality Agreement), 10.3.2, 10.3.3, 10.3.4, 10.3.7, 10.4, 12.4, and 12.5 shall survive termination or expiration of this Agreement, as applicable.

13. MISCELLANEOUS

13.1 Further Assurances. From time to time on and after the Effective Date, each Party shall at the reasonable written request of the other Party (a) deliver to the other Party such records, data, or other documents consistent with the provisions of this Agreement and/or (b) take or cause to be taken all such other actions as such other Party may reasonably deem necessary or desirable in order for such Party to obtain the full benefits of this Agreement and the transactions contemplated hereby.

13.2 Governing Law and Arbitration. This Agreement shall be governed by, and construed and interpreted in accordance with, the laws of the United Kingdom. The Parties agree that any and all disputes arising from, in connection with, or in any way related to this Agreement shall be resolved, unless settled sooner, through mandatory binding arbitration in accordance with the London Court of International Arbitration ("LCIA"). The language of the proceedings shall be in English. The arbitrators shall apply the substantive laws of the United Kingdom, including, without limitation, the Rules of Evidence. The arbitrators shall interpret

[*] 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 apply the terms of this Agreement with respect to any award or resolution to any dispute. Notwithstanding the foregoing, any Party may, without waiving any other rights or remedies available under this Agreement, seek to obtain from a court of competent jurisdiction a temporary restraining order, preliminary injunction, or other interim or conservatory relief, as necessary to enforce the provisions of this Agreement, without breach of this arbitration provision and without abridgement of the powers of the arbitrators.

13.3 Force Majeure. Neither Party shall be held responsible for any delay or failure in performance hereunder caused by strikes, embargoes, unexpected government requirements, civil or military authorities, acts of God, earthquake, or by the public enemy or other causes reasonably beyond such Party's control and without such Party's fault or negligence; provided, that the affected Party notifies the unaffected Party as soon as reasonably possible and resumes performance hereunder as soon as reasonably possible following cessation of such force majeure event.

13.4 Independent Contractors. The relationship of Company and Codexis established by this Agreement is that of independent contractors. Nothing in this Agreement shall be construed to create any other relationship between Company and Codexis. Neither Party shall have any right, power, or authority to bind the other or assume, create, or incur any expense, liability, or obligation, express or implied, on behalf of the other.

13.5 Assignment. This Agreement is binding upon and inures to the benefit of the Parties, and to their permitted successors and assigns. The Parties agree that their rights and obligations under this Agreement may not be transferred or assigned to a Third Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld. Notwithstanding the foregoing, Codexis shall have the right to transfer or assign its rights and obligations under this Agreement, without Company's consent, to a successor to all or substantially all of its business or assets relating to this Agreement whether by sale, merger, or other business reorganization. Any assignment not in conformance with this Section 13.5 shall be null, void, and of no legal effect.

13.6 Notices. Any notice, report, communication, or consent required or permitted by this Agreement shall be in writing and shall be sent (a) by prepaid registered or certified mail, return receipt requested, (b) by overnight express delivery service by a nationally recognized courier, or (c) via confirmed facsimile or telecopy, followed as soon as reasonably possible by a copy mailed in the preceding manner, addressed to the other Party at the address shown below or at such other address as such Party gives notice hereunder. Such notice will be deemed to have been given when delivered or, if delivery is not accomplished by some fault of the addressee, when tendered.

If to Company: [*]
[*]
[*]
[*]
[*]
[*]

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If to Codexis: [*]
[*]
[*]
[*]
[*]
[*]

13.7 Severability. If any provision of this Agreement shall be found by a court to be void, invalid, or unenforceable, the same shall be reformed to comply with Applicable Law or stricken if not so conformable, so as not to affect the validity or enforceability of this Agreement; provided, that no such reformation or striking shall be effective if the result materially changes the economic benefit of this Agreement to either Codexis or Company. In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be void, invalid, or unenforceable, and reformation or striking of such provision would materially change the economic benefit of this Agreement to either Codexis or Company, Codexis and Company shall modify such provision in accordance with Section 13.8 to obtain a legal, valid, and enforceable provision and provide an economic benefit to Codexis and Company that most nearly effects Codexis' and Company's intent on entering into this Agreement.

13.8 Modifications; Waivers. This Agreement may not be altered, amended, supplemented, or modified in any way except by a writing signed by both Parties. The failure of a Party to enforce any rights or provisions of the Agreement shall not be construed to be a waiver of such rights or provisions, or a waiver by such Party to thereafter enforce such rights or provision or any other rights or provisions hereunder.

13.9 Entire Agreement. The Parties hereto acknowledge that this Agreement, including the exhibits attached hereto, the Quality Agreement, any Work Orders and any Purchase Orders, sets forth the entire agreement and understanding of the Parties as to the subject matter hereof, and supersedes all prior and contemporaneous discussions, agreements, and writings with respect hereto with respect to the subject matter hereof. No trade customs, courses of dealing or courses of performance by the Parties shall be relevant to modify, supplement, or explain any term(s) used in this Agreement.

13.10 No Third Party Beneficiaries. This Agreement is neither expressly nor impliedly made for the benefit of any party other than those executing it.

13.11 Ambiguities. The Parties jointly drafted this Agreement. Ambiguities and uncertainties in this Agreement, if any, shall not be interpreted against either Party, irrespective of which Party may be deemed to have caused the ambiguity or uncertainty to exist.

13.12 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

13.13 UNCISG. The Parties agree that the United Nations Convention on International Sales of Goods shall have no force or effect on this Agreement.

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

[*Signature page follows*]

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

IN WITNESS WHEREOF, Company and Codexis have executed this Agreement by their respective duly authorized representatives on the dates identified below but the Agreement shall become effective on the Effective Date.

CODEXIS, INC.
("Codexis")

By: /s/ Alan Shaw

Name: Alan Shaw

Title: President & CEO

Date: 11th May 2011

LACTOSAN GMBH & CO. KG
("Company")

By: /s/ Hans Lettner

Name: Hans Lettner

Title: GM

Date: 16th May 2011

[*] 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 3.1

Form of Work Order

WORK ORDER #

This Work Order # (this "**Work Order**") is made as of (the "Work Order Effective Date") and is issued pursuant to and subject to the terms and conditions of the Manufacture and Supply Agreement, effective as of March , 2011, between Codexis and Company (the "Supply Agreement"). Defined terms used herein but not defined herein shall have the meanings ascribed to them in the Supply Agreement.

Enzyme(s):	[—]
Type of Enzyme (check one):	☐ Established Enzyme ☐ First-Make Enzyme ☐ Ad-Hoc Enzyme
Enzyme Specification(s):	[—]
Codexis Materials Supply required?	☐ Yes ☐ No
Technology Transfer required?	☐ Yes ☐ No
Is storage required?	☐ Yes ☐ No

Supply of Enzyme:

Company shall supply Enzyme to Codexis pursuant to the terms and conditions of the Supply Agreement and the applicable Purchase Order(s) for such Enzyme.

[*] 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.

Further Work:

The Parties have executed this Work Order by their respective duly authorized representatives on the dates identified below but the Work Order shall become effective on the Work Order Effective Date.

CODEXIS, INC.
("Codexis")

By: _____

Name: _____

Title: _____

Date: _____

LACTOSAN GMBH & CO. KG
("Company")

By: _____

Name: _____

Title: _____

Date: _____

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

Exhibit 5.3

Form of Purchase Order

Please see attached.

[*] 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 5.4

Packaging Documentation (as provided by Codexis)

A. Applicable material safety data sheets.

B. Air Waybill or other equivalent proof of shipment from transportation company.

C. Packing list that agrees to the net weight of the Batch of Enzyme being shipped and includes the gross weight that agrees to the Air Waybill or other equivalent proof of shipment from transportation company.

D. Commercial Invoice

E. Value Evidence Certificate

F. Any other documentation as reasonably required by Codexis and/or its Third Party designee.

G. Certificate of Analysis

[*] 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 31.1

CERTIFICATION

I, Alan Shaw, 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: August 3, 2011

/s/ Alan Shaw
Alan Shaw
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Robert Lawson, 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: August 3, 2011

/s/ Robert Lawson

Robert Lawson
Senior Vice President and Chief Financial 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 June 30, 2011, as filed with the Securities and Exchange Commission (the "Report"), Alan Shaw, President and Chief Executive Officer of the Company and Robert Lawson, 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: August 3, 2011

/s/ Alan Shaw
Alan Shaw
President and Chief Executive Officer

/s/ Robert Lawson
Robert Lawson
Senior Vice President and Chief Financial Officer