CODEXIS INC
Form 10-Q
November 07, 2012
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2012

OR

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

For the transition period from to

Commission file number: 001-34705

Codexis, Inc.

(Exact name of registrant as specified in its charter)

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

650 421 8100

(Registrant s telephone number, including area code)

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

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x 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 x 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 x
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 x

As of October 31, 2012, there were 37,552,137 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 September 30, 2012

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Codexis, Inc.

Condensed Consolidated Balance Sheets

(Unaudited)

(In Thousands)

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

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

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Codexis, Inc.

Condensed Consolidated Statements of Operations

(Unaudited)

(In Thousands, Except Per Share Amounts)

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

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

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Codexis, Inc.

Condensed Consolidated Statements of Comprehensive Loss

(Unaudited)

(In Thousands)

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

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

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Codexis, Inc.

Condensed Consolidated Statements of Cash Flows

(Unaudited)

(In Thousands)

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

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

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Codexis, Inc.

Notes to Condensed Consolidated Financial Statements

(Unaudited)

1. Description of Business

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

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

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

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

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

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

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

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

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates and such differences may be material to the condensed consolidated financial statements.

Foreign Currency Translation

The assets and liabilities of foreign subsidiaries, where the local currency is the functional currency, are translated from their respective functional currencies into U.S. dollars at the exchange rates in effect at the balance sheet date, with resulting

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foreign currency translation adjustments recorded in the condensed consolidated statement of comprehensive loss. Revenue and expense amounts are translated at average rates for each period. Where the U.S. dollar is the functional currency, nonmonetary assets and liabilities originally acquired or assumed in other currencies are recorded in U.S. dollars at the exchange rates in effect at the date they were acquired or assumed. Monetary assets and liabilities denominated in other currencies are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Foreign currency transaction gains and losses are not material for any period presented.

Fair Value of Financial Instruments

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

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

Cash, Cash Equivalents and Marketable Securities

We consider all highly liquid investments with maturity dates of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents consist of cash on deposit with banks and money market funds. The majority of cash and cash equivalents are maintained with major financial institutions in North America. Deposits with these financial institutions may exceed the amount of insurance provided on such deposits. Marketable securities included in current assets are comprised of corporate bonds, commercial paper, government-sponsored enterprise securities and U.S. Treasury obligations. Marketable securities included in non-current assets are comprised of corporate bonds and U.S. Treasury obligations that have a maturity date greater than 1 year. Our investment in common shares of CO_2 Solutions Inc. (CO_2 Solutions) is included in non-current marketable securities.

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

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

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

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

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Restricted Cash

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

Revenue Recognition

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

Our primary sources of revenues consist of collaborative research and development agreements, product revenues and government awards. Collaborative research and development agreements typically provide us with multiple revenue streams, including up-front fees for licensing, exclusivity and technology access, fees for full-time employee equivalent (FTE) services and the potential to earn milestone payments upon achievement of contractual criteria and royalty fees based on future product sales or cost savings by our customers. Our collaborative research and development revenues consist of revenues from Equilon Enterprises LLC dba Shell Oil Products US (Shell) and revenues from other collaborative research and development agreements. For each source of collaborative research and development revenues, product revenues and award revenues, we apply the following revenue recognition criteria:

Up-front fees received in connection with collaborative research and development agreements, including license fees, technology access fees, and exclusivity fees, are deferred upon receipt, are not considered a separate unit of accounting and are recognized as revenues over the relevant performance periods.

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

A payment that is contingent upon the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is an event (i) that can only be achieved based in whole or in part on either our performance or on the occurrence of a specific outcome resulting from our performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, and (iii) results in additional payments being due to us. Milestones are considered substantive when the consideration earned from the achievement of the milestone (i) is commensurate with either our performance to achieve the milestone or the enhancement of value of the item delivered as a result of a specific outcome resulting from our performance, (ii) relates solely to past performance, and (iii) is reasonable relative to all deliverable and payment terms in the arrangement.

Other payments received for which such payments are contingent solely upon the passage of time or the result of a collaborative partner s performance are recognized as revenue when earned in accordance with the contract terms and when such payments can be reasonably estimated and collectability is reasonably assured.

We recognize revenues from royalties based on licensees sales of products using our technologies. Royalties are recognized as earned in accordance with the contract terms when royalties from licensees can be reasonably estimated and collectability is

reasonably assured.

Product revenues are recognized once passage of title and risk of loss has occurred and contractually specified acceptance criteria have been met, provided all other revenue recognition criteria have also been met. Product revenues consist of sales of biocatalysts, intermediates, active pharmaceutical ingredients and Codex Biocatalyst Panels and Kits. Cost of product revenues includes both internal and third party fixed and variable costs, including amortization of purchased technology, materials and supplies, labor, facilities and other overhead costs associated with our product revenues.

We licensed mutually agreed upon third party technology for use in our research and development collaboration with Shell. We recorded the license payments to research and development expense and offset related

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

We receive payments from government entities in the form of government awards. Government awards are agreements that generally provide us with cost reimbursement for certain types of expenditures in return for research and development activities over a contractually defined period. Revenues from government awards are recognized in the period during which the related costs are incurred, provided that the conditions under which the government awards were provided have been met and we have only perfunctory obligations outstanding.

Shipping and handling costs charged to customers are recorded as revenues. Shipping costs are included in our cost of product revenues. Such charges were not significant in any of the periods presented.

Milestone revenue

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

Change in accounting estimate - U.S. Government awards

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

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

Income Taxes

We use the liability method of accounting for income taxes. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets are recognized for deductible temporary differences, along with net operating loss (NOL) carry forwards, if it is more likely than not that the tax benefits will be realized. To the extent a deferred tax asset cannot be recognized under the preceding criteria, a valuation allowance is established. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled.

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

Stock-Based Compensation

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

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We account for stock options issued to non-employees based on their estimated fair value determined using the Black-Scholes option-pricing model. The fair value of the options granted to non-employees is remeasured as they vest, and the resulting change in value, if any, is recognized as an increase or decrease in stock based compensation expense during the period the related services are rendered.

Net Loss per Share of Common Stock

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

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

Reclassifications

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

Recent Accounting Pronouncements

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

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

3. Collaborative Research and Development Agreements

Shell and Raízen

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

In November 2007, we entered into a new and expanded five-year collaborative research agreement (Shell Research Agreement) and a license agreement (the Shell License Agreement) with Shell. In connection with the Shell Research Agreement, we agreed to use our proprietary technology platform to discover and develop enzymes and microorganisms for use in converting cellulosic biomass into biofuels and related products and Shell agreed to pay us (i) research funding at specified rates per FTE working on the project during the research term, (ii) milestone payments upon the achievement of milestones, and (iii) royalties on future product sales. The Shell Research Agreement also specified certain

minimum levels of FTE services that we were required to allocate to the collaboration efforts that increased over the term of the agreement, which was originally set to expire on November 1, 2012.

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

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

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

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

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

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

In accordance with our revenue recognition policy, the $20 million up-front exclusivity fee and the research funding fees received for FTE services have been recognized in proportion to the actual research efforts incurred relative to the amount of total expected effort to be incurred by us over the five-year research period commencing November 2007. Milestones payments earned under this agreement were determined to be at risk at the inception of the arrangement and substantive and were recognized upon achievement of the applicable milestone and when collectability of such payment was reasonably assured. There are no further milestone payments under the Shell Research Agreement, other than a $3.0 million milestone payment described above for which we may become eligible. We did not record any milestone revenues during the three and nine months ended September 30, 2012. We recorded $3.1 million of milestone revenues during the three and nine months ended September 30, 2011. For the three months ended September 30, 2012 and 2011, our collaborative research and development revenue from Shell was $17.5 million and $17.3 million, respectively. For the nine months ended September 30, 2012 and 2011, our collaborative research and development revenue from Shell was $45.3 million and $47.0 million, respectively.

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

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

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

Manufacturing Collaboration

Arch

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

4. Joint Development Agreement with CO_2 Solutions

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

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

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

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5. Balance Sheets Details

Cash Equivalents and Marketable Securities

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

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

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

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

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

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

Inventories

Inventories consisted of the following (in thousands):

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

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6. Fair Value

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

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

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

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

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

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

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

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

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

Total	$ 20,027	$ 36,908	$	$ 56,935

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

7. Related Party Transactions

Shell and Raízen

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

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

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

Exela PharmaSci, Inc.

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

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

8. Commitments and Contingencies

Operating Leases

Our headquarters are located in Redwood City, California where we occupy approximately 107,000 square feet of office and laboratory space in four buildings. On March 16, 2011, we entered into a Fifth Amendment to Lease (the Fifth Amendment) with Metropolitan Life Insurance Company (MetLife) with respect to our offices located at 200 and 220 Penobscot Drive, Redwood City, California, (the Penobscot Space), 400 Penobscot Drive, Redwood City, California (the Building 2 Space) and 640 Galveston Drive, Redwood City, California (the Galveston Space), and with respect to approximately 29,921 square feet of additional space located at 101 Saginaw Drive, Redwood City, California (the Saginaw Space). Under the Fifth Amendment, the term of the lease of the Penobscot Space, the Building 2 Space and the Saginaw Space lasts until

January 31, 2020, and we have options to extend for two additional five year periods. Pursuant to the Fifth Amendment, we surrendered the Galveston Space in August 2011. The Fifth Amendment provides a number of incentives to us including forgiveness of rent payments for the initial two months of the extended lease term for certain buildings, a tenant improvement allowance (TIA) of $2.4 million and an additional $0.8 million special allowances for certain HVAC costs.

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

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

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

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

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

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

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

Litigation

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

Indemnifications

We have certain agreements with licensors, licensees and collaborators that contain indemnification provisions. In such provisions, we typically agree to indemnify the licensor, licensee and collaborator against certain types of third party claims. The maximum amount of the indemnifications is not limited. We accrue for known indemnification issues when a loss is probable and can be reasonably estimated. There were no accruals related to indemnification issues for any periods presented.

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Other contingencies

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

9. Warrants

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

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

10. Stockholders Equity

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

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

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

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

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

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

Stockholder rights plan

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

Stock-Based Compensation Expense

We estimate the fair value of stock-based awards granted to employees and directors using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires the use of highly subjective and complex assumptions to determine the fair value of stock-based awards, including the expected life of the option and expected volatility of the underlying stock over the expected life of the related grants. Since we were not a publicly traded entity prior to April 2010, sufficient company-specific historical volatility data was not available for reporting periods prior to the three months ended June 30, 2012. As a result, for those prior periods, we estimated the expected volatility based on the historical volatility of a group of unrelated public companies within our industry. Effective for the quarter ended June 30, 2012, we determined we had sufficient company-specific historical volatility data. As a result, for the three months ended September 30, 2012, we estimate the expected volatility based on the historical volatility of our common stock.

Due to our limited history of grant activity, the expected life of options granted to employees is calculated using the simplified method permitted by the SEC as the average of the total contractual term of the option and its vesting period. The risk-free rate assumption was based on U.S. Treasury instruments whose terms were consistent with the terms of our stock options. The expected dividend assumption was based on our history and expectation of dividend payouts.

The following table presents total stock-based compensation expense included in the condensed consolidated statements of operations (in thousands):

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

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

11. Segment Reporting

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. Our chief operating decision makers are our Chief Executive Officer and our board of directors. The Chief Executive Officer and our board of directors review financial information presented on a consolidated basis, accompanied by information about revenues by geographic region, for purposes of allocating resources and evaluating financial performance. We have one business activity and there are no segment managers who

are held accountable for operations, operating results beyond revenue goals or gross margins, or plans for levels or components below the consolidated unit level. Accordingly, we have a single reporting segment.

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

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

(1) Primarily United States

Geographic presentation of identifiable long-lived assets below shows those assets that can be directly associated with a particular geographic area and consist of the following (in thousands):

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

(1) Primarily United States

12. Restructuring

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

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

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

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

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

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

13. Subsequent Events

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

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ITEM 2. MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

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

Overview

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

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

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

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

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

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

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

target customer for CodeXyme should Raízen decide to build capacity for second generation ethanol in Brazil in the future.

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

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

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

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

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

Revenues and Operating Expenses

Revenues

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

Collaborative research and development revenues include license, technology access and exclusivity fees, FTE payments, milestones, royalties, and optimization and screening fees.

Product revenues consist of sales of biocatalysts, intermediates, APIs, Codex Biocatalyst Panels and Kits.

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

Cost of Product Revenues

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

Research and Development Expenses

Research and development expenses consist of costs incurred for internal projects as well as partner-funded collaborative research and development activities. These costs include our direct and research-related overhead expenses, which include salaries and other personnel-related expenses (including stock-based compensation), occupancy-related costs, supplies, depreciation of facilities and laboratory equipment and amortization of acquired technologies, as well as research consultants, and are expensed as incurred. Costs to acquire technologies that are utilized in research and development and that have no alternative future use are expensed when incurred.

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Sales, General and Administrative Expenses

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

Critical Accounting Policies and Estimates

The interim condensed consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States and include our accounts and the accounts of our wholly-owned subsidiaries. The preparation of our condensed consolidated financial statements requires our management to make estimates, assumptions, and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the applicable periods. Management bases its estimates, assumptions and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances. Different assumptions and judgments would change the estimates used in the preparation of our condensed consolidated financial statements, which, in turn, could change the results from those reported. Our management evaluates its estimates, assumptions and judgments on an ongoing basis. There have been no material changes to our critical accounting policies and estimates discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2011.

Financial Operations Overview

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

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

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

Revenues

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

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

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

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

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

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

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

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Cost of Product Revenues

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

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

Operating Expenses

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

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

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

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Restructuring Charges All Plans

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

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

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

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

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

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

Other Income (Expense), net

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

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

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

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

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

Revenues

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

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

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

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

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

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

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Cost of Product Revenues

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

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

Operating Expenses

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

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

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

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Restructuring Charges All Plans

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

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

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

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

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

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

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Other Income (Expense), net

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

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

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

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

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Liquidity and Capital Resources

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

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

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

Cash Flows from Operating Activities

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

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

Cash Flows from Investing Activities

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

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

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

Cash Flows from Financing Activities

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

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

Contractual Obligations and Commitments

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

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

Off-Balance Sheet Arrangements

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

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk Management

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

Equity Price Risk

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

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

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures. We maintain disclosure controls and procedures and internal controls that are designed to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and

reported within the time periods specified in the SEC s rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer (principal executive officer) and our Chief Financial Officer (principal financial and accounting officer), as appropriate, to allow timely decisions regarding required disclosure.

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

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

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

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PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

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

ITEM 1A. RISK FACTORS

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

Risks Relating to Our Business and Strategy

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

Our company has been in existence since January 2002. From 2002 until 2005, our operations focused on organizing and staffing our company and developing our technology platform. In 2005, we recognized our first revenues from product sales. Since 2005, we have continued to generate revenues, but because our revenue growth has occurred in recent periods, our limited operating history may make it difficult to evaluate our current business and predict our future performance. Any assessments of our current business and predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history. We have encountered and will continue to encounter risks and difficulties frequently experienced by growing companies in rapidly changing industries. If we do not address these risks successfully, our business will be harmed.

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

Our financial condition and operating results have varied significantly in the past and may continue to fluctuate from quarter to quarter and year to year in the future due to a variety of factors, many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations include the following factors, as well as other factors described elsewhere in this report and in our annual report on Form 10-K:

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

any adverse affects our recent restructuring plan may have on our ability to react to business developments and manage our business;

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our ability to realize the expected benefits from the reduction in force we undertook at the end of August 2012;

our dependence on a limited number of customers;

our dependence on a limited number of products in our pharmaceutical business;

our primary reliance on one contract manufacturer for commercial scale production of substantially all of our enzymes;

the ability of Arch to effectively market pharmaceutical products manufactured using our enzymes;

our ability to maintain internal control over financial reporting;

our ability to manage our growth;

the success of our customers pharmaceutical products in the market and the ability of such customers to obtain regulatory approvals for products and processes;

our ability to control and to improve pharmaceutical gross margins;

our ability to develop and successfully commercialize new products for the pharmaceuticals market;

our ability to maintain license rights for commercial scale expression systems for cellulases;

fluctuations in the price of and demand for commodities that our enzymes and fermentation organisms can be employed to produce or for substitute commodities;

the availability, cost and location of cellulosic biomass sources;

changes to existing biofuel regulations and policies;

our potential bio-based chemical products might not be approved or accepted by our customers;

our ability to independently develop, manufacture, market, sell and distribute commercial cellulase enzymes;

our ability to obtain and maintain governmental awards;

risks associated with the international aspects of our business;

our ability to integrate any businesses we may acquire with our business;

our ability to accurately report our financial results in a timely manner;

our ability to obtain, protect and enforce our intellectual property rights;

our ability to prevent the theft or misappropriation of our biocatalysts, the genes that code for our biocatalysts, know-how or technologies;

potential advantages that our competitors and potential competitors may have in securing funding or developing products;

business interruptions, such as earthquakes and other natural disasters;

public concerns about the ethical, legal and social ramifications of genetically engineered products and processes;

our ability to comply with laws and regulations;

our ability to properly handle and dispose of hazardous materials used in our business;

potential product liability claims;

the existence of government subsidies or regulation with respect to carbon dioxide emissions; and

our ability to use our net operating loss carryforwards to offset future taxable income.

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

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

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

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

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

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

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

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

Our future capital requirements may be substantial, particularly as we continue to develop our business, including investing in our CodeXyme cellulase enzymes and CodeXol detergent alcohol business opportunities. Although we believe that, based on our current level of operations, our existing cash, cash equivalents and marketable securities will provide adequate funds for ongoing operations, planned capital expenditures and working capital requirements for at least the next 12 months, we may need additional capital if our current plans and assumptions change. Our need for additional capital will depend on many factors, including the financial success of our pharmaceutical business, identifying a business partner to fund our cellulase and ethanol programs, our spending to develop and commercialize new and existing products, the effect of any acquisitions of other businesses, technologies or facilities that we may make or develop in the future, our spending on new market opportunities, including bio-based chemicals, and the filing, prosecution, enforcement and defense of patent claims. If our capital resources are insufficient to meet our capital requirements, and we are unable to enter into or maintain collaborations with partners that are able or willing to fund our development efforts or commercialize any products that we develop or enable, we will have to raise additional funds to continue the development of our technology and products and complete the commercialization of products, if any, resulting from our technologies. If future financings involve the issuance of equity securities, our existing stockholders would suffer dilution. If we raise debt financing, we may be subject to restrictive covenants that limit our ability to conduct our business. We may not be able to raise sufficient additional funds on terms that are favorable to us, if at all. If we fail to raise sufficient funds and fail to generate sufficient revenues to achieve planned gross margins and to control operating costs, our ability to fund our operations, take advantage of strategic opportunities, develop products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate research or development programs or the commercialization of products resulting from our technologies, curtail or cease operations or obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we will not be able to successfully execute our business plan or continue our business.

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

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

we do not achieve our research and development objectives under our collaboration agreements in a timely manner or at all;

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- we develop products and processes or enter into additional collaborations that conflict with the business objectives of our other collaborators;
- we disagree with our collaborators as to rights to intellectual property that are developed during the collaboration, or their research programs or commercialization activities;
- we are unable to manage multiple simultaneous collaborations;
- our collaborators become competitors of ours or enter into agreements with our competitors;
- our collaborators become unable or less willing to expend their resources on research and development or commercialization efforts due to general market conditions, their financial condition or other circumstances beyond our control; or
- our collaborators experience business difficulties, which could eliminate or impair their ability to effectively perform under our agreements;

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

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

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

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

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

In addition, the loss of any key scientific staff, or the failure to attract or retain other key scientific employees, could prevent us from developing and commercializing our products for our target markets and entering into collaborations or licensing arrangements to execute on our business strategy. We may

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not be able to attract or retain qualified employees in the future due to the intense competition for qualified personnel among biotechnology and other technology-based businesses, particularly in the areas of biofuels and bio-based chemicals, or due to the availability of personnel with the qualifications or experience necessary for our business. Additionally, potential future government awards may require us to maintain a minimum level of staffing. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that will adversely affect our ability to meet the demands of our collaborators and customers in a timely fashion or to support our internal research and development programs. In particular, our product and process development programs are dependent on our ability to attract and retain highly skilled scientists and engineers. Competition for experienced scientists and other technical personnel from numerous companies and academic and other research institutions may limit our ability to do so on acceptable terms. All of our employees are at-will employees, which means that either the employee or we may terminate their employment at any time.

Our planned activities will require additional expertise in specific industries and areas applicable to the products and processes developed through our technology platform or acquired through strategic or other transactions, especially in the end markets that we seek to penetrate. These activities will require the addition of new personnel, and the development of additional expertise by existing personnel. The inability to attract personnel with appropriate skills or to develop the necessary expertise could impair our ability to grow our business.

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

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

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

We are dependent on a limited number of customers.

Our current revenues are derived from a limited number of key customers. For the year ended December 31, 2010, our top five customers accounted for 85% of our total revenues, with Shell accounting for 62% of our total revenues. For the year ended December 31, 2011, our top five customers accounted for 77% of our total revenues, with Shell accounting for 51% of our total revenues. For the

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nine months ended September 30, 2012, our top five customers accounted for 85% of our total revenues, with Shell accounting for 56% of our total revenues. Our research collaboration with Shell terminated effective as of August 31, 2012, which means that we will not receive any additional collaboration funding from Shell. We expect a limited number of customers to continue to account for a significant portion of our revenues for the foreseeable future. This customer concentration increases the risk of quarterly fluctuations in our revenues and operating results. The loss of business from Shell will, and the loss or reduction from one or a combination of our other significant customers could, materially adversely affect our revenues, financial condition and results of operations.

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

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

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

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

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

We do not have any supply agreements in place with any enzyme contract manufacturers, other than Lactosan. In the absence of a supply agreement, a contract manufacturer will be under no obligation to manufacture our enzymes and could elect to discontinue their manufacture at any time. If we require additional manufacturing capacity and are unable to obtain it in sufficient quantity, we may not be able to increase our pharmaceutical sales, or we may be required to make substantial capital investments to build that capacity or to contract with other manufacturers on terms that may be less favorable than the terms we currently have with our suppliers. If we choose to build our own additional manufacturing facility, it could take two years or longer before our facility is able to produce commercial volumes of our enzymes. Any resources we expend on acquiring or building internal manufacturing capabilities could be at the expense of other potentially more profitable opportunities. In addition, if we contract

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with other manufacturers, we may experience delays of several months in qualifying them, which could harm our relationships with our collaborators or customers and could negatively affect our revenues or operating results.

We also expect to use contract manufacturers to produce our cellulase enzymes. Our cellulase enzyme business will encounter similar risks in engaging contract manufacturers as our pharmaceutical business in the event we elect to use contract manufacturers.

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

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

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

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

If we or our independent registered public accounting firm identify internal control deficiencies in the future, our ability to accurately and timely report our financial position, results of operations or cash flows could be impaired, which could result in late filings of our annual and quarterly reports under the Securities Exchange Act of 1934, as amended, restatements of our consolidated financial statements, significant expenses to remediate any such deficiencies, a decline in our stock price, suspension or delisting of our common stock by The NASDAQ Global Market, or other material adverse effects on our business, reputation, results of operations, financial condition or liquidity.

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

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

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

Our pharmaceutical product gross margins have varied significantly in the past and may continue to fluctuate from quarter to quarter and year to year in the future due to a variety of factors, including product mix, pricing pressure from our pharmaceutical customers and competition from other products or technologies. This variability may have a material adverse impact on our operating results and financial condition and cause our stock price to decline.

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

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

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

we may face pressure from existing or new competitive products; and

we may face pricing pressures from existing or new competitors, some of which may benefit from government subsidies or other incentives.

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

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

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

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

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

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

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

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

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

The market for biofuels is heavily influenced by foreign, federal, state and local government regulations and policies concerning the petroleum industry. In 2007, the U.S. Congress passed an alternative fuels mandate that currently calls for approximately 36 billion gallons of liquid transportation fuels sold in 2022 to come from alternative sources, including biofuels. Of this amount, a minimum of 21 billion gallons must be advanced biofuels, with 16 billion gallons of that to be cellulosic derived. In the U.S. and a number of other countries, these regulations and policies have been modified in the past and may be modified again in the future. For example, the U.S. Environmental Protection Agency has the authority to adjust or reduce the gallon milestones of the alternative fuels mandate to reflect the marketplace supply availability. Any reduction in mandated requirements for fuel alternatives and additives to gasoline may cause demand for biofuels to decline and deter investment in the research and development of biofuels. Congressional and market uncertainty regarding future policies will affect our ability to develop new biofuels products or to license our technologies to third parties. Any inability to address these requirements and any regulatory or policy changes could have a material adverse effect on our biofuels business, financial condition and operating results. Our other potential bioindustrial products may be subject to additional regulations. Adoption of E15 (15% ethanol blend) in the United States may also be a significant factor in commercialization of cellulosic ethanol. The U.S. Environmental Protection Agency granted final approval for the sale of E15 on June 15, 2012. However, federal, state and local governments have yet to determine their role in providing infrastructure support to aid retailers in installing, or replacing, fuel pumps that are required for E15. Installation of such pumps is an option, not a requirement, and if it is not adopted in the coming years it may limit the future demand for both corn-based and cellulosic ethanol in the United States.

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

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

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

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

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

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

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

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

We face risks associated with our international business.

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

- changes in or interpretations of foreign regulations that may adversely affect our ability to sell our products, repatriate profits to the United States or operate our foreign-located facilities;
- the imposition of tariffs;

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- the imposition of limitations on, or increase of, withholding and other taxes on remittances and other payments by foreign subsidiaries or joint ventures;

- the imposition of limitations on genetically-engineered products or processes and the production or sale of those products or processes in foreign countries;

- currency exchange rate fluctuations;

- uncertainties relating to foreign laws, regulations and legal proceedings including tax, import/export, anti-corruption and exchange control laws;

- the availability of government subsidies or other incentives that benefit competitors in their local markets that are not available to us;

- increased demands on our limited resources created by our diversified, global operations may require us to expand the capabilities of our administrative and operational resources and to attract, train, manage and retain qualified management, technicians, scientists and other personnel which we may be unable to do effectively;

- economic or political instability in foreign countries;

- difficulties associated with staffing and managing foreign operations; and

- the need to comply with a variety of U.S. and foreign laws applicable to the conduct of international business, including import and export control laws and anti-corruption laws.

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

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

We have made acquisitions in the past, and if appropriate opportunities become available, we expect to acquire additional businesses, assets, technologies, or products to enhance our business in the future. For example, in October 2010, we acquired substantially all of the patents and other intellectual property rights associated with Maxygen s directed evolution technology. In connection with any future acquisitions, we could:

- issue additional equity securities, which would dilute our current stockholders;

- incur substantial debt to fund the acquisitions;

- use our cash to fund the acquisitions; or

assume significant liabilities including litigation risk.

Acquisitions involve numerous risks, including problems integrating the purchased operations, technologies or products, unanticipated costs and other liabilities, diversion of management s attention from our core businesses, adverse effects on existing business relationships with current and/or prospective collaborators, customers and/or suppliers, risks associated with entering markets in which we have no or limited prior experience and potential loss of key employees. We do not have extensive experience in managing the integration process and we may not be able to successfully integrate any businesses, assets, products, technologies, or personnel that we might acquire in the future without a significant expenditure of operating, financial and management resources, if at all. The integration process could divert management s time from focusing on operating our business, result in a decline in employee morale and cause retention issues to arise from changes in compensation, reporting relationships, future prospects or the direction of the business. Acquisitions may also require us to

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record goodwill and non-amortizable intangible assets that will be subject to impairment testing on a regular basis and potential periodic impairment charges, incur amortization expenses related to certain intangible assets, and incur large and immediate write offs and restructuring and other related expenses, all of which could harm our operating results and financial condition. In addition, we may acquire companies that have insufficient internal financial controls, which could impair our ability to integrate the acquired company and adversely impact our financial reporting. If we fail in our integration efforts with respect to any of our acquisitions and are unable to efficiently operate as a combined organization, our business and financial condition may be adversely affected.

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

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

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

Our success depends in part on our ability to obtain patents and maintain adequate protection of our intellectual property for our technologies and products and potential products in the United States and other countries. We have adopted a strategy of seeking patent protection in the United States and in foreign countries with respect to certain of the technologies used in or relating to our products and processes. As such, as of September 30, 2012, we owned or controlled approximately 307 issued patents and approximately 320 pending patent applications in the United States and in various foreign jurisdictions. Some of our gene shuffling patents will expire as early as 2014. We also have license rights to a number of issued patents and pending patent applications in the United States and in various foreign jurisdictions. Our owned and licensed patents and patent applications are directed to our enabling technologies and to the methods and products that support our business in the pharmaceuticals manufacturing, biofuels and bio-based chemicals markets. We intend to continue to apply for patents relating to our technologies, methods and products as we deem appropriate.

Numerous patents in our portfolio involve complex legal and factual questions and, therefore, enforceability cannot be predicted with any certainty. Issued patents and patents issuing from pending applications may be challenged, invalidated, or circumvented. Moreover, the U.S. Leahy-Smith America Invents Act, enacted in September 2011, brings significant changes to the U.S. patent system, which include a change to a first to file system from a first to invent system and changes to the procedures

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for challenging issued patents and disputing patent applications during the examination process, among other things. The effects of these changes on our patent portfolio and business have yet to be determined, as the U.S. Patent and Trademark Office must still implement regulations relating to these changes and U.S. courts have yet to address the new provisions, but in any event, these changes could increase the costs and uncertainties surrounding the prosecution of our patent applications and the enforcement or defense of our patent rights. Additional uncertainty may result from legal precedent handed down by the United States Federal Circuit Court and Supreme Court as they determine legal issues concerning the scope and construction of patent claims and inconsistent interpretation of patent laws by the lower courts. Accordingly, we cannot ensure that any of our pending patent applications will result in issued patents, or even if issued, predict the breadth of the claims upheld in our and other companies patents. Given that the degree of future protection for our proprietary rights is uncertain, we cannot ensure that: (i) we were the first to make the inventions covered by each of our pending applications, (ii) we were the first to file patent applications for these inventions, or (iii) the proprietary technologies we develop will be patentable. In addition, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our intellectual property is difficult, and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in certain foreign countries where the local laws may not protect our proprietary rights as fully as in the United States. Moreover, third parties could practice our inventions in territories where we do not have patent protection. Such third parties may then try to import products made using our inventions into the United States or other territories. If competitors are able to use our technology, our ability to compete effectively could be harmed. Moreover, others may independently develop and obtain patents for technologies that are similar to or superior to our technologies. If that happens, we may need to license these technologies, and we may not be able to obtain licenses on reasonable terms, if at all, which could cause harm to our business.

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

Our commercial success also depends in part on our ability to operate without infringing patents and proprietary rights of third parties, and without breaching any licenses or other agreements that we have entered into with regard to our technologies, products and business. We cannot ensure that patents have not been issued to third parties that could block our ability to obtain patents or to operate as we would like. There may be patents in some countries that, if valid, may block our ability to make, use or sell our products in those countries, or import our products into those countries, if we are unsuccessful in circumventing or acquiring the rights to these patents. There also may be claims in patent applications filed in some countries that, if granted and valid, may also block our ability to commercialize products or processes in these countries if we are unable to circumvent or license them.

The industries in which we operate, and the biotechnology industry in particular, are characterized by frequent and extensive litigation regarding patents and other intellectual property rights. Many biotechnology companies have employed intellectual property litigation as a way to gain a competitive advantage. Our involvement in litigation, interferences, opposition proceedings or other intellectual property proceedings inside and outside of the United States, to defend our intellectual property rights or as a result of alleged infringement of the rights of others, may divert our management s time from focusing on business operations and could cause us to spend significant amounts of money. Any potential intellectual property litigation also could force us to do one or more of the following:

stop selling or using our products or technologies that use the subject intellectual property;

pay monetary damages or substantial royalties;

grant cross-licenses to third parties relating to our patents or proprietary rights;

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obtain from the third party asserting its intellectual property rights a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all; or

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

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

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

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

The laws of some foreign countries, including Brazil, where we have recently begun to do business, do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending Intellectual property rights in certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property, particularly those relating to biotechnology and/or bioindustrial technologies. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate. This could make it difficult for us to stop the infringement of our patents or misappropriation of our other intellectual property rights. Additionally, proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business.

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

Third parties, including our contract manufacturers, customers and those involved in shipping our biocatalysts, often have custody or control of our biocatalysts. If our biocatalysts, or the genes that code for our biocatalysts, were stolen, misappropriated or reverse engineered, they could be used by other parties who may be able to reproduce these biocatalysts for their own commercial gain. If this were to occur, it would be difficult for us to challenge this type of use, especially in countries with limited intellectual property protection or in countries in which we do not have patents covering the misappropriated biocatalysts.

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

We rely in part on trade secret protection to protect our confidential and proprietary information and processes. However, trade secrets are difficult to protect. We have taken measures to protect our trade secrets and proprietary information, but these measures may not be effective. We require employees and consultants to execute confidentiality agreements upon the commencement of an employment or

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consulting arrangement with us. These agreements generally require that all confidential information developed by the individual or made known to the individual by us during the course of the individual s relationship with us be kept confidential and not disclosed to third parties. These agreements also generally provide that inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. Nevertheless, our proprietary information may be disclosed, third parties could reverse engineer our biocatalysts and others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

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

The biocatalysis industry and each of our target markets are characterized by rapid technological change. Our future success will depend on our ability to maintain a competitive position with respect to technological advances. In addition, as we enter new markets, we will face new competition and will need to adapt to competitive factors that may be different from what we face today.

We are aware that other companies, including Royal DSM N.V., or DSM, DuPont, Novozymes, and Vercipia Biofuels, an affiliate of BP P.L.C., have alternative methods for obtaining and generating genetic diversity or use mutagenesis techniques to produce genetic diversity. Academic institutions such as the California Institute of Technology, the Max Planck Institute and the Center for Fundamental and Applied Molecular Evolution (FAME), a jointly sponsored initiative between Emory University and Georgia Institute of Technology, are also working in this field. Technological development by others may result in our products and technologies, as well as products developed by our customers using our biocatalysts, becoming obsolete.

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

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

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

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

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

Our ability to compete successfully in any of these markets will depend on our ability to develop proprietary products that reach the market in a timely manner and are technologically superior to and/or are less expensive than other products on the market. Many of our competitors have substantially greater production, financial, research and development, personnel and marketing resources than we do. They also started developing products earlier than we did, which may allow them to establish blocking intellectual property positions or bring products to market before we can. In addition, certain of our competitors may also benefit from local government subsidies and other incentives that are not available to us. As a result, our competitors may be able to develop competing and/or superior technologies and processes, and compete more aggressively and sustain that competition over a longer period of time than we could. Our technologies and products may be rendered obsolete or uneconomical by technological advances or entirely different approaches developed by one or more of our competitors. We cannot be certain that any products we develop in the future will compare favorably to products offered by our competitors or that our existing or future products will compare favorably to any new products that are developed by our competitors. As more companies develop new intellectual property in our markets, the possibility of a competitor acquiring patent or other rights that may limit our products or potential products increases, which could lead to litigation.

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

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

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

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

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

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

- public attitudes about the safety and environmental hazards of, and ethical concerns over, genetic research and genetically engineered products and processes, which could influence public acceptance of our technologies, products and processes;

- public attitudes regarding, and potential changes to laws governing ownership of genetic material, which could harm our intellectual property rights with respect to our genetic material and discourage collaborators from supporting, developing, or commercializing our products, processes and technologies; and

- governmental reaction to negative publicity concerning genetically modified organisms, which could result in greater government regulation of genetic research and derivative products. The subject of genetically modified organisms has received negative publicity, which has aroused public debate. This adverse publicity could lead to greater regulation and trade restrictions on imports of genetically altered products. The biocatalysts that we develop have significantly enhanced characteristics compared to those found in naturally occurring enzymes or microbes. While we produce our biocatalysts only for use in a controlled industrial environment, the release of such biocatalysts into uncontrolled environments could have unintended consequences. Any adverse effect resulting from such a release could have a material adverse effect on our business and financial condition, and we may have exposure to liability for any resulting harm.

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

Our bioindustrial products, including those used in the biofuels and bio-based chemicals markets, will need to meet a significant number of regulations and standards, including regulations imposed by the U.S. Department of Transportation, the U.S. Environmental Protection Agency, various state agencies and others. In addition, our bioindustrial products will be subject to foreign regulations if we attempt to

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

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

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

We may be sued for product liability.

The design, development, manufacture and sale of our products involve an inherent risk of product liability claims and the associated adverse publicity. For example, we may be named directly in product liability suits relating to drugs that are produced using our enzymes or that incorporate our intermediates and APIs. The biocatalysts, pharmaceutical intermediates and APIs that we produce or are produced for us by our manufacturing partners could be subject to quality control or contamination issues of which we are not aware. Claims could be brought by various parties, including customers who are purchasing products directly from us, other companies who purchase products from our customers or by the end users of the drugs. We could also be named as co-parties in product liability suits that are brought against our contract manufacturers who manufacture our enzymes, pharmaceutical intermediates and APIs, such as Lactosan and/or Arch. Insurance coverage is expensive and may be difficult to obtain, and may not be available in the future on acceptable terms, or at all. We cannot assure you that our contract manufacturer has adequate insurance coverage to cover against potential claims. In addition, although we currently maintain product liability insurance for our products in amounts we believe to be commercially reasonable, if the coverage limits of these insurance policies are not adequate, a claim brought against us, whether covered by insurance or not, could have a material adverse effect on our business, results of operations, financial condition and cash flows. This insurance may not provide adequate coverage against potential losses, and if claims or losses exceed our liability insurance coverage, we may go out of business. Moreover, we have agreed to indemnify some of our customers for certain claims that may arise out of the use of our products, which could expose us to significant liabilities.

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

In general, under Section 382 of the Internal Revenue Code, a corporation that undergoes an ownership change is subject to limitations on its ability to utilize its pre-change net operating loss carryforwards, or NOLs, to offset future taxable income. If the Internal Revenue Service challenges our analysis that our existing NOLs are not subject to limitations arising from previous ownership changes, our ability to utilize NOLs could be limited by Section 382 of the Internal Revenue Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Internal Revenue Code. Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations. For these reasons, we may not be able to utilize a material portion of the NOLs reflected in our financial statements, even if we attain profitability.

Risks Related to Owning our Common Stock

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

Provisions in our amended and restated certificate of incorporation and our bylaws may delay or prevent an acquisition of us. Among other things, our amended and restated certificate of incorporation and bylaws provide for a board of directors which is divided into three classes, with staggered three-year terms and provide that all stockholder action must be effected at a duly called meeting of the stockholders and not by a consent in writing, and further provide that only our board of directors, the chairman of the board of directors, our chief executive officer or president may call a special meeting of the stockholders. In addition, our amended and restated certificate of incorporation allows our board of directors, without further action by our stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These provisions may also frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, who are responsible for appointing the members of our management team. Furthermore, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits, with some exceptions, stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us. Finally, our charter documents establish advanced notice requirements for nominations for election to our board of directors and for proposing matters that can be acted upon at stockholder meetings. Although we believe these provisions together provide for an opportunity to receive higher bids by requiring potential acquirers to negotiate with our board of directors, they would apply even if an offer to acquire our company may be considered beneficial by some stockholders.

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

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

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

Based on the number of shares outstanding as of September 30, 2012, our officers, directors and stockholders who hold at least 5% of our stock together beneficially own approximately 35.95% of our outstanding common stock. If these officers, directors, and principal stockholders or a group of our principal stockholders act together, they will be able to exert a significant degree of influence over our management and affairs and control matters requiring stockholder approval, including the election of directors and approval of mergers or other business combination transactions. The interests of this concentration of ownership may not always coincide with our interests or the interests of other stockholders. For instance, officers, directors, and principal stockholders, acting together, could cause us to enter into transactions or agreements that we would not otherwise consider. Similarly, this concentration of ownership may have the effect of delaying or preventing a change in control of our company otherwise favored by our other stockholders. As of September 30, 2012, Raízen, Biomedical Sciences Investment Fund Pte Ltd. and CMEA Ventures beneficially owned approximately 14.9%, 8.5% and 8.1% of our common stock, respectively.

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

The market price of shares of our common stock could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- actual or anticipated fluctuations in our financial condition and operating results;
- the position of our cash, cash equivalents and marketable securities;
- actual or anticipated changes in our growth rate relative to our competitors;
- actual or anticipated fluctuations in our competitors operating results or changes in their growth rate;
- announcements of technological innovations by us, our collaborators or our competitors;
- announcements by us, our collaborators or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- any announcements or developments from Raízen;
- announcements or developments regarding technical progress of CodeXyme cellulase enzymes or CodeXol detergent alcohols;
- additions or losses of one or more significant pharmaceutical products;

announcements or developments regarding pharmaceutical products manufactured using our biocatalysts, intermediates and APIs;

the entry into, modification or termination of collaborative arrangements;

additions or losses of customers;

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additions or departures of key management or scientific personnel;

competition from existing products or new products that may emerge;

issuance of new or updated research reports by securities or industry analysts;

fluctuations in the valuation of companies perceived by investors to be comparable to us;

disputes or other developments related to proprietary rights, including patent litigation and our ability to obtain patent protection for our technologies;

changes in existing laws, regulations and policies applicable to our business and products, including the National Renewable Fuel Standard program;

contractual disputes or litigation with our partners, customers or suppliers;

announcement or expectation of additional financing efforts;

sales of our common stock by us, our insiders or our other stockholders;

share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;

general market conditions in our industry; and

general economic and market conditions, including the recent financial crisis.

Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of shares of our common stock. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management s attention from other business concerns, which could seriously harm our business.

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

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

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

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

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In addition, the Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management and our independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. Our compliance with Section 404 requires that we incur substantial accounting expense and expend significant management time on compliance-related issues. Moreover, if we are not able to maintain compliance with the requirements of Section 404, our stock price could decline, and we could face sanctions, delisting or investigations by The NASDAQ Global Market, or other material adverse effects on our business, reputation, results of operations, financial condition or liquidity.

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

(a)

Not applicable.

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

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

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

ITEM 3. Defaults Upon Senior Securities

Not applicable

ITEM 4. Mine Safety Disclosures

Not applicable

ITEM 5. Other Information

(a)

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

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

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

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

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

(b)

Not applicable.

ITEM 6. Exhibits

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

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

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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.

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SIGNATURES

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

Codexis, Inc.

Date: November 7, 2012 By: /s/ John Nicols
John Nicols

President and Chief Executive Officer

(principal executive officer)

Date:November 7, 2012 By: /s/ David O Toole
David O Toole

Senior Vice President and Chief Financial Officer

(principal financial and accounting officer)

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EXHIBIT INDEX

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

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