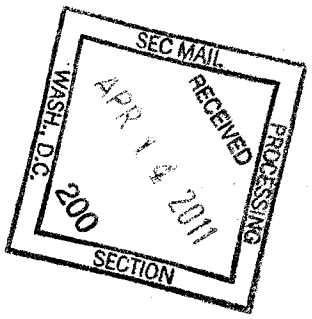
maxygen

Maxygen Annual Report 2010

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



FORM 10-K
ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2010

Commission file number 000-28401

MAXYGEN, INC.
(Exact name of registrant as specified in its charter)

Delaware	**77-0449487**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

515 Galveston Drive
Redwood City, California 94063
(Address of principal executive offices)

Registrant's telephone number, including area code: **(650) 298-5300**

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $0.0001 par value	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☒

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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

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

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

As of June 30, 2010, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the voting stock held by non-affiliates, computed by reference to the closing price for the common stock as quoted by the Nasdaq Global Stock Market as of that date, was approximately $147,973,000. Shares of common stock held by each executive officer and director and by each person who owned 10% or more of the outstanding common stock have been excluded as such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 28, 2011, there were 30,076,922 shares of the registrant's common stock outstanding.

Documents Incorporated by Reference

Certain portions of the registrant's proxy statement for the 2011 Annual Meeting of Stockholders (hereinafter referred to as the "2011 Proxy Statement") are incorporated by reference into Part III of this report.

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This report and the disclosures herein include, on a consolidated basis, the business and operations of Maxygen, Inc. and its wholly-owned subsidiaries, Maxygen Holdings (U.S.), Inc., Maxygen ApS and Maxygen Holdings, Inc., as well as its majority-owned subsidiaries, Perseid Therapeutics LLC, Maxygen Holdings LLC and Maxygen Holdings Ltd. In this report, "Maxygen," the "company," "we," "us" and "our" refer to such consolidated entities, unless, in each case, the context indicates that the disclosure applies only to a named subsidiary.

Forward Looking Statements

This document contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. These statements are based on the current expectations and beliefs of our management and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "can," "will," "should," "could," "expect," "plan," "anticipate," "believe," "estimate," "predict," "intend," "potential" or "continue" or the negative of these terms or other comparable terminology. In any forward-looking statement in which we express an expectation or belief as to future results, such expectation or belief is expressed in good faith and believed to have a reasonable basis, but there can be no assurance that the statement or expectation or belief will result or be achieved or accomplished. The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements:

- strategic alternatives and transactions with respect to our business and the timing, likelihood and outcome thereof;
- any decision by Astellas to exercise, or not exercise, its option to purchase our ownership interest in Perseid Therapeutics LLC;
- whether we receive any portion of the milestone payment from Bayer HealthCare LLC and the potential timing of such receipt, and any events related to Bayer's achievement, or failure to achieve, the development milestone related to such payment;
- our ability or plans to recommence and/or continue the development of our MAXY-G34 product candidate for any indication;
- our ability to develop products suitable for commercialization;
- our predicted development and commercial timelines for any of our potential products;
- our ability to continue operations and our estimates for future performance and financial position of the company;
- the establishment, development and maintenance of any manufacturing or collaborative relationships;
- the effectiveness of the MolecularBreeding™ directed evolution platform and other technologies and processes and whether Codexis, Inc. will effectively prosecute, maintain and protect the patent rights associated with this technology platform;
- our ability to protect our intellectual property portfolio and rights;
- our ability to identify and develop new potential products;
- the attributes of any products we, or any of our collaborative partners, may develop;
- our business strategies and plans; and
- other economic, business, competitive, and/or regulatory factors affecting our business and the market we serve generally.

These statements are only predictions. Risks and uncertainties and the occurrence of other events could cause actual results to differ materially from these predictions. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of these statements. Important factors that could cause our actual results to differ materially from the forward-looking statements we make in this report are set forth in this report, including the factors described in the section entitled "Item 1A—Risk Factors," as well as those discussed in our Current Reports on Form 8-K and other SEC filings. While we may elect to update these forward-looking statements at some point in the future, Maxygen is under no obligation to (and expressly disclaims any such obligation to) update or alter its forward-looking statements whether as a result of new information, future events, or otherwise, except to the extent required by applicable law.

PART I

Item 1 BUSINESS

Overview

We are a biopharmaceutical company focused on developing improved versions of protein drugs through internal development and external collaborations and other arrangements. We use our directed evolution technology platform, along with ancillary technologies, and extensive protein modification expertise to pursue the creation of biosuperior proteins.

We operate substantially all of our research and development operations through Perseid Therapeutics LLC, or Perseid, a majority-owned subsidiary established in September 2009 in connection with a joint venture arrangement with Astellas Pharma, Inc., or Astellas, which currently holds a minority investment in Perseid. Perseid is focused on the discovery, research and development of multiple protein pharmaceutical programs, including CTLA-4 Ig product candidates (designated as our MAXY-4 program) that are designed to be superior, next-generation CTLA-4 Ig therapeutics for the treatment of a broad array of autoimmune disorders, including rheumatoid arthritis, and transplant rejection. Under the joint venture arrangement, Astellas has an option to acquire all of our ownership interest in Perseid at specified exercise prices that increase each quarter from the current option price of $76.0 million (through March 18, 2011) to $123.0 million over the term of the option, which expires on September 18, 2012.

In addition to our majority ownership of Perseid, we have retained all rights to our MAXY-G34 product candidate, which is designed to be an improved, next-generation pegylated, granulocyte colony stimulating factor, or G-CSF, for the treatment of chemotherapy-induced neutropenia. We also held approximately $128.0 million in cash, cash equivalents and marketable securities as of December 31, 2010 (including $25.7 million held by Perseid as of such date) and remain eligible for a milestone payment of up to $30.0 million from Bayer HealthCare LLC, or Bayer, related to the sale of our hematology assets to Bayer in July 2008.

Our Strategy

The consummation of the joint venture transaction with Astellas in September 2009 largely completed a multi-year strategic process to position our programs and assets in collaborations and other arrangements that are primarily supported by external parties. Since then, we have focused, and continue to focus, on managing these assets and arrangements to maximize the return to our stockholders. We completed a number of transactions in 2010 in furtherance of this strategy. In January 2010, we consummated a transaction with AltraVax, Inc., or AltraVax, a newly formed, privately-held biopharmaceutical company, for the sale of substantially all of our vaccine related assets, including the related government grants. In October 2010, we sold substantially all of the patents and other intellectual property rights associated with our Molecular Breeding™ directed evolution platform to Codexis, Inc., or Codexis, and cancelled all payment and potential royalty obligations of Codexis to us relating to biofuels and other energy products, for $20.0 million. In December 2010, we distributed substantially all of the shares of Codexis common stock we held, together with approximately $29.2 million in cash, to our stockholders by way of pro rata special distributions. In addition, since December 2009, we have repurchased approximately 10.0 million shares of our common stock at an aggregate cost of approximately $54.1 million.

We expect to continue to realize value for our stockholders by focusing our efforts on the continued progress of Perseid and its collaborations with Astellas in an effort to increase the likelihood that Astellas will exercise its option to purchase our interest in Perseid. In addition, given that we continue to have large cash reserves and a reduced ongoing financial commitment to the business contributed to Perseid, we may continue to consider and evaluate additional distributions to our stockholders of a portion of our cash resources in excess of our current and longer term operational requirements, although none are currently contemplated. Such distributions may be accomplished through cash dividends, stock repurchases or other mechanisms and may be

fully or partially taxable depending on the circumstances of such distribution. If appropriate opportunities become available, we may also consider and evaluate using a portion of our cash reserves to acquire additional businesses, assets, technologies, or products. Our plans with respect to any future distributions or acquisitions will be largely dependent upon the success of Perseid, whether Astellas exercises its option to purchase Perseid, whether we receive the milestone payment from Bayer, any future developments related to our MAXY-G34 program and the future financial commitments and longer term operational requirements related to these assets.

Perseid Therapeutics LLC

Perseid began operations on September 18, 2009, in connection with the consummation of the joint venture transaction between us and Astellas pursuant to which we contributed substantially all of our protein pharmaceutical programs and related assets, together with $10.0 million in cash, to Perseid. Astellas also invested $10.0 million in Perseid. As part of the joint venture arrangement, Astellas has been granted an option to acquire all of our ownership interest in Perseid at specified exercise prices that increase each quarter from the current option price of $76.0 million (through March 18, 2011) to $123.0 million over the term of the option, which expires on September 18, 2012 (the third anniversary of the closing).

Perseid's lead product candidates, part of the MAXY-4 program, are designed to be superior, next-generation CTLA-4 Ig therapeutics for the treatment of a broad array of autoimmune disorders, including rheumatoid arthritis, and transplant rejection. In January 2011, Astellas initiated a Phase I clinical trial of Perseid's lead product candidate (as described below). Perseid also has a number of early-stage discovery programs focused primarily on the treatment or prevention of certain other autoimmune disorders or transplant rejection. We expect Perseid's operations to continue to be funded entirely by the initial investments by us and Astellas and funding from Astellas under two collaboration agreements; one for the co-development and commercialization of the MAXY-4 product candidates and one for the discovery, research and preclinical development of certain protein therapeutics other than MAXY-4.

We have included the results of Perseid in our consolidated financial statements, with the minority interest of Astellas in Perseid reflected in our consolidated balance sheet as a non-controlling interest. As of December 31, 2010, we had an ownership interest of approximately 83.3% in Perseid and Astellas owned the remaining ownership interest of approximately 16.7%. In addition, Perseid has granted profit interest units, a special type of LLC common unit, to certain current and former employees of Maxygen and Perseid.

MAXY-4

Perseid's lead product candidates in the MAXY-4 program are designed to be superior, next-generation CTLA-4 Ig therapeutics for the treatment of a broad array of autoimmune disorders, including rheumatoid arthritis, and transplant rejection. These candidates are designed to block the co-stimulation of T cells, a subset of white blood cells that are known to be involved in the pathogenesis of autoimmunity. By binding to human CD80/CD86 ligands with high avidity, CTLA-4 Ig fusion proteins inhibit CD80/CD86-mediated co-stimulation of T cells via the CD28 receptor, thereby decreasing activation of T cells and thus decreasing immune system activation.

Rheumatoid arthritis is a chronic autoimmune disease characterized by chronic pain and disability of the peripheral joints. Rheumatoid arthritis affects approximately 1% of the world's population and its incidence is about twice as frequent among women than it is among men. Biologic therapeutics available for rheumatoid arthritis focus upon the greater than four million moderate-to-severe patients diagnosed with this severely debilitating condition in the developed world.

In January 2011, Astellas initiated a Phase I clinical study to evaluate Perseid's CTLA-4 Ig therapeutic (designated by Astellas as ASP2408) for the treatment of rheumatoid arthritis and potentially other autoimmune indications. It is the first clinical trial being conducted under Perseid's collaboration with Astellas, which is sponsoring the clinical trial. Perseid earned a $10.0 million payment from Astellas for the achievement of this clinical milestone.

The clinical trial is a Phase 1, randomized, double-blind, placebo-controlled, dose escalation study. The primary objective of the study is to assess the safety, tolerability, and pharmacokinetics of single ascending intravenous doses of Perseid's CTLA-4 Ig therapeutic in healthy male and female subjects. The secondary objective of this study is to evaluate the pharmacodynamics of the CTLA-4 Ig therapeutic. The trial is taking place at one center in the United States and is designed to enroll 65 subjects in eight dose cohorts.

The MAXY-4 product candidates have demonstrated improved potency in several preclinical assays as compared to Orencia® (Bristol-Myers Squibb Company) and belatacept. Orencia®, a currently marketed product, is indicated for reducing signs and symptoms, inducing major clinical response, slowing the progression of structural damage, and improving physical function in adult patients with moderately to severely active rheumatoid arthritis who have had an inadequate response to one or more disease-modifying, anti-rheumatic drugs. Belatacept is currently under development by Bristol-Myers Squibb Company for organ transplant therapy. In 2010, sales of Orencia®, which was launched in the United States during 2006 and in the European Union during 2007, were approximately $733.0 million. In addition to the rheumatoid arthritis marketplace, future commercial opportunities for our MAXY-4 program may include other autoimmune diseases, such as Crohn's disease, systemic lupus erythematosus, psoriasis and ulcerative colitis, as well as transplant rejection.

MAXY-4 Co-Development and Commercialization Agreement

In September 2008, we entered into a co-development and commercialization agreement with Astellas relating to the development and commercialization of our MAXY-4 product candidates for autoimmune diseases and transplant rejection. This co-development and commercialization agreement was assigned to Perseid as part of the joint venture arrangement with Astellas.

Under the terms of the agreement, Perseid continues to co-develop with Astellas MAXY-4 product candidates for autoimmune indications in North America and European countries. Astellas has exclusive rights to develop MAXY-4 product candidates for autoimmune indications outside of North America and Europe, and for the prophylaxis or treatment of transplant rejection worldwide. Astellas also has exclusive worldwide rights to commercialize the MAXY-4 product candidates for all indications subject to the agreement, with Perseid having an option to co-promote products developed under the agreement for autoimmune disease indications in North America on a product-by-product and country-by-country basis.

Perseid is generally responsible for all preclinical development activities under the agreement, as well as certain manufacturing activities during development and commercialization. Perseid also has an option to conduct certain clinical development activities in North America and Europe for one of the first two autoimmune indications.

Except as discussed below, all development costs for the development of the MAXY-4 product candidates for autoimmune indications in North America and Europe are shared equally by Perseid and Astellas, while Astellas bears all development costs that are for autoimmune indications outside of North America and Europe and for transplant rejection worldwide. Development costs that are applicable to both autoimmune indications in North America and Europe and for transplant rejection (or costs that are not otherwise designated as specific to either) are also shared by the parties, with Astellas responsible for more than 50% of such costs. Astellas also paid for the first $10.0 million of certain pre-clinical development costs that would have otherwise been shared by the parties. Under the agreement, Perseid has the right to opt out of its cost sharing obligations, on a product-by-product basis, at various points during the development of the applicable product (in which case Perseid would lose any related co-promotion option).

We initially received an upfront fee of $10.0 million under the agreement and Perseid remains eligible to receive future milestone payments. During 2010, Perseid received two $5.0 million payments from Astellas for the achievement of preclinical milestones under this agreement and, in February 2011, Perseid received a $10.0 million payment from Astellas for the initiation of the Phase I trial discussed above. Except for products and related countries for which Perseid has exercised its co-promotion rights, Perseid is eligible to receive base tiered

royalties on net sales of all products sold under the agreement. In addition to base royalties, Perseid will also be eligible for additional royalties on sales of any product for an autoimmune indication in North America and Europe (provided it has not opted out of its cost sharing obligations or exercised its co-promotion rights for such product). If Perseid opts out of its cost sharing obligations on a particular product, Perseid would be eligible only for the base royalty rates on sales of such product. In addition, if Perseid exercises an option to co-promote a particular product for an autoimmune disease indication in North America (and has not otherwise opted out of its cost sharing obligations for such product), revenues from any sales of such product in the applicable country would be subject to a profit-sharing arrangement between the parties instead of royalty payments.

Subject to certain conditions, Astellas may terminate the agreement in its entirety, or on a product-by-product basis, at any time for convenience or due to certain adverse safety results. The agreement also provides for termination of the agreement by Perseid in its entirety, or for partial termination of the agreement by Perseid on a region-by-region basis, if Astellas elects to permanently discontinue the development and/or commercialization of all compounds or products under certain circumstances. Either party may also terminate the agreement in the event of an uncured material breach by the other party. Subject to certain conditions, upon any full or partial termination of the agreement, all related rights to the applicable, terminated MAXY-4 compounds or products would revert back to Perseid.

Other Products

In addition to the MAXY-4 program, Perseid also has a number of early-stage research and discovery programs primarily targeting the treatment or prevention of certain autoimmune disorders and transplant rejection.

Other Products Collaboration Agreement

In connection with the consummation of the joint venture arrangement with Astellas, Perseid and Astellas entered into a collaboration agreement under which Astellas provides funding to Perseid to perform discovery, research and preclinical development of agreed upon programs (other than MAXY-4), as well as protein therapeutics that may be contributed by Astellas. Under the agreement, all discovery, research and development activities are set forth in a development plan and budget that is directed and approved by a joint steering committee made up of representatives from Astellas and Perseid. The funding is intended to cover all internal and external costs of Perseid attributable to such activities and, at a minimum, includes amounts necessary to cover up to 42 scientific and technical full-time equivalents (FTEs) of Perseid who are not otherwise allocated to supporting the MAXY-4 program and, at a maximum, includes $15.0 million for any consecutive 18-month period. Funding is made in advance on a quarterly basis based on budgeted amounts approved by the joint steering committee established under the collaboration agreement.

For two years from the effective date of the agreement (until September 18, 2011), Perseid may not, without the prior written consent of Astellas, conduct research, development, manufacturing or commercialization activities except as set forth in the development plan and budget approved by the joint steering committee or such activities to support the MAXY-4 program.

Under the agreement, Astellas has an exclusive option to acquire an exclusive license to commercialize one of the programs that Perseid develops under the agreement. Astellas may exercise this option only if it decides not to exercise its option to purchase our interests in Perseid and only for a limited period of time. Except with respect to any program for which Astellas has exercised this option, upon the earlier of the expiration or termination of this option, Perseid will have the right to research, develop and commercialize any proteins without the consent of, or further obligation to, Astellas.

Technology License Agreement

As part of the joint venture arrangement, we granted a license to Perseid to certain assets and proprietary technologies, including assets and technologies related to the MolecularBreeding™ directed evolution platform,

regulated read-through, CMV promoters and other protein modification technology, to perform discovery, research, development, manufacture and commercialization of proteins and products containing proteins for the prevention, treatment or management of human diseases or conditions. The licenses are exclusive with respect to the MolecularBreeding™ directed evolution platform and other program-specific technology related to the research and development programs transferred from us to Perseid and non-exclusive with respect to other licensed technology, in each case, subject to existing third party rights to such licensed assets and technology. In October 2010, we sold the intellectual property rights underlying the MolecularBreeding™ directed evolution platform to Codexis. However, the license agreement between us and Perseid and the licenses granted to Perseid thereunder remain in effect, and as part of the transaction with Codexis, Codexis granted us licenses to these intellectual property rights sufficient for us to satisfy our licensing obligations to Perseid and other third parties.

Investor Agreements

We are also a party to various agreements that govern the relationship between us and Astellas as investors in Perseid, including an investors' rights agreement, which provides for Astellas' option to purchase our interests in Perseid, a limited liability company agreement, a co-sale agreement and a voting agreement.

Transition Services Agreement

We are also a party to a transition services agreement with Perseid that sets forth the rights and obligations to provide certain services between us and Perseid for the operation and management of each of our businesses. We provide to Perseid certain general and administrative services to support employment, finance, patent, legal, tax, regulatory, marketing and communication functions, in each case based upon an average allocation of percentage time for such services. We also provide coverage for eligible Perseid employees under certain of our benefit plans. Similarly, Perseid provides us with facilities, information technology, communication and networking services, in each case based upon an average allocation of percentage time for such services. In addition, Perseid may provide us with services to support our MAXY-G34 program, subject to the approval of Astellas if such services exceed an average of more than one FTE over the 12 month period beginning from the effective date of this agreement. The services will be provided until the earlier of (i) three years from the effective date of this agreement or (ii) the expiration or exercise of Astellas' option to purchase our interests in Perseid, and if Astellas elects to exercise the option, the services provided will continue until 90 days from the date of exercise.

MAXY-G34

Our MAXY-G34 product candidate has been designed to be an improved next-generation pegylated, granulocyte colony stimulating factor, or G-CSF, for the treatment of chemotherapy-induced neutropenia. G-CSF is a natural protein that functions by stimulating the body's bone marrow to produce more white blood cells. We did not transfer the MAXY-G34 program to Perseid in connection with the joint venture arrangement with Astellas and retain ownership of this program at Maxygen.

Neutropenia is a severe decrease in neutrophil cell counts in the blood. Neutropenia is a common side effect of chemotherapeutic treatments for many forms of cancer, including breast cancer, lung cancer, lymphomas and leukemias. Neutropenic patients are at increased risk of contracting bacterial infections, some of which can be life threatening. Further, and most importantly, neutropenic patients may receive reduced or delayed chemotherapy treatment, which can result in cancer progression.

Neupogen®, a first-generation G-CSF product, and Neulasta®, a second-generation pegylated G-CSF product, currently dominate the market to treat chemotherapy and radiation-induced neutropenia. Worldwide sales of Neupogen® and Neulasta® were approximately $4.8 billion in 2010.

In December 2008, we completed a Phase IIa clinical trial for our MAXY-G34 product candidate for the treatment of chemotherapy-induced neutropenia in breast cancer patients in which MAXY-G34 was safe and

effective in reducing chemotherapy-induced neutropenia with no serious adverse events, drug-related grade 3 or 4 adverse events or immunogenicity reported in any patient receiving MAXY-G34. Adverse events were consistent with known side effects of G-CSF molecules.

In October 2008, we made the decision to delay both Phase III manufacturing activities and the planned Phase IIb clinical trial of our MAXY-G34 program until we could identify a partner who would share these costs. The Phase III manufacturing costs were anticipated to begin in September 2008, and the delay of these activities will likely have a material impact on any potential future development and commercialization timeline for the MAXY-G34 program. Our original schedule called for the Phase IIb trial to begin in the second half of 2009. To date, we have not identified a suitable partner for this program for chemotherapy-induced neutropenia.

In addition, the existence of certain issued patents and pending patent applications that claim certain G-CSF compositions and their use, including a U.S. patent issued to Amgen in 2008 with certain claims to mutated G-CSF molecules (Patent No. 7,381,804), could also make it more difficult for us to secure a collaborative or other arrangement for MAXY-G34. We submitted a request for an inter partes reexamination of the Amgen patent with the U.S. Patent Office, or PTO, that was accorded the filing date of March 18, 2009. In May 2009, the PTO issued an order granting our request and also issued an office action rejecting all of the claims of the Amgen patent. The PTO considered arguments raised by both parties regarding the rejections and issued an action closing prosecution in November 2010 maintaining its rejection of the claims in the Amgen patent. The reexamination proceeding, however, continues and any final ruling by the PTO may be appealed to the U.S. federal courts. As a result, there can be no assurances that we will ultimately prevail, that we will be able to recommence development activities, or that we will be successful in the development and commercialization of the MAXY-G34 program, even if we are successful in the re-examination process.

Acute Radiation Syndrome

G-CSF products such as our MAXY-G34 product candidate may also have potential application in the treatment of Acute Radiation Syndrome, or ARS, an acute illness caused by irradiation of the entire body by a high dose of penetrating radiation in a very short period of time. A significant portion of the funding for the treatment of ARS to date has come from various government entities for the development of therapeutics as a medical countermeasure to nuclear terrorism and other radiological emergencies.

In May 2009, we entered into an option and license agreement with Cangene pursuant to which we had granted Cangene options to obtain certain licenses to intellectual property rights associated with our MAXY-G34 program to fulfill potential future government contracts related to the development, manufacture and procurement of MAXY-G34 for the treatment or prevention of neutropenia associated with ARS. We received an option fee of $500,000 and were eligible to receive an option exercise fee, as well as additional license fees based on a percentage of net contract revenue received by Cangene, to the extent that Cangene was awarded one or more applicable government contracts and exercised an option for a license. The option and licensing arrangement with Cangene expired in July 2010 as a result of the decision by the Biomedical Advanced Research and Development Authority (BARDA), an agency within the U.S. Department of Health and Human Services, to eliminate Cangene from the competitive range with respect to its bid on a contract for developing a treatment for ARS. As a result of the expiration, Maxygen is no longer eligible for any further payments under the agreement.

We continue to retain all rights to the MAXY-G34 program for commercial development of all therapeutic areas, including all rights for chemotherapy-induced neutropenia and ARS indications, and we are continuing to evaluate the potential further development of the MAXY-G34 program for both indications.

Investment in Codexis, Inc.

We formed Codexis in January 2002 as a wholly owned subsidiary to operate our former chemicals business. In connection with the formation of Codexis, we entered into a license agreement with Codexis under which we granted to Codexis certain exclusive rights to the MolecularBreeding™ directed evolution platform for

certain small molecule pharmaceutical, energy and industrial chemical applications. Codexis received financing from third party investors and operated as an independent subsidiary beginning in September 2002 and, in April 2010, Codexis completed an initial public offering of its common stock. At the time of the Codexis initial public offering, we held approximately 6.0 million shares, or approximately 17.0%, of the outstanding common stock of Codexis. As part of our ongoing strategic initiatives, in October 2010, we sold substantially all of the patents and other intellectual property rights associated with our MolecularBreeding™ directed evolution platform to Codexis for $20.0 million and terminated our prior license agreement with Codexis. In December 2010, we distributed substantially all of the shares of Codexis common stock we held in a pro rata distribution to our stockholders.

Sale of Intellectual Property Assets

In October 2010, we consummated an asset purchase agreement with Codexis pursuant to which Codexis acquired substantially all of the patents and other intellectual property rights associated with the MolecularBreeding™ directed evolution platform. The assets acquired by Codexis include patents, trademarks, copyrights, software and certain assumed contracts.

The intellectual property assets and rights acquired by Codexis will continue to be subject to existing license rights previously granted by us to third parties, including Perseid, which retains exclusive licenses to use the MolecularBreeding™ directed evolution platform for the discovery, research and development of protein pharmaceuticals.

In consideration for the assets acquired by Codexis under the purchase agreement and the termination of the prior license agreement, Codexis paid a total purchase price to us of $20.0 million, of which $4.0 million will be held in escrow for twelve months from the closing date, with $2.0 million of such amount to be held in escrow for a total of twenty-three months, in each case to satisfy any of our indemnification obligations under the purchase agreement. Escrow amounts not used to satisfy such obligations or subject to pending claims will be released to us upon expiration of the applicable escrow term.

Licensing Arrangement

In connection with the assets acquired by Codexis, we also entered into a new license agreement with Codexis, pursuant to which Codexis granted us certain license rights to the intellectual property assets acquired by Codexis to the extent necessary for us to fulfill our contractual obligations under the license agreements we retained, such as our license agreement with Perseid, and to permit us to practice any retained rights under such agreements. The license agreement also provides for a grant by us of certain license rights to Codexis, including rights necessary for Codexis to fulfill its contractual obligations under the license agreements it has assumed under the purchase agreement.

Termination of Prior License Agreement

Since Codexis acquired substantially all of the intellectual property rights that were subject to our prior license agreement with Codexis, we agreed to terminate our prior licensing arrangement with Codexis. As noted above, the prior license agreement was entered into by the parties in connection with the formation of Codexis in March 2002 and granted to Codexis certain exclusive rights to the MolecularBreeding™ directed evolution platform for certain small molecule pharmaceutical, energy and industrial chemical applications. In December 2006, we expanded the scope of these exclusive licenses for certain applications relating to energy products, including biofuels. Under the prior agreement, as amended, we were entitled to receive a significant portion of certain consideration received by Codexis from a third party licensee in connection with the commercialization of energy products made with a biocatalyst developed using the licensed technology. We were also eligible for a 2% royalty on net sales of any related energy product commercialized directly by Codexis. During 2010, 2009 and 2008, we recognized approximately $2.0 million, $4.6 million, and $664,000, respectively, in revenue from Codexis under this prior license agreement. This revenue reflects amounts due to us from payments received by

Codexis under its collaboration arrangement with Shell that began in November 2006 and an expanded collaboration agreement between Royal Dutch Shell plc and Codexis for the development of new enzymes to convert biomass to fuel. As a result of the termination of the prior agreement, we are no longer eligible for any payments or potential royalties from Codexis.

Distribution of Codexis Stock

In December 2010, we completed the distribution of substantially all of the shares of Codexis common stock we owned to our stockholders. As a result of the distribution, each of our stockholders received 0.187039 of a share of Codexis common stock for each outstanding share of Maxygen common stock such stockholder held as of the December 3, 2010 record date, subject to a due bill process for shares of Maxygen common stock traded between the record date and the December 15, 2010 ex-dividend date. Our stockholders received cash in lieu of any fraction of a Codexis share that they would have otherwise received in the distribution.

In aggregate, we distributed 5,445,274 shares of Codexis common stock to our stockholders. The remaining 515,876 shares of Codexis common stock we held at December 31, 2010 represent shares that are being retained by us on behalf of the holders of certain outstanding Maxygen equity awards, fractional shares of Codexis common stock for which Maxygen instead made a cash payment to its stockholders in lieu thereof, and shares required to be withheld under applicable tax laws. Because we had no current or cumulative earnings and profits for tax purposes in 2010, the distribution was treated as a tax-free return of capital to our stockholders for U.S. federal income tax purposes.

Sale of Factor VIIa Assets to Bayer HealthCare LLC

In July 2008, we sold our hematology assets, including MAXY-VII, our factor VIIa program, and assets related to our factor VIII and factor IX programs, and granted certain licenses to the MolecularBreeding™ directed evolution platform to Bayer. We recognized revenues of $90.6 million in connection with these transactions, which included receipt of an upfront cash payment of $90.0 million. Our MAXY-VII product candidates were designed to be superior next-generation factor VIIa products to treat hemophilia and, potentially, acute bleeding indications. Factor VIIa is a natural protein with a pivotal role in blood coagulation and clotting.

Contingent Milestone Payment

Under the technology transfer agreement with Bayer, we are eligible to receive future cash milestone payments of up to an additional $30.0 million based on the achievement of certain events related to the potential initiation by Bayer of a phase II clinical trial of MAXY-VII. The milestone payment is also subject to the satisfaction of certain patent related conditions, with half of the potential $30.0 million milestone payment subject to the satisfaction of certain patent related conditions in the United States and the remaining half of the potential milestone payment subject to the satisfaction of similar patent related conditions in certain European countries. To date, all of the patent related conditions have been satisfied. However, there can be no assurances that these conditions will remain satisfied at the time of the achievement of the events related to the potential initiation of the phase II clinical trial, if it occurs. The failure to satisfy these patent related conditions at that time could reduce the potential milestone payment by 25%, 50% or 75%, or could result in no payment of the potential milestone payment.

Licensing Arrangement

In connection with the acquisition by Bayer of our MAXY-VII program and other hematology assets, we also entered into a license agreement with Bayer. Subject to the exclusive rights retained by us and other restrictions described below, the license agreement provides Bayer a nonexclusive, non-sublicensable license to use the MolecularBreeding™ directed evolution platform and ancillary protein expression technologies, including use in biopharmaceuticals. In addition, for initially 30 specific proteins in the fields of hematology,

cardiovascular and women's healthcare, Bayer's license to use the MolecularBreeding™ directed evolution platform will be exclusive until July 1, 2013 (or earlier with regard to specific proteins that are removed through reduction or substitution, as described below). The specific proteins for which Bayer will have exclusive rights will be reduced each year through the first three years of the license agreement, after which Bayer will have exclusive rights to 15 specific proteins for the remainder of the exclusivity period. Subject to certain conditions, the license agreement provides Bayer with the right to substitute a limited number of its exclusive proteins each year.

Pursuant to the license agreement, we have retained exclusive rights to use the MolecularBreeding™ directed evolution platform for initially 30 specific proteins that include proteins in the immune suppression and autoimmunity fields, as well as our existing clinical, preclinical and research stage programs, such as MAXY-G34 and MAXY-4. The specific proteins to which we retain exclusive rights are subject to the same provisions of the license agreement applicable to Bayer's exclusive proteins, including those described above regarding reduction (which will reduce the number of exclusive proteins retained by us to 15 specific proteins after three years), substitution rights and the exclusivity period.

In addition, under the license agreement, Bayer is prohibited from using the MolecularBreeding™ directed evolution platform for various applications that have been excluded from the scope of the license. These excluded uses include applications related to vaccines, immunomodulators and certain small molecule discovery applications, as well as areas that have been exclusively licensed by us to third parties under existing agreements (or are now licensed to such third parties directly by Codexis), such as agricultural and chemical applications. Bayer is also prohibited from using its licensed rights to the MolecularBreeding™ directed evolution platform in a fee for service arrangement with any third party.

In October 2010, we sold the intellectual property rights underlying the MolecularBreeding™ directed evolution platform to Codexis. However, the license agreement between us and Bayer and the licenses granted to Bayer thereunder remain in effect, and as part of the transaction with Codexis, Codexis granted us licenses to these intellectual property rights sufficient for us to satisfy our licensing obligations to Bayer and other third parties.

In addition, we also entered into an intellectual property cross license agreement with Bayer to provide for a license by us to Bayer of certain intellectual property rights retained by us that relate to the hematology assets acquired by Bayer and to provide for a license from Bayer back to us to certain intellectual property rights acquired by Bayer for use by us outside of the hematology field.

Sale of Vaccines Assets to AltraVax

In January 2010, we consummated a transaction with AltraVax, a newly formed, privately-held biopharmaceutical company, for the sale of substantially all of our vaccine related assets, including the related government grants. Under the arrangement, we received an upfront payment from AltraVax of $500,000 and a second payment of $525,000 in December 2010. AltraVax is obligated to pay us the remaining portion of the total purchase price on or before December 31, 2011. We are also eligible to receive a certain percentage of any revenue received by AltraVax under contracts involving our vaccines technology that are entered into by AltraVax for a period of up to two years after the payment by AltraVax of the total purchase price.

As part of the transaction, we also granted AltraVax certain exclusive licenses in the vaccines field and certain non-exclusive licenses in the adjuvants field to the MolecularBreeding™ directed evolution platform and certain ancillary technologies, in each case, subject to existing third party rights to such licensed assets and technology. In October 2010, we sold the intellectual property rights underlying the MolecularBreeding™ directed evolution platform to Codexis. However, the license agreement between us and AltraVax and the licenses granted to AltraVax thereunder remain in effect, and as part of the transaction with Codexis, Codexis granted us licenses to these intellectual property rights sufficient for us to satisfy our licensing obligations to AltraVax and other third parties.

Prior to the sale of our vaccine assets to AltraVax, our vaccine research program included an active program to advance the research for development of a preventative HIV vaccine and was fully funded by research grants from the National Institutes of Health, or NIH.

Technology

We are a leader in the field of directed molecular evolution. We use a directed evolution technology, known as the MolecularBreeding™ directed evolution platform, along with ancillary technologies, and extensive protein modification expertise to pursue the creation of biosuperior proteins. As a result of our license agreement with Perseid and the sale of substantially all of the intellectual property rights underlying the MolecularBreeding™ directed evolution technology platform to Codexis in October 2010, our utilization of these directed evolution and protein modification technologies is conducted solely by Perseid in connection with its discovery, research and development of protein pharmaceuticals.

MolecularBreeding™ Directed Evolution Technology Platform

The MolecularBreeding™ directed evolution platform mimics the natural events of evolution. First, genes are subjected to one or more proprietary DNA shuffling formats to generate a diverse library of gene variants. Second, our proprietary screening platform is used to select individual proteins from the gene variants in the library. The proteins that show improvements in the desired characteristics become the initial lead candidates. After confirmation of activity, sequence and activity information from the initial lead candidates is used to design further libraries which are designed and prepared using proprietary methods. Once the level of improvement needed for the particular protein pharmaceutical is achieved, the group of product candidates is evaluated to select one or more product candidates for development.

The ability to screen or select for a desired improvement in function is essential to the effective development of an improved protein product. As a result, we have invested significant resources in developing high-throughput screening formats.

Our approach is to create multitiered screening systems where we use very high throughput screening methods (e.g. phage display) as a first screen to quickly select proteins with the desired characteristics, followed by lower throughput methods using soluble proteins to confirm biological activities and to identify lead product candidates. Some of our screening capabilities include phage display, cell display, FACS sorting, Biacore, ELISA, cell-based bioassays and animal models.

Other Technologies

In addition to the MolecularBreeding™ directed evolution platform, we have acquired capabilities with regard to several complementary technologies potentially useful for the development of protein-based pharmaceuticals. Two examples of the tools that we use to post-translationally modify protein drugs are pegylation and glycosylation technologies. Glycosylation and pegylation have been validated technically and commercially through the successes of drugs, such as the pegylated interferons (Pegasys and PEG-Intron® (Schering Corporation)) and Aranesp® (Amgen, Inc.), a hyper-glycosylated erythropoeitin. These post-translational modifications of proteins have been demonstrated to change the pharmacokinetics and pharmacodynamics of certain protein drugs. In addition, these modifications can change the solubility, bioavailability and immunogenicity profile of protein drugs.

Intellectual Property and Licensing Arrangements

Our success depends in large part on our proprietary products and technology under which we seek protection from patent, copyright, trademark and trade secret laws. Such protection is also maintained using confidential disclosure agreements. Protection of our technologies is important for us to utilize proprietary services to create products unavailable from our competitors, and to exclude our competitors from practicing technology that we have developed or have exclusively licensed from other parties.

In October 2010, we sold substantially all of the patents and other intellectual property rights associated with the MolecularBreeding™ directed evolution platform, including patents, trademarks, copyrights, software and certain assumed contracts, to Codexis. Prior to this transaction, we and Codexis were parties to a license agreement pursuant to which we granted Codexis a worldwide, exclusive license to certain intellectual property related to the use of directed evolution technology in a variety of fields of use. Under the terms of the original license, Codexis was obligated to pay us a significant portion of certain types of consideration that Codexis received in connection with its biofuels research and development, including its collaboration with Shell. Since Codexis now owns substantially all of the intellectual property rights subject to the original license, the original license with us has been terminated, and Codexis is no longer obligated to make payments to us, including potential royalties, relating to biofuels and other energy products. The intellectual property rights and assets that Codexis acquired from us will continue to be subject to existing license rights previously granted by us to third parties.

In addition, as part of the transaction with Codexis, we entered into a new license agreement with Codexis, pursuant to which Codexis granted to us certain license rights to the intellectual property assets that Codexis acquired to the extent necessary for us to fulfill our contractual obligations under the license agreements we have retained. These include licenses: to Perseid to perform discovery, research, development, manufacture and commercialization of proteins and products containing proteins for the prevention, treatment or management of human diseases or conditions; to Bayer in the fields of hematology, cardiovascular and women's healthcare; and to AltraVax in the vaccines and adjuvants fields. Accordingly, Perseid retains exclusive licenses to use the intellectual property for the discovery, research and development of protein pharmaceuticals

Maxygen's patent portfolio includes approximately 310 issued or granted patents and 120 pending applications that are owned or in-licensed by Maxygen. This includes approximately 39 granted or issued patents and 10 pending applications, owned by Maxygen, that are directed to our MAXY-G34 product candidate. Of the remaining licensed patents and patent applications, most are owned by Codexis and exclusively licensed to us for use in certain fields. Perseid's patent portfolio includes approximately 40 granted or issued patents and 23 pending applications that are directed at specific product candidates, including one issued U.S. patent and 20 pending applications for its MAXY-4 product candidates.

As part of our confidentiality and trade secret protection procedures, we enter into confidentiality agreements with our employees, consultants and potential collaborative partners. Despite these precautions, third parties or former employees could obtain and use information regarding our technologies without authorization, or develop similar technology independently. It is difficult for us to monitor unauthorized use of our proprietary methods and information. Effective protection of intellectual property rights is also unavailable or limited in some foreign countries. The efforts that we take to protect our proprietary information and rights may be inadequate to protect such information and rights. Our competitors could independently develop similar technology or design around any patents or other intellectual property rights we hold.

Manufacturing

We rely on third party manufacturers and collaborators to produce our compounds for certain preclinical and clinical purposes and may do so for commercial production of any drug candidates that are approved for marketing. However, if we are not able to secure manufacturing arrangements with contract manufacturers, we may need to develop our own manufacturing capability to meet our future needs, which would require significant capital investment.

Competition

Any products that we develop will compete in highly competitive markets. We face competition from large pharmaceutical and biopharmaceutical companies, such as Eli Lilly and Company, Pfizer, Inc., Genentech, Inc., Bristol-Myers Squibb Company, Schering-Plough Corporation and Amgen Inc., and from smaller biotechnology companies, such as Human Genome Sciences, Inc., Teva Pharmaceutical Industries Ltd., Zymogenetics, Inc., Inspiration Biopharmaceuticals, Inc. and Catalyst Biosciences, Inc.

With regard to the MAXY-4 product candidates, we expect Orencia® (Bristol Myers Squibb Company) to compete with MAXY-4, if commercialized. In addition, we are aware that Bristol Myers Squibb Company is also developing belatacept that, if marketed, could compete with MAXY-4. With regard to our MAXY-G34 product candidate, we would expect Neulasta® and Neupogen® to compete with MAXY-G34 in chemotherapy-induced neutropenia, if commercialized. In addition, we are aware that BioGeneriX AG and Teva Pharmaceutical Industries Ltd. are developing G-CSF products based on naturally occurring human G-CSF. If these products are commercialized, we may also face competition from biologic generics (i.e. bioequivalent protein drugs, generic biologicals and biogenerics).

Many of our potential competitors, either alone or together with their collaborative partners, have substantially greater financial, technical and personnel resources than we do, and there can be no assurance that they will not succeed in developing technologies and products that would render our technologies and products or those of a collaborator obsolete or noncompetitive. In addition, many of our competitors have significantly greater experience than we do in developing products, undertaking preclinical testing and clinical trials, obtaining the approval of the U.S. Food and Drug Administration, or FDA, and other regulatory approvals of products, and manufacturing and marketing products.

With regard to the field of directed molecular evolution, we are aware that other companies, including Verenium Corporation, Xencor, Inc. and Nautilus Biotech 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, Pennsylvania State University, and the University of Washington are also working in this field. We have licensed certain patents from certain of these institutions. This field is highly competitive and companies and academic and research institutions are actively seeking to develop technologies that could be competitive with our technologies.

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

Research and Development Expenses

The majority of our operating expenses to date have been related to research and development. Our research and development expenses were $32.0 million in 2010, $36.6 million in 2009 and $46.3 million in 2008. Additional information required by this item is incorporated herein by reference to "Research and Development Expenses" in Note 1 of the Notes to Consolidated Financial Statements.

Operations

Our operations are based in the United States, however, certain of our collaborators and licensees are based outside the United States. Additional information required by this item is included in Note 11 of the Notes to Consolidated Financial Statements and incorporated herein by reference.

Government Regulation

We are subject to regulation by the FDA and comparable regulatory agencies in foreign countries with respect to the development and commercialization of products resulting from our drug discovery activities. The FDA and comparable regulatory bodies in other countries currently regulate therapeutic proteins and related pharmaceutical products as biologics. Biologics are subject to extensive pre- and post-market regulation by the FDA, including regulations that govern the collection, testing, manufacture, safety, efficacy, potency, labeling, storage, record keeping, advertising, promotion, sale and distribution of the products.

The time required for completing testing and obtaining approvals of our product candidates is uncertain but will take several years, and approvals will only be obtained if our product candidates are shown to be safe and efficacious in clinical trials. Any delay in testing may hinder product development. In addition, we may encounter delays in product development or rejections of product applications due to changes in FDA or foreign regulatory policies during the period of product development and testing. Failure to comply with regulatory requirements may subject us to, among other things, civil penalties and criminal prosecution; restrictions on product development and production; suspension, delay or withdrawal of approvals; and the seizure or recall of products. The lengthy process of obtaining regulatory approvals and ensuring compliance with appropriate statutes and regulations requires the expenditure of substantial resources. Any delay or failure by us to obtain regulatory approvals could adversely affect our ability to commercialize product candidates and generate sales revenue. Such delays or failures could also impact our likelihood of receiving milestone and royalty payments under any future collaborative arrangement.

Under FDA regulations, the clinical testing program required for marketing approval of a new drug typically involves three sequential phases, which may overlap:

- Phase I: Studies are conducted in normal, healthy human volunteers or patients to determine safety, dosage tolerance, absorption, metabolism, distribution and excretion. If possible, Phase I studies may also be designed to gain early evidence of effectiveness.
- Phase II: Studies are conducted in small groups of patients afflicted with a specific disease to determine dosage tolerance and optimal dosage, to gain preliminary evidence of efficacy, and to determine the common short-term side effects and risks associated with the substance being tested.
- Phase III: Involves large-scale studies conducted in disease-afflicted patients to provide statistical evidence of efficacy and safety and to provide an adequate basis for physician labeling.

To date, neither we nor any corporate collaborator has successfully completed all stages of clinical development for any of our product candidates. If we (or a corporate collaborator) are unable to continue or successfully commence, continue or complete clinical trials of any of our product candidates, or decide not to continue clinical trials for a particular indication, we will not be able to seek or obtain regulatory approval for commercialization of the applicable product candidate for the relevant indication.

Phase I, Phase II or Phase III clinical testing may not be completed successfully within any specific period of time, if at all, with respect to any of our potential products. Furthermore, we, an institutional review board, the FDA or other regulatory bodies may deny approval for conducting a clinical trial or temporarily or permanently suspend a clinical trial at any time for various reasons, including a finding that the subjects or patients are being exposed to an unacceptable health risk.

FDA marketing approval is only applicable in the United States. Marketing approval in foreign countries is subject to the regulations of those countries. The approval procedures vary among countries and can involve additional testing. The requirements for approval and the time required to obtain approval may differ from that required for FDA approval.

Although there are some centralized procedures for filings in the European Union countries, in general each country has its own procedures and requirements, and compliance with these procedures and requirements may be expensive and time-consuming. Accordingly, there may be substantial delays in obtaining required approvals from foreign regulatory authorities after the relevant applications are filed, if approvals are ultimately received at all.

Employees

As of February 28, 2011, we had 69 employees, 55 of whom were employed directly by Perseid. Of the employees employed directly by Perseid, 49 were engaged in research and development and 6 were engaged in

general and administrative activities. The remaining 14 employees employed directly by Maxygen were engaged in general and administrative activities. None of our employees or Perseid's employees is represented by a labor union, and we consider our employee relations to be good.

Corporate Information

We began operations in 1997 to commercialize technologies originally conceived at Affymax Research Institute, then a subsidiary of what is now GlaxoSmithKline plc. We were incorporated in Delaware on May 7, 1996 and began operations in March 1997. Our principal executive offices are located at 515 Galveston Drive, Redwood City, CA 94063. Our telephone number is (650) 298-5300.

Available Information

Our web site is located at www.maxygen.com. We make available free of charge, on or through our web site, our annual, quarterly and current reports, and any amendments to those reports, as soon as reasonably practicable after electronically filing or furnishing such reports with the Securities and Exchange Commission, or SEC. Information contained on our web site is not part of this report.

Item 1A RISK FACTORS

This report contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of factors both in and out of our control, including the risks faced by us described below and elsewhere in this report.

You should carefully consider the risks described below, together with all of the other information included in this report, in considering our business and prospects. The risks and uncertainties described below are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations. If any of the following risks actually occur, our business could be harmed. In such case, the trading price of our common stock could decline, and you may lose all or part of your investment.

Risks Related To Our Business

We have implemented a substantial restructuring of our operations and have revised our strategic plan, and we may fail to successfully execute this plan.

The formation of Perseid Therapeutics LLC, or Perseid, the consummation of our joint venture transaction with Astellas Pharma Inc., or Astellas, in September 2009 and the related changes in our management team largely completed a multi-year strategic process to restructure our operations and position our programs and assets in collaborations and other arrangements that are primarily supported by external parties. However, we plan to continue to evaluate options regarding the management of our assets and arrangements in an effort to maximize the return to our stockholders over the next several years. These options could include a sale or disposition of one or more corporate assets, the acquisition of a business or asset, a strategic business combination, or other transactions. For example, in January 2010, we sold substantially all of our vaccines assets to AltraVax, Inc. In October 2010, we sold substantially all of our patent rights and certain other assets relating to the MolecularBreeding™ directed evolution platform to Codexis and, in December 2010, we distributed substantially all of the shares of Codexis common stock we held to our stockholders. While we continue to be actively engaged in this process, there can be no assurance that any particular strategic option or outcome will be pursued, whether any transaction, or series of transactions required to sell or acquire individual assets, will occur, or whether we will be able to successfully consummate any such transaction on a timely basis, on terms acceptable to us or at all. In addition, we may be unsuccessful in implementing an option that is chosen by our board of directors, or we may implement an option that yields unexpected results. The process of continuing to review, and potentially executing, strategic options may be very costly and time-consuming and may distract our

management and otherwise disrupt our operations, which could have adverse effects on our business, financial condition and results of operations. As a result, there can be no assurances that any particular business arrangement or transaction, or series of transactions, will be consummated or lead to increased stockholder value.

To the extent that we elect to pursue a transaction, or series of transactions, that includes a sale of one or more corporate assets, our ability to sell any assets may be limited by many factors beyond our control, such as general economic conditions or the attributes of the particular asset. We cannot predict whether we would be able to sell any particular asset on favorable terms and conditions, if at all, or the length of time needed to sell any asset. We also have a number of ancillary technologies and similar assets that may not be accorded any additional value in an asset sale or other strategic transaction. Accordingly, there can be no assurances that we or our stockholders will realize any value from all of our assets or any particular asset. In addition, although we intend to structure any potential transaction so as to minimize the federal and state tax consequences to both us and our stockholders, any particular transaction that we pursue could result in the imposition of both federal and state taxes that may have an adverse affect on us and our stockholders.

Furthermore, we have incurred, and may in the future incur, significant costs related to the execution of our revised strategic plan, such as legal and accounting fees and expenses and other related charges. We may also incur additional unanticipated expenses in connection with this strategic plan. A considerable portion of the costs related to any strategic transaction, such as legal and accounting fees, will be incurred regardless of whether any transaction is completed. These expenses will decrease the remaining cash available for use in our business or the execution of our strategic plan.

The operations of Perseid and the joint venture arrangement with Astellas involve substantially all of our protein pharmaceutical programs and related assets and research and development personnel. If Astellas does not exercise its option to purchase our interests in Perseid, we may be unable to continue Perseid's operations, and our business may be substantially harmed.

We operate substantially all of our research and development operations through Perseid. Under our joint venture arrangement with Astellas, Astellas has an option to acquire all of our ownership interest in Perseid at specified exercise prices that increase each quarter from the current option price of $76.0 million (through March 18, 2011) to $123.0 million over the term of the option, which expires on September 18, 2012 (the third anniversary of the closing). If Astellas elects not to exercise this option, Perseid may be unable to execute its business plan or continue its operations, and we may not realize any value from these operations.

In addition, any decision by Astellas regarding the exercise of its option to purchase our ownership interests in Perseid may be largely dependent on the successful development of the MAXY-4 program, as well as the successful preclinical development of one or more early stage programs by Perseid, which is subject to all of the risks discussed below inherent in drug development, such as potential difficulties or delays in the development, testing, regulatory approvals, progression or production of drug compounds, the failure to develop products suitable for commercialization, the delay or suspension of predicted development and commercial timelines for any potential products, the failure to protect intellectual property rights, the failure to identify and develop new potential products, and the risk that any compounds developed may have adverse side effects or inadequate therapeutic efficacy, as well as other economic, business, competitive, regulatory factors and/or changing research and business priorities affecting Astellas. In particular, the research and business priorities of Astellas may change based on the commercial success or failure of competing products, such as Orencia® and belatacept in the case of MAXY-4, mergers, acquisitions or reorganizations involving Astellas or other factors outside of Perseid's control. Accordingly, there can be no assurance that Perseid will be successful or that Astellas will exercise its buy-out option even if Perseid is successful.

Furthermore, macroeconomic or industry-wide conditions may improve, or the business contributed to Perseid may be more successful than expected when we negotiated the transactions with Astellas, each of which may make the business and related pharmaceutical assets that we have contributed to Perseid more valuable than

anticipated. Astellas, as a holder of Perseid's preferred units, will have the right to veto certain alternative transactions in which we might realize value for our investment in Perseid, including mergers and acquisitions and asset sales. The joint venture arrangements also place substantial restrictions on our ability to license the intellectual property rights that we have contributed to Perseid to parties other than Astellas.

Also, if Astellas elects not to exercise this option, we may be required to fund the operations of Perseid for the foreseeable future and this may utilize a substantial portion of our available cash resources or we may have inadequate resources to do so. This could create uncertainty for our employees and the employees of Perseid, and this uncertainty may adversely affect our ability to retain key employees, including our senior management, and to hire new talent necessary to maintain our ongoing operations and the operations of Perseid, or to execute our business plan or the business plan of Perseid, all of which could have a material adverse effect on our business.

Our revenues and the operations of Perseid are substantially dependent upon funding provided by Astellas under the joint venture arrangement.

Perseid and Astellas are parties to two collaboration agreements; one for the co-development and commercialization of the MAXY-4 product candidates and one for the discovery, research and preclinical development of certain protein therapeutics other than MAXY-4. Except for the $10.0 million invested in Perseid by each of Astellas and us, Perseid's operations are currently funded entirely by Astellas through these two agreements (including through the receipt by Perseid of various milestone payments under these agreements). The funding of Perseid's ongoing operations is highly dependent on the timing of reimbursements and potential milestone payments from Astellas under these agreements and a number of factors could leave Perseid with insufficient capital to operate its business. For example, development costs for the MAXY-4 program, which are shared by Perseid, may increase unexpectedly or Perseid may fail to achieve milestones under either agreement. More importantly, Astellas may make changes in the development plan for MAXY-4 or another product that significantly delays the achievement of related milestones. Any significant delays in the reimbursement of expenses or the achievement of milestones and the payment of related milestone amounts, if any, by Astellas could have a material adverse effect on our business. In addition, if Astellas does not otherwise perform its obligations under these arrangements as expected or breaches or otherwise fails to conduct its collaborative activities successfully and in a timely manner, Perseid's operations and our business would be severely harmed.

We rely heavily on the technology licensed to us by Codexis and if these rights are not effectively prosecuted, maintained or protected by Codexis our business and the success of Perseid may be harmed.

In October 2010, we sold substantially all of the intellectual property rights and certain other assets relating to the MolecularBreeding™ directed evolution platform to Codexis. Perseid relies heavily on this technology, which is now licensed to us by Codexis. While Perseid retains exclusive licenses to use the technology platform for the discovery, research and development of protein pharmaceuticals, Codexis, as the owner of these intellectual property rights, now has the right to control prosecution, maintenance and enforcement of these patent rights. If Codexis or an acquirer of Codexis chooses not to enforce the intellectual property rights on which our business and that of Perseid relies, or enforces those rights ineffectively and has them invalidated, Perseid's ability to effectively use its licensed rights may be adversely impacted. In addition, if Codexis does not adequately prosecute, maintain or protect these intellectual property rights, competitors may be able to practice these technologies and erode Perseid's competitive advantage. Any loss of rights thereunder could also decrease the likelihood that Astellas would exercise its option to purchase our interests in Perseid and, if so, could make it more difficult for us to continue the business of Perseid.

In addition, the intellectual property portfolio we sold to Codexis will continue to be subject to existing licenses that we previously granted to third parties under agreements that we will remain a party to. These existing license agreements, the related sublicenses to third party technologies and the license agreement with Codexis, and the interplay between those agreements, are highly complex and rely on highly technical definitions to delineate permitted and restricted activities. As a result of this complexity, the agreements may be subject to differing interpretations by the counterparties that could lead to disputes or litigation, including for alleged

breaches or claims that our activities or the activities of a third party are not covered by the scope of the licenses. While Codexis is obligated to comply with the terms of these agreements and to indemnify us for certain losses under these agreements, any action or omission by Codexis that causes us to breach any of our obligations under these agreements may subject us to liability and, to the extent indemnification by Codexis is not available, we may be required to pay damages to such third party. Any such litigation may divert management time from focusing on business operations and could cause us to spend significant amounts of money. If such litigation were to be decided adversely to us, we could: lose our rights to utilize the subject intellectual property in our business; be forced to stop using our processes that use the subject intellectual property; be required to obtain a license to use the subject intellectual property, which license may not be available on commercially reasonable terms, or at all; be forced to redesign those processes that use the subject intellectual property, which may result in significant cost or delay to us, or which could be technically infeasible; or be required to pay monetary damages.

We may make additional distributions to our stockholders of a portion of our cash resources, which may restrict our funds available for other actions and negatively affect the market price of our securities.

In December 2010, we distributed substantially all of the shares of Codexis, Inc. common stock we held, together with approximately $29.2 million in cash, to our stockholders. In addition, since December 2009, we have repurchased approximately 10.0 million shares of our common stock for a total cost of approximately $54.1 million. However, given that we continue to have large cash reserves and a reduced ongoing financial commitment to the pharmaceutical business transferred to Perseid, our board of directors may consider and evaluate additional distributions to our stockholders of a portion of our cash resources in excess of our current and longer term operational requirements, although none are currently contemplated. Such distributions may be accomplished through cash dividends, stock repurchases or other mechanisms and may be fully or partially taxable depending on the circumstances of such distribution. Any such distribution may not have the effects anticipated by our board of directors and may instead harm the market price and liquidity of our securities. The full implementation of any additional distribution could use a significant portion of our remaining cash reserves, and this use of cash could limit our future flexibility to operate our business, invest in our existing assets, complete acquisitions of businesses or technologies, or pursue other transactions. For example if Astellas does not exercise its option to purchase our interests in Perseid, we may not have sufficient cash resources to maintain the operations of Perseid.

In addition, the implementation of certain distribution mechanisms, such as stock repurchases, could also result in an increase in the percentage of common stock owned by our existing stockholders, and such increase may trigger disclosure or other regulatory requirements for our larger stockholders. As a result, these stockholders may liquidate a portion of their holdings, which may have a negative impact on the market price of our securities. Furthermore, repurchases of stock may affect the trading of our common stock to the extent we fail to satisfy continued-listing requirements of the exchange on which our stock trades, including those based on numbers of holders or public float of our common stock. Any stock repurchases would also reduce the number of shares of our common stock in the market, which may impact the continuation of an active trading market in our stock, causing a negative impact on the market price of our stock.

The prospects for commercializing or realizing any value from our MAXY-G34 product candidate are highly uncertain.

Our MAXY-G34 program was not transferred to Perseid in connection with the joint venture arrangement with Astellas and we continue to retain all rights to the MAXY-G34 program for commercial development of all therapeutic areas, including all rights for chemotherapy-induced neutropenia and ARS indications. However, in 2008, we announced the delay of both Phase III manufacturing and the Phase IIb trial of our MAXY-G34 product candidate for the treatment of chemotherapy-induced neutropenia until we identify a partner who will share the costs of these activities. To date, we have not identified a suitable partner for this program, and there can be no assurances that we will enter into a collaborative or other arrangement with a third party to fund the further development of MAXY-G34 for the treatment of chemotherapy-induced neutropenia. Accordingly, absent a collaborative or other arrangement, we will further delay or cease development of MAXY-G34 for the treatment

of chemotherapy-induced neutropenia, which would adversely affect our ability to realize any value from this program.

In addition, our suspension of certain manufacturing and development activities will likely have an adverse impact on the timeline for any potential commercialization of MAXY-G34 for chemotherapy-induced neutropenia, which will likely make it more difficult for us to secure a collaborative or other arrangement to fund the further development of this product candidate and could limit the commercial potential of MAXY-G34, if commercialized. The existence of certain issued patents and pending patent applications that claim certain G-CSF compositions and their use, including a U.S. patent issued to Amgen in 2008 with certain claims to mutated G-CSF molecules, could also make it more difficult for us to secure a collaborative or other arrangement for MAXY-G34. Litigation or other proceedings or third party claims of intellectual property infringement relating to our MAXY-G34 product candidate could further delay or materially impact the ability to commercialize MAXY-G34 and may also absorb significant management time.

Even if we are able to enter into a collaborative or other arrangement with a third party to fund the further development and commercialization of MAXY-G34 and this product candidate successfully completes clinical trials and is approved for marketing in the United States or other countries, it will need to compete with other G-CSF drugs then on the market. The ability of MAXY-G34 to be successful in the market will depend on a variety of factors, including, for example, whether MAXY-G34 is clinically differentiated from other G-CSF drugs, the scope and limitations of the label approved by regulators for the use of MAXY-G34, the price of MAXY-G34, reimbursement decisions by third parties with regard to MAXY-G34, the approval and sale of any generic or bioequivalent forms of G-CSF products, such as Neulasta® and Neupogen®, in the United States, and the effort and success of marketing activities undertaken with regard to MAXY-G34.

If we do not retain key employees, our ability to maintain our ongoing operations or execute a potential strategic option could be impaired.

To be successful and achieve our objectives under our revised corporate strategy, we must retain qualified scientific and management personnel. Our previous reductions to our workforce and the continued review of our strategic options may create continued uncertainty for our employees and this uncertainty may adversely affect our ability to retain key employees, including our senior management, and to hire new talent necessary to maintain our ongoing operations, including the operations of Perseid, or to execute additional potential strategic options, which could have a material adverse effect on our business. Further, as a result of management changes implemented in connection with the joint venture arrangement with Astellas, we currently have only two executive officers who are responsible for the operations of Maxygen and Perseid, and our failure to retain or replace either of these individuals could have a material adverse effect on our business.

In addition, even if we retain key personnel, our recent restructuring and the revision of our corporate strategy could place significant strain on our resources and our ability to maintain our ongoing operations. Our restructuring plan may also require us to rely more heavily on temporary or part-time employees, third party contractors and consultants to assist with managing our operations. Accordingly, we may fail to maintain our ongoing operations or execute our strategic plan if we are unable to manage such changes effectively.

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.

As part of our revised strategic plan, we may use a portion of our available cash resources to acquire additional businesses, assets, technologies, or products in the future if appropriate opportunities become available. In connection with any future acquisitions, we could:

- use a significant portion of our cash resources to fund and manage the acquisitions;
- issue additional equity securities which would dilute our current stockholders;
- incur substantial debt to fund the acquisitions; or

- assume significant liabilities.

Acquisitions involve numerous risks, including problems integrating the purchased operations, technologies or products, unanticipated costs 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 or management process could divert management time from focusing on operating our business, result in a decline in employee morale and cause retention issues to arise from changes in compensation, reporting relationships, future prospects or the direction of the business. Acquisitions may also require us to record goodwill and non-amortizable intangible assets that will be subject to impairment testing on a regular basis and potential periodic impairment charges, incur amortization expenses related to certain intangible assets, and incur large and immediate write offs and restructuring and other related expenses, all of which could harm our operating results and financial condition. In addition, 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 or management efforts with respect to any of our acquisitions, our business and financial condition may be adversely affected.

In addition, any acquisition of a business, asset, technology or product could require us to use significantly more cash reserves than initially expected or in excess of the cash reserves actually required for our current and longer term operational requirements, and this use of cash could limit our future flexibility to operate our business, invest in our existing assets, complete acquisitions of businesses or technologies, or pursue other transactions.

The development of our product candidates, which is based on modifications to natural human proteins, may be subject to substantial delays, increased development costs, reduced market potential for any resulting product or the termination of the affected development program, which could adversely affect our business.

We design our product candidates to confer what we believe will be improved biological properties as compared to one or more currently marketed products. As a result, our product candidates differ from currently marketed drugs in ways that we expect will be beneficial. However, the impact of the modifications that we make in our product candidates may not be fully apparent in preclinical testing and may only be discovered in clinical testing. Such altered properties may render a product candidate unsuitable or less beneficial than expected for one or more diseases or medical conditions of possible interest or make the product candidate unsuitable for further development. For example, our products may be found to be more immunogenic than the corresponding natural human proteins or demonstrate undesirable pharmokinetic or pharmodynamic properties. For a particular product candidate, this may lead to the redirection of the development strategy which could result in substantial delays, increased development costs, decreased likelihood of obtaining regulatory approval, and reduced market potential for any resulting product. This also could result in the termination of the development of the affected product candidate. In either case, such results could adversely affect our business.

In addition, we or a collaborator may determine that certain preclinical or clinical product candidates or programs do not have sufficient therapeutic or commercial potential to warrant further advancement for a particular indication or all indications, and may elect to terminate a program for such indications or product candidates at any time. Our assessment of the commercial potential for a product may change significantly from the time when we invest in discovery and development to the time when the product either reaches the market or reaches clinical development stages that require investment at risk. Commercial potential can change due to many factors beyond our control, such as general economic conditions, the qualitative and quantitative properties of medical reimbursement schemes at the time, the legal status for sale of biologic generics (i.e. bioequivalent protein drugs, generic biologicals and biogenerics), and the financial status of potential partner companies. As commercial potential decreases so the ability or interest of other parties to share the costs of further development

of our products may decrease, thus precluding advancement of our products. Furthermore, we may conclude that a product candidate is not differentiated in a meaningful way from existing products, or that the costs of seeking to establish that a product candidate is differentiated would be prohibitive, or that the market size for a differentiated product with the attributes of a particular product candidate does not justify the expense and risk of further development. If we terminate a preclinical or clinical program in which we have invested significant resources, our financial condition and results of operations may be adversely affected, as we will have expended resources on a program that will not provide a return on our investment and we will have missed the opportunity to have allocated those resources to potentially more productive uses.

In particular, any failure or delay in the development of the MAXY-4 product candidates in preclinical or clinical development could substantially decrease the likelihood that Astellas would exercise its option to purchase our interests in Perseid. Any such failure or delay in the development of the MAXY-4 product candidates could also adversely affect our ability to continue the business of Perseid, which could have a material adverse impact on our business and cause the price of our stock to drop significantly.

We have a history of net losses. We expect to continue to incur net losses and may not achieve or maintain profitability.

As of December 31, 2010, we had an accumulated deficit of $203.2 million. Although we achieved profitability in 2008, primarily due to the $90.6 million we received from Bayer HealthCare LLC in connection with the sale of our hematology assets, and in 2010, primarily due to the $53.2 million recorded as a gain on the distribution of the Codexis stock, we expect to incur additional operating losses for the foreseeable future and may not achieve profitability in the future. We expect to derive a substantial majority of our revenue from collaborations and license agreements. Revenues from such sources are uncertain because such agreements generally have fixed terms and may be terminated under certain conditions, and because our ability to secure future agreements will depend upon our ability to address the needs of current and potential future collaborators. As part of our revised corporate strategy, we may also sell assets that currently generate revenue for us. We expect that our operating expenses will exceed revenues in the near term, and we do not expect to achieve profitability during the next several years, if at all. These operating expenses will decrease the remaining cash available for use in our business or the execution of our strategic plan.

Any inability to adequately protect our proprietary technologies could harm our competitive position.

Our success will depend in part on our ability to obtain patents and maintain adequate protection of our intellectual property for our technologies and products in the United States and other countries. If we do not adequately protect our intellectual property, competitors may be able to practice our technologies and erode our competitive advantage. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting their proprietary rights in these foreign countries. These problems can be caused by, for example, a lack of rules and processes allowing for meaningfully defending intellectual property rights.

We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. The patent positions of biopharmaceutical and biotechnology companies, including our patent positions, are often uncertain and involve complex legal and factual questions. We apply for patents covering our technologies and potential products as we deem appropriate. However, we may not obtain patents on all inventions for which we seek patents, and any patents we obtain may be challenged and may be narrowed in scope or extinguished as a result of such challenges. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products. Enforcement of our patents against infringers could require us to expend significant amounts with no assurance that we would be successful in any litigation. Others may independently develop similar or alternative technologies or products or design around our patented technologies or products. In addition, we may fail to effectively prosecute or maintain certain patent rights or others may challenge or invalidate our patents, in which case our patents may fail to provide us with any competitive advantages.

We also rely upon trade secret protection for our confidential and proprietary information. We have taken security measures to protect our proprietary information. These measures may not provide adequate protection for our trade secrets or other proprietary information. We seek to protect our proprietary information by entering into confidentiality agreements with employees, collaborators and consultants. Nevertheless, employees, collaborators or consultants may still disclose or misuse our proprietary information, and we may not be able to meaningfully protect our trade secrets. In addition, others may independently develop substantially equivalent proprietary information or techniques or otherwise gain access to our trade secrets.

Litigation or other proceedings or third party claims of intellectual property infringement could require us to spend time and money and could require us to shut down some of our operations.

Our ability to develop products depends in part on not infringing patents or other proprietary rights of third parties, and not breaching any licenses that we have entered into with regard to our technologies and products. In particular, others have obtained patents, and have filed, and in the future are likely to file, patent applications that may issue as patents that cover genes or gene fragments or corresponding proteins or peptides that we may wish to utilize to develop, manufacture and commercialize our product candidates. There are often multiple patents owned by third parties that cover particular proteins and related nucleic acids that are of interest to us in the development of our product candidates. To the extent that these patents, or patents that may issue in the future, cover methods or compositions that we wish to use in developing, manufacturing or commercializing our product candidates, and such use by us or on our behalf would constitute infringement of an issued valid patent claim, we would need to obtain a license from the proprietor of the relevant patent rights, which may not be available to us on acceptable terms, if at all.

Third parties may assert that we are employing their proprietary technology without authorization. In particular, our efforts to develop improved, next-generation protein pharmaceuticals could lead to allegations of patent infringement by the parties that hold patents covering other versions of such proteins or methods of making and using such proteins. In addition, third parties that do not have patents that currently cover our activities may obtain such patents in the future and then claim that our activities or product candidates infringe these patents. We could incur substantial costs and diversion of the time and attention of management and technical personnel in defending ourselves against any of these claims or enforcing our patents or other intellectual property rights against others. Furthermore, parties making claims against us may be able to obtain injunctive or other equitable relief that could effectively block our ability to further develop, commercialize and sell products. In addition, in the event of a successful claim of infringement against us, we may be required to pay damages and obtain one or more licenses from third parties. We may not be able to obtain these licenses at a reasonable cost, if at all. In that event, we could encounter delays in product introductions while we attempt to develop alternative methods or products, or be required to cease commercializing affected products.

We monitor the public disclosures of other companies operating in our industry regarding their technological development efforts. If we determine that these efforts violate our intellectual property or other rights, we intend to take appropriate action, which could include litigation. Any action we take could result in substantial costs and diversion of management and technical personnel. Furthermore, the outcome of any action we take to protect our rights may not be resolved in our favor.

We are deploying unproven technologies. If we, or our collaborative partners, do not develop commercially successful products, we may be forced to cease operations.

You must evaluate us in light of the uncertainties and complexities affecting a biotechnology company with early stage programs. We may not be successful in the commercial development of products. Successful products will require significant investment and development, including clinical testing, to demonstrate their safety and effectiveness before their commercialization. To date, companies in the biotechnology industry have developed and commercialized only a limited number of biological products. We have not proven our ability to develop or commercialize any products. We, alone or in conjunction with corporate collaborators, will need to conduct a substantial amount of additional development before any regulatory authority will approve any of our potential

products. This research and development may not indicate that our products are safe and effective, in which case regulatory authorities may not approve them. Problems are frequently encountered in connection with the development and utilization of new and unproven technologies, and the competitive environment in which we operate could limit our ability to develop commercially successful products.

Our manufacturing strategy, which relies on third-party manufacturers, exposes us to additional risks.

We do not currently have the resources, facilities or experience to manufacture any product candidates or potential products ourselves. Completion of any clinical trials and any commercialization of our products will require access to, or development of, manufacturing facilities that meet U.S. Food and Drug Administration, or FDA, standards or other regulatory requirements to manufacture a sufficient supply of our potential products. We currently depend on third parties for the scale up and manufacture of our product candidates for preclinical and clinical purposes. If our third party manufacturers are unable to manufacture preclinical or clinical supplies in a timely manner, or are unable or unwilling to satisfy our needs or the requirements of the FDA or other regulatory requirements, it could delay clinical trials, regulatory submissions and commercialization of our potential products, entail higher costs and possibly result in our being unable to sell our products. In addition, technical problems or other manufacturing delays could delay the advancement of potential products into preclinical or clinical trials, delay or prevent us from achieving development milestones under a collaborative agreement or result in the termination of development of particular product candidates, adversely affecting our revenues and product development timetable, which in turn could adversely affect our business and our stock price.

There are a limited number of contract manufacturers that are suitable for the manufacture of protein pharmaceuticals in compliance with current Good Manufacturing Practices (GMP) requirements, and there is often limited access to such facilities. If we are unable to enter into agreements with qualified manufacturers that will provide us with our product candidates in a timely manner and at an acceptable cost, the development or commercialization of a potential product could be delayed, which would adversely affect our business.

In addition, failure of any third party manufacturers or us to comply with applicable regulations, including pre- or post-approval inspections and the current GMP requirements of the FDA or other comparable regulatory agencies, could result in sanctions being imposed on us. These sanctions could include fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our products, delay, suspension or withdrawal of approvals, license revocation, product seizures or recalls, operational restrictions and criminal prosecutions, any of which could significantly and adversely affect our business.

The manufacturing of our product candidates presents technological, logistical and regulatory risks, each of which may adversely affect our potential revenues.

The manufacturing and manufacturing process development of pharmaceuticals, and, in particular, biologicals, are technologically and logistically complex and heavily regulated by the FDA and other governmental authorities. The manufacturing and manufacturing process development of our product candidates present many risks, including, but not limited to, the following:

- before we can obtain approval of any of our product candidates for the treatment of a particular disease or condition, we must demonstrate to the satisfaction of the FDA and other governmental authorities that the drug manufactured for commercial use is comparable to the drug manufactured for clinical trials and that the manufacturing facility complies with applicable laws and regulations;
- it may not be technically feasible to scale up an existing manufacturing process to meet demand or such scale-up may take longer than anticipated; and
- failure to comply with strictly enforced GMP regulations and similar foreign standards may result in delays in product approval or withdrawal of an approved product from the market.

Any of these factors could delay any clinical trials, regulatory submissions or commercialization of our product candidates, entail higher costs and result in our being unable to effectively sell any products.

We rely on third parties to conduct our preclinical studies and our clinical trials. If these third parties do not perform as contractually required or expected, we may not be able to obtain regulatory approval for our product candidates, or we may be delayed in doing so.

We do not have the ability to independently conduct preclinical studies or clinical trials for our product candidates, and therefore have relied on third parties, such as contract research organizations, medical institutions, academic institutions, clinical investigators and contract laboratories, to conduct many of our preclinical studies, assist us in designing our clinical trials, prepare documents for submission to regulatory authorities, obtain regulatory approval to conduct clinical trials, enroll qualified patients, conduct and maintain our clinical trials, and analyze the results of such trials. We (or a collaborator) are responsible for confirming that our preclinical studies are conducted in accordance with applicable regulations and that each of our clinical trials is conducted in accordance with its general investigational plan and protocol. The FDA requires us to comply with regulations and standards, commonly referred to as good laboratory practices, or GLP, for conducting and recording the results of our preclinical studies and good clinical practices for conducting, monitoring, recording and reporting the results of clinical trials, to assure that data and reported results are accurate and that the clinical trial participants are adequately protected. Our reliance on third parties does not relieve us of these responsibilities.

If these third parties do not successfully carry out their contractual duties, do not meet expected deadlines, fail to comply with the FDA's GLP regulations, do not conduct clinical trials in accordance with the approved protocol and regulatory requirements, or are unable to manage the conduct of our clinical trials effectively in compliance with FDA and other regulatory requirements, it could adversely impact the results obtained in such preclinical studies or clinical trials or require us to enter into new arrangements with alternative third parties, all of which could extend, delay or terminate the progress or completion of clinical trials, regulatory submissions and commercialization of our potential products. In any such case, we may be affected by increased costs and delays or both, which may harm our business.

Our current and future product candidates could take a long time to complete clinical development, may fail in clinical development, or may never gain approval, which could reduce or eliminate our revenue by delaying or terminating the potential commercialization of our product candidates.

The conduct of clinical trials for a single product candidate is a time-consuming, expensive and uncertain process and typically requires years to complete. Our product candidates or potential product candidates may produce undesirable toxicities and adverse effects in preclinical studies. Such toxicities or adverse effects could delay or prevent the filing of an IND with respect to such product candidates or potential product candidates. In clinical trials, administering any of our product candidates to humans may produce undesirable toxicities or side effects. These toxicities or side effects could interrupt, delay, suspend or terminate clinical trials of our product candidates and could result in the FDA or other regulatory authorities denying approval of our product candidates for any or all targeted indications. Indications of potential adverse effects or toxicities which may occur in clinical trials and which we believe are not significant during the course of such trials may later turn out to actually constitute serious adverse effects or toxicities when a drug has been used in large populations or for extended periods of time.

Although MAXY-4 and MAXY-G34 have demonstrated desirable properties in preclinical testing, and in early clinical testing of MAXY-G34, indicating that these product candidates may have advantages as compared to currently marketed drugs, the results from preclinical testing in vitro and animal models, as well as early, small scale clinical trials, often are not predictive of results obtained in larger later stage clinical trials designed to prove safety and efficacy. As a result, there can be no assurances that clinical trials of any of our current or future product candidates will be completed or produce sufficient safety and efficacy data necessary to obtain regulatory approval or result in a marketed product.

In addition, the timing of the commencement, continuation or completion of clinical trials may be subject to significant delays, or a clinical trial may be suspended or delayed by us, a collaborator, the FDA or other foreign governmental agencies for various reasons, including:

- deficiencies in the conduct of the clinical trials;

- negative or inconclusive results from the clinical trials that necessitate additional clinical studies;
- difficulties or delays in identifying and enrolling patients who meet trial eligibility criteria;
- delays in obtaining or maintaining required approvals from institutions, review boards or other reviewing entities at clinical sites;
- inadequate supply or deficient quality of product candidate materials necessary for the conduct of the clinical trials;
- the occurrence of unacceptable toxicities or properties or unforeseen adverse events, especially as compared to currently approved drugs intended to treat the same indications;
- our lack of financial resources to continue the development of a product candidate;
- future legislation or administrative action or changes in FDA policy or the policy of foreign regulatory agencies during the period of product development, clinical trials and FDA regulatory review; or
- other reasons that are internal to the business of a collaborative partner, which it may not share with us.

As a result of these risks and other factors, we may conduct lengthy and expensive preclinical studies and clinical trials of MAXY-4 and our other current or future product candidates, only to learn that a particular product candidate has failed to demonstrate sufficient safety or efficacy necessary to obtain regulatory approval for one or more therapeutic indications, has failed to demonstrate clinically relevant differentiation of our products from currently marketed products, does not offer therapeutic or other improvements compared to other marketed drugs, has unforeseen adverse events or does not otherwise demonstrate sufficient potential to make the commercialization of the product worthwhile. Any failure or substantial delay in successfully completing clinical trials, obtaining regulatory approval and commercializing our product candidates could severely harm our business.

Our potential products are subject to a lengthy and uncertain regulatory process and may never gain approval. If our potential products are not approved, we or our collaborative partners will not be able to commercialize those products.

The FDA must approve any therapeutic product or vaccine before it can be marketed in the United States. Other countries also require approvals from regulatory authorities comparable to the FDA before products can be marketed in the applicable country. Before we can file a biologic license application (BLA) with the FDA or other regulatory entity, the product candidate must undergo extensive testing, including animal studies and human clinical trials, which can take many years and require substantial expenditures. Data obtained from such testing may be susceptible to varying interpretations that could delay, limit or prevent regulatory approval.

Because our potential products involve the application of new technologies and may be based upon new therapeutic approaches, they may be subject to substantial review by government regulatory authorities and these authorities may grant regulatory approvals more slowly for our products than for products using more conventional technologies. Neither the FDA nor any other regulatory authority has approved any therapeutic product candidate developed with the MolecularBreeding™ directed evolution platform for commercialization in the United States or elsewhere. We, or a collaborator, may not be able to conduct clinical testing or obtain the necessary approvals from the FDA or other regulatory authorities for our products.

Regulatory approval of a BLA is never guaranteed, and the approval process may take several years and is extremely expensive. The FDA and other regulatory agencies also have substantial discretion in the drug approval process. Despite the time and expense exerted, failure can occur at any stage, and we could encounter problems that cause us to abandon clinical trials or to repeat or perform additional preclinical testing and clinical trials. The number and focus of preclinical studies and clinical trials that will be required for approval from the FDA and other regulatory agencies varies depending on the drug candidate, the disease or condition that the drug candidate is designed to address, and the regulations applicable to any particular drug candidate. The FDA and other regulatory agencies can delay, limit or deny approval of a drug candidate for many reasons, including:

- a drug candidate may not be safe or effective;

- regulatory officials may not find the data from preclinical testing and clinical trials sufficient;
- the FDA and other regulatory agencies might not approve our third-party manufacturer's processes or facilities; or
- the FDA or other regulatory agencies may change their approval policies or adopt new regulations.

Even if we receive regulatory approval to sell a product, the approved label for a product may entail limitations on the indicated uses for which we can market a product. For example, even if MAXY-G34 is further developed for the treatment of chemotherapy-induced neutropenia and approved by the FDA, if we are not able to obtain broad labeling for this product allowing approved use with multiple chemotherapy regimens for multiple cancers, MAXY-G34 may not be adopted by hospital formularies or otherwise have limited commercial success which could have a significant adverse impact on our business. Further, once regulatory approval is obtained, a marketed product and its manufacturer are subject to continued review, and discovery of previously unknown problems or adverse events associated with an approved product or the discovery of previously unknown problems with the manufacturer may result in restrictions on the product, the manufacturer or the manufacturing facility, including withdrawal of the product from the market. In certain countries, regulatory agencies also set or approve prices.

During the period while we are engaged in product development, the policies of the FDA and foreign regulatory entities may change and additional government laws or regulations may be enacted that could prevent or delay regulatory approval of our drug candidates. If we are not able to maintain regulatory compliance, we might not obtain approval of our products or be permitted to market our products. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. In this regard, legislation has been proposed in the United States but not yet enacted into law that would define a regulatory approval process for protein drugs that are similar to already marketed protein drugs.

If our collaborations are not successful or we are unable to enter into and maintain future collaboration arrangements for any of our product candidates, we may not be able to effectively develop and market some of our products.

Since we do not currently possess the resources necessary to develop and commercialize multiple products, or the resources to complete all approval processes that may be required for these potential products, we have generally sought to enter into collaborative arrangements to fund the development of new product candidates for specific indications and to develop and commercialize potential products. Perseid is currently party to collaboration arrangements with Astellas with respect to the MAXY-4 program and its other preclinical product candidates, and if we are unable to enter into any new collaboration arrangements, or if existing or future collaboration arrangements are not maintained, our potential products may not be commercialized.

We have limited or no control over the resources that a collaborator may devote to the development and commercialization of our potential products. A collaborator may elect not to develop potential products arising out of a collaborative arrangement or not to devote sufficient resources to the development, manufacture, marketing or sale of these products. Further, a collaborator may not perform its obligations as expected and may delay the development or commercialization of a product candidate, terminate its agreement with us, or breach or otherwise fail to conduct its collaborative activities successfully and in a timely manner. If any of these events occur, we may not be able to develop or commercialize our potential products.

For example, if Astellas elects not to exercise its option to purchase our interests in Perseid and we are unable to enter into a collaboration or licensing arrangement for the continued preclinical or clinical development of MAXY-4 or any of Perseid's other programs, or we are unable to enter into a collaboration or licensing arrangement for the continued clinical development of MAXY-G34, we or Perseid may elect to delay or discontinue further development of such programs, which may harm our business.

Any conflicts with a collaborator could harm our business.

An important part of our strategy involves conducting proprietary research programs. As a result, we may pursue opportunities in fields that could conflict with a future collaborator. Moreover, disagreements with a collaborator could develop over rights to our intellectual property. Any conflict with a collaborator could reduce our ability to obtain future collaboration agreements and negatively impact our relationship with a future collaborator, which could reduce our revenues.

In addition, a collaborator may market products intended to treat the medical conditions that our product candidates are planned to be used to treat, and could become our competitors in the future. For example, a collaborator could develop and commercialize competing products, fail to rapidly develop our product candidates, fail to obtain timely regulatory approvals for product commercialization, terminate their agreements with us prematurely, or fail to devote sufficient resources to allow the development and commercialization of our products. Any of these circumstances could harm our product development efforts. We have limited ability to prevent actions by any future collaborator that could have any adverse impact on the development and commercialization of our related product candidates.

Our revenues, expenses and operating results are subject to fluctuations that may cause our stock price to decline.

Our revenues, expenses and operating results have fluctuated in the past and are likely to do so in the future. These fluctuations could cause our stock price to fluctuate significantly or decline. Some of the factors that could cause our revenues, expenses and operating results to fluctuate include:

- the sale of an asset, or assets, that currently generate revenue for us, including the sale of our interest in Perseid to Astellas in connection with any exercise by Astellas of its option;
- the termination of research and development contracts with collaborators, which may not be renewed or replaced;
- the success rate of our development or discovery efforts leading to milestones and royalties under collaboration arrangements, if any;
- the timing of licensing fees or the achievement of milestones under new or existing licensing and collaborative arrangements, including the potential milestone payment from Bayer;
- the timing of expenses, particularly with respect to contract manufacturing, preclinical studies and clinical trials;
- the timing and willingness of any existing or future collaborators to commercialize our products, which would result in royalties to us; and
- general and industry specific economic conditions, which may affect the research and development expenditures of any future collaborator.

In addition, a large portion of our expenses is relatively fixed, including expenses for facilities, equipment and personnel. Accordingly, if revenues fluctuate unexpectedly due to failure to obtain anticipated new contracts or other factors, we may not be able to immediately reduce our operating expenses, which could significantly harm our operating results for a particular fiscal period.

Due to the possibility of fluctuations in our revenues and expenses, we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. Our operating results in some quarters may not meet the expectations of stock market analysts and investors. In that case, our stock price would likely decline.

Other biological products may compete with our products.

If approved for sale by regulatory authorities, our next-generation protein therapeutics will likely compete with already approved earlier-generation products based on the same protein. In addition, as the patent protection for such earlier-generation protein products expires, we expect that additional products with amino acid sequences identical or substantially similar to those of the earlier-generation protein products that have lost patent protection will also enter the marketplace and compete with such earlier generation protein products and our products. This competition may be intense, with success determined by product attributes, price and marketing power. The availability of such similar products may result in price erosion for all products of the class and could lead to limits on reimbursement for our products by third party payors.

With regard to our MAXY-4 product candidates, we expect Orencia® (Bristol Myers Squibb Company) to compete with MAXY-4, if commercialized. In addition, we are aware that Bristol Myers Squibb Company is also developing belatacept that, if marketed, could compete with MAXY-4.

With regard to our MAXY-G34 product candidate, we would expect Neulasta® and Neupogen® to compete with MAXY-G34, if commercialized for chemotherapy-induced neutropenia. In addition, we are aware that BioGeneriX AG and Teva Pharmaceutical Industries Ltd. are developing G-CSF products based on naturally occurring human G-CSF.

In addition, any approval of biosimilars in the United States or other foreign jurisdiction would likely lead to the eventual introduction of biosimilar protein products, which could result in increased competition for all forms of a particular therapeutic protein.

Many potential competitors who have greater resources and experience than we do may develop products and technologies that make ours obsolete.

The biotechnology industry is characterized by rapid technological change, and the area of gene research is a rapidly evolving field. Our future success will depend on our ability to maintain a competitive position with respect to technological advances. Rapid technological or product development by others may result in our products and technologies becoming obsolete.

As a company that is focused on next-generation protein therapeutic products, we face, and will continue to face, intense competition from both large and small biotechnology companies, as well as academic and research institutions and government agencies, that are pursuing competing technologies for modifying DNA and proteins. These companies and organizations may develop technologies that are alternatives to our technologies. Further, our competitors in the protein optimization field, including companies that have developed and commercialized prior versions of protein therapeutic products, may be more effective at implementing their technologies to develop commercial products. Some of these competitors have entered into collaborations with leading companies within our target markets to produce commercial products. In addition, therapeutic products that are small molecules may be developed by our competitors that could reduce or displace the market for our protein therapeutic products. Small molecule drugs are often less expensive and easier to administer than protein therapeutics and therefore would have competitive advantages if they were developed and shown to be safe and effective for the indication that our product candidates are targeting.

Even if approved by the FDA or a comparable foreign regulatory agency, any products that we develop through our technologies will compete in multiple, highly competitive markets and may fail to achieve market acceptance, which would impair our ability to become profitable. Most of the companies and organizations competing with us in the markets for such products have greater capital resources, research and development and marketing staff and facilities and capabilities, and greater experience in modifying DNA and proteins, obtaining regulatory approvals, manufacturing products and marketing. Accordingly, our competitors may be able to develop technologies and products more easily, which would render our technologies and products and those of a collaborator obsolete and noncompetitive.

In addition, if any of our drug candidates are approved for commercial sale, they will need to compete with other products intended to treat the same disease, including the marketed versions of the protein therapeutic drug that we have sought to improve, and possibly including other variant versions of such drug, and generic bioequivalent or biosimilar versions of such drugs, and small molecule drugs. Such competition may be intense and lead to price reductions for all forms of a particular therapeutic protein. Moreover, any adverse developments related to a currently marketed version of the protein therapeutic drug that we have sought to improve or a generic bioequivalent or biosimilar version of such drug may have a significant adverse impact on the continued development or future commercialization and marketing of our related product candidates and could cause us to change our development plans or discontinue further development of such product candidates. If we are unable to market and commercialize our product successfully, our business would be adversely affected.

Drug development is a long, expensive and uncertain process and may not result in the development of any commercially successful products.

The development of human therapeutic products is long and uncertain. Most product candidates fail before entering clinical trials or in clinical trials. Moreover, most products that commence clinical trials are not approved for use in humans and never reach the market. In addition, due to the nature of human therapeutic research and development, the expected timing of product development, initiation of clinical trials and the results of such development and clinical trials are uncertain and subject to change at any point. Such uncertainty, which exists even for product candidates that appear promising based on earlier data, may result in research or development delays, clinical trial delays and failures, product candidate failures and delays in regulatory action or approval. Such delays or failures could reduce or eliminate our revenue by delaying or terminating the potential development and commercialization of our product candidates and could drastically reduce the price of our stock and our ability to raise capital. Without sufficient capital, we could be forced to reduce or cease our operations.

All of our product candidates are subject to the risks of failure inherent in drug development. Preclinical studies may not yield results that would satisfactorily support the filing of an investigational new drug application (IND) with respect to our drug candidates, and the results of preclinical studies do not necessarily predict the results of clinical trials. Moreover, the available animal models may be unsuitable for assessing our potential products for one or more indications, increasing the risk that animal models may not provide accurate or meaningful data as to the suitability or advantages of our potential products as treatments for the diseases or medical conditions of interest. Similarly, early-stage clinical trials may not predict the results of later-stage clinical trials, including the safety and efficacy profiles of any particular drug candidate. In addition, there can be no assurance that the design of our clinical trials will result in obtaining the desired efficacy data to support regulatory approval. Even if we believe the data collected from clinical trials of our drug candidates are promising, such data may not be sufficient to support approval by the FDA or any foreign regulatory agency, which could delay, limit or prevent regulatory approval of our drug candidates. The FDA and similar regulatory agencies determine the type and amount of data necessary to obtain approval of any drug candidate, and as a result of new data or changes in the policies or practices of such agencies, the type and amount of data required for approval may change in the period between the start of product development and the completion of clinical trials.

Any failure or substantial delay in successfully completing clinical trials, obtaining regulatory approval and commercializing any of our current or future product candidates could severely harm our business.

If we or a collaborator receives regulatory approval for one of our drug candidates, we will be subject to ongoing FDA obligations and continued regulatory review, and we may also be subject to additional FDA post-marketing obligations, all of which may result in significant expense and limit our ability to commercialize our potential drugs.

Any regulatory approvals that we or a collaborator receive for one of our product candidates may also be subject to limitations on the indicated uses for which the product may be marketed or contain requirements for potentially costly post-marketing follow-up studies. In addition, if the FDA or a foreign regulatory agency

approves any of our drug candidates, the labeling, packaging, adverse event reporting, storage, advertising, promotion, and record keeping for the product will be subject to extensive regulatory requirements. The subsequent discovery of previously unknown problems with the product, including adverse events of unanticipated severity or frequency, may result in restriction on the marketing of the product, and could include withdrawal of the drug from the market.

We may be subject to costly product liability claims and may not have adequate insurance.

Because we have conducted clinical trials in humans in the past and may conduct such trials in the future, we face the risk that the use of our product candidates will result in adverse effects. We currently maintain product liability insurance for our clinical trials, however, such liability insurance may not be adequate to fully cover any liabilities that arise from clinical trials of our product candidates. We may not have sufficient resources to pay for any liabilities resulting from a claim excluded from, or beyond the limit of, our insurance coverage.

Any claims relating to improper handling, storage or disposal of the hazardous chemicals and radioactive and biological materials we use in our business could be time-consuming and costly.

Our research and development processes involve the controlled use of hazardous materials, including chemicals and radioactive and biological materials and our operations produce hazardous waste products. We cannot eliminate the risk of accidental contamination or discharge and any resultant injury from those materials. Federal, state and local laws and regulations govern the use, manufacture, storage, handling and disposal of hazardous materials. We may be sued for any injury or contamination that results from our use or the use by third parties of these materials. Compliance with environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production activities.

Legislative actions, new accounting pronouncements and higher compliance costs may adversely impact our future financial position and results of operations.

Future changes in financial accounting standards may cause adverse, unexpected earnings fluctuations and may adversely affect our reported results of operations. New accounting pronouncements and varying interpretations of such pronouncements have occurred with frequency in the recent past and may occur in the future. In addition, we may make changes in our accounting policies in the future.

In addition, compliance with changing regulations regarding corporate governance and public disclosure may also result in additional expenses. Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002 and related SEC regulations and Nasdaq Global Market listing requirements, have often created uncertainty for companies such as ours. We are committed to maintaining high standards of corporate governance and public disclosure. As a result, we intend to invest all reasonably necessary resources to comply with evolving standards, and this investment may result in increased general and administrative expenses and cause a diversion of management time and attention from revenue-generating activities to compliance activities.

If current levels of market disruption and volatility continue or worsen, we may not be able to preserve our cash balances or access such sources if necessary.

The capital and credit markets have been experiencing extreme volatility and disruption. As of December 31, 2010, we had $128.0 million in cash, cash equivalents and marketable securities, of which, $25.7 million is held by Perseid and may only be used for Perseid's operations. While we maintain an investment portfolio primarily of short-term commercial paper and money market funds and have not experienced any liquidity issues with respect to these securities, we may experience reduced liquidity with respect to some of our investments if current levels of market disruption and volatility continue or worsen. Under extreme market conditions, there can be no assurance that we would be able to preserve our cash balances or that such sources would be available or sufficient for our business.

Our facilities in California are located near an earthquake fault, and an earthquake or other types of natural disasters or resource shortages could disrupt our operations and adversely affect our results.

All of our facilities and substantially all of our important documents and records, such as hard copies of our laboratory books and records for our drug candidates and compounds and our electronic business records, are located in our corporate headquarters at a single location in Redwood City, California, near active earthquake zones. We do not have a formal business continuity or disaster recovery plan, and in the event of a natural disaster, such as an earthquake or localized extended outages of critical utilities or transportation systems, we could experience a significant business interruption.

Our stock price has been, and may continue to be, extremely volatile, and an investment in our stock could decline in value.

The trading prices of life science company stocks in general, and ours in particular, have experienced significant price fluctuations in the last several years. During 2010, the price of our common stock on the Nasdaq Global Market ranged from $3.75 to $7.19. The valuations of many life science companies without product revenues and earnings, including ours, are based on valuation standards such as price to sales ratios and progress in product development or clinical trials. Trading prices based on these valuations may not be sustained. Any negative change in the public's perception of the prospects of biotechnology or life science companies could depress our stock price regardless of our results of operations. Other broad market and industry factors may decrease the trading price of our common stock, regardless of our performance. In addition, our stock price could be subject to wide fluctuations in response to factors including the following:

- our consummation, or our failure to consummate, any strategic transaction;
- any decision by Astellas to exercise, or the failure of Astellas to exercise, its option to purchase our ownership interests in Perseid;
- our implementation, or our failure to implement, any additional distributions of our cash resources to stockholders;
- our receipt of, or failure to receive, any licensing or milestone fees or the achievement of milestones under new or existing licensing and collaborative arrangements, including the potential milestone payment from Bayer;
- our failure to meet our publicly announced revenue and/or expense projections and/or product development timetables;
- adverse or inconclusive results or delays in preclinical development or clinical trials;
- any entry into or material amendment or termination of a collaborative or license agreement;
- any decisions to discontinue or delay development programs or clinical trials;
- announcements of new technological innovations or new products by us or our competitors;
- conditions or trends in the biotechnology and life science industries;
- changes in the market valuations of other biotechnology or life science companies;
- developments in domestic and international governmental policy or regulations;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- changes in general economic, political and market conditions, such as recessions, interest rate changes, terrorist acts and other factors;
- developments in or challenges relating to our patent or other proprietary rights, including lawsuits or proceedings alleging patent infringement based on the development, manufacturing or commercialization of our product candidates; and
- sales of our common stock or other securities in the open market.

In the past, stockholders have often instituted securities class action litigation after periods of volatility in the market price of a company's securities. If a stockholder files a securities class action suit against us, we could incur substantial legal fees and our management's attention and resources would be diverted from operating our business to respond to the litigation.

Substantial sales of shares may adversely impact the market price of our common stock.

Our common stock trading volume is low and thus the market price of our common stock is particularly sensitive to trading volume. If our stockholders sell substantial amounts of our common stock, including shares issued upon the exercise of outstanding options or other equity awards, the market price of our common stock may decline. Significant sales of our common stock may adversely impact the then-prevailing market price of our common stock.

Volatility in the stock prices of other companies may contribute to volatility in our stock price.

The stock market in general, and The Nasdaq Global Market and the market for technology companies in particular, have experienced significant price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Further, there has been particular volatility in the market prices of securities of early stage and development stage life sciences companies. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been instituted. A securities class action suit against us could result in substantial costs, potential liabilities and the diversion of management's attention and resources, and could harm our reputation and business.

Item 1B UNRESOLVED STAFF COMMENTS

Not applicable.

Item 2 PROPERTIES

We lease an aggregate of 43,272 square feet of office and laboratory facilities in Redwood City, California. Our leases expire on February 28, 2015 and include options to extend the leases for up to six additional years. Perseid is the primary lessee under the lease agreements and its operations and employees occupy the majority of the leased space, with space, rent and other expenses allocated to Maxygen based on headcount, as adjusted from time to time, under sublease arrangements between Perseid and Maxygen. We believe that our existing facilities are adequate to meet our needs for the immediate future.

Item 3 LEGAL PROCEEDINGS

The information included in Note 10 of the Notes to Consolidated Financial Statements in Part II – Item 8 of this report is incorporated herein by reference.

Item 4 (REMOVED AND RESERVED)

Part II

Item 5 MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock has been traded on the Nasdaq Global Market under the symbol "MAXY" since December 16, 1999. During the last two fiscal years, through December 31, 2010, the high and low sale prices for our common stock, as reported on the Nasdaq Global Market, were as follows:

	High	Low
Year ended December 31, 2010		
First Quarter	$6.82	$5.35
Second Quarter	7.19	5.50
Third Quarter	6.26	5.30
Fourth Quarter	6.91	3.75
Year ended December 31, 2009		
First Quarter	$9.49	$6.41
Second Quarter	7.68	4.78
Third Quarter	8.30	6.10
Fourth Quarter	6.90	4.92

Holders

As of February 28, 2011, there were 182 holders of record of our common stock, one of which is Cede & Co., a nominee for Depository Trust Company ("DTC"). All of the shares of common stock held by brokerage firms, banks and other financial institutions as nominees for beneficial owners are deposited into participant accounts at DTC, and therefore, are considered to be held of record by Cede & Co. as one stockholder.

Dividends

In December 2010, we distributed substantially all of the shares of Codexis common stock we held, valued at $53.2 million on the date of distribution, together with approximately $29.2 million in cash, to our stockholders by way of pro rata special distributions. Prior to those distributions, we had not previously declared or paid any cash dividends or other distributions on our capital stock. Our payment of any future dividends or distributions will be at the discretion of our board of directors.

Issuer Purchases of Equity Securities

The table below summarizes information about our purchases of equity securities registered pursuant to Section 12 of the Exchange Act during the quarterly period ended December 31, 2010.

Period	Total Number of Shares Purchased(1)	Average Price Paid per Share(2)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs(1)	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs(3)
Oct. 1, 2010 through Oct. 31, 2010	35,920	$5.81	35,920	—
Nov. 1, 2010 through Nov. 30, 2010	2,900	$5.99	2,900	—
Dec. 1, 2010 through Dec. 31, 2010	—	—	—	—
Total	38,820	$5.82	38,820	—

(1) On May 27, 2010, we announced that our Board had authorized a stock repurchase program to repurchase shares of our common stock, subject to certain specifications, up to an aggregate maximum amount of $10.0 million through December 31, 2010.

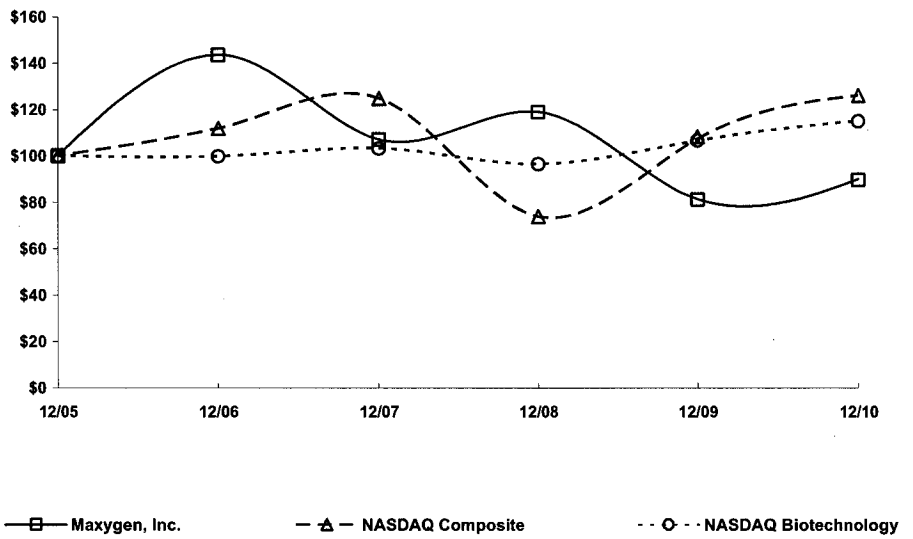
(2) The price paid per share of common stock does not include the related transaction costs.

(3) We terminated our stock repurchase program in November 2010 in connection with our announcement regarding the distributions of Codexis common stock and cash to our stockholders

Company Stock Price Performance[1]

The following graph shows the cumulative total stockholder return of an investment of $100 in cash on December 31, 2005 through December 31, 2010 for (i) our common stock, (ii) the Nasdaq Composite Index and (iii) the Nasdaq Biotechnology Index. All values assume reinvestment of the full amount of all dividends or distributions. Stockholder returns over the indicated period should not be considered indicative of future stockholder returns.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among Maxygen, Inc., The NASDAQ Composite Index
And The NASDAQ Biotechnology Index



* $ 100 invested on 12/31/05 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

Total Return Analysis

	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010
Maxygen, Inc.	$100.00	$143.41	$106.92	$118.77	$ 81.09	$ 89.51
Nasdaq Composite Index	$100.00	$111.74	$124.67	$ 73.77	$107.12	$125.93
Nasdaq Biotechnology Index	$100.00	$ 99.71	$103.09	$ 96.34	$106.49	$114.80

(1) The material in this section is not "soliciting material," is not deemed "filed" with the SEC and is not to be incorporated by reference in any of our filings under the Securities Act or the Exchange Act whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

Item 6 SELECTED FINANCIAL DATA

The following selected financial information is derived from our audited consolidated financial statements. When you read this selected financial data, it is important that you also read the historical financial statements and related notes included in this report, as well as the section of this report entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations." Historical results are not necessarily indicative of future results.

	Year Ended December 31,				
	2006	2007	2008	2009	2010
	(in thousands, except per share data)				
Consolidated Statements of Operations Data:					
Collaborative research and development revenue	$ 20,527	$ 8,718	$ —	$ —	$ —
Technology and license revenue	17	1,514	90,584	15	1,543
Related party revenue	—	8,286	5,051	31,816	35,325
Grant revenue	4,477	4,639	5,074	4,545	733
Total revenues	25,021	23,157	100,709	36,376	37,601
Operating expenses:					
Research and development	49,130	59,851	46,274	36,640	32,035
General and administrative	17,559	14,951	14,845	17,494	12,675
Goodwill impairment	—	—	12,192	—	—
Restructuring charge	—	5,212	1,987	15,964	(98)
Total operating expenses	66,689	80,014	75,298	70,098	44,612
Income (loss) from operations	(41,668)	(56,857)	25,411	(33,722)	(7,011)
Gain on distribution of equity securities(1)	—	—	—	—	53,180
Sale of platform technology(2)	—	—	—	—	20,000
Interest and other income	8,524	7,542	4,914	977	25
Equity in net loss of minority investee(3)	(1,000)	—	—	—	—
Gain on sale of equity investment(4)	17,802	—	—	—	—
Net income (loss) before income taxes	(16,342)	(49,315)	30,325	(32,745)	66,194
Income tax benefit (expense)	(140)	—	—	588	2,238
Net income (loss)	(16,482)	(49,315)	30,325	(32,157)	68,432
Net income (loss) attributable to non-controlling interest	—	—	—	245	(452)
Net income (loss) attributable to Maxygen, Inc.	$(16,482)	$(49,315)	$ 30,325	$(32,402)	$68,884
Basic net income (loss) per share attributable to Maxygen, Inc.	$ (0.46)	$ (1.34)	$ 0.82	$ (0.85)	$ 2.30
Diluted net income (loss) per share attributable to Maxygen, Inc.	$ (0.46)	$ (1.34)	$ 0.81	$ (0.85)	$ 2.29
Shares used in basic net income (loss) per share calculations	36,046	36,787	37,100	38,236	29,949
Shares used in diluted net income (loss) per share calculations	36,046	36,787	37,358	38,236	30,128

(1) Gain on distribution of equity securities resulted from the fair value recorded for the 5.4 million shares of Codexis, Inc. distributed in December 2010.

(2) Sale of platform technology resulted from our sale of substantially all of the patents and other intellectual property rights associated with our MolecularBreeding™ directed evolution platform to Codexis, Inc. in October 2010.

(3) Equity in net loss of minority investee in the year ended December 31, 2006 resulted from the losses we recorded equal to our investment basis in Codexis, Inc. under the equity method of accounting as of December 31, 2006.

(4) The gain on sale of equity investment in the year ended December 31, 2006 resulted from the net gain on the sale of our investment in Avidia, Inc. in October 2006, in connection with the acquisition of Avidia, Inc. by Amgen Inc.

	December 31,				
	2006	2007	2008	2009	2010
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents and investments	$ 182,876	$ 145,813	$ 206,483	$ 159,530	$ 128,027
Working capital	175,356	138,171	195,234	154,234	127,034
Total assets	205,647	172,709	213,557	177,237	146,986
Accumulated deficit	(220,704)	(270,019)	(239,694)	(272,096)	(203,212)
Total Maxygen, Inc. stockholders' equity(1)	189,799	153,494	194,512	151,604	126,103
Non-controlling interest	—	—	—	3,907	3,664
Total stockholders' equity	189,799	153,494	194,512	155,511	129,767

(1) We made a special cash distribution of $1.00 per share and distributed 5.4 million shares of Codexis common stock in December 2010, both of which were reflected as a reduction in Additional paid-in capital, a component of Stockholders' equity.

Item 7 MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with our consolidated financial statements and the related notes and other financial information appearing elsewhere in this report. This report contains forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from those indicated in forward-looking statements. See "Forward-Looking Statements" and "Risk Factors."

Overview

We are a biopharmaceutical company focused on developing improved versions of protein drugs through internal development and external collaborations and other arrangements. We use our directed evolution technology platform, along with ancillary technologies, and extensive protein modification expertise to pursue the creation of biosuperior proteins.

We operate substantially all of our research and development operations through Perseid Therapeutics LLC, or Perseid, a majority-owned subsidiary established in September 2009 in connection with a joint venture arrangement with Astellas Pharma, Inc., or Astellas, which holds a minority investment in Perseid. Perseid is focused on the discovery, research and development of multiple protein pharmaceutical programs, including CTLA-4 Ig product candidates (designated as our MAXY-4 program) that are designed to be superior, next-generation CTLA-4 Ig therapeutics for the treatment of a broad array of autoimmune disorders, including rheumatoid arthritis, and transplant rejection. Under the joint venture arrangement, Astellas has an option to acquire all of our ownership interest in Perseid at specified exercise prices that increase each quarter from the current option price of $76.0 million (through March 18, 2011) to $123.0 million over the term of the option, which expires on September 18, 2012.

In January 2011, Astellas initiated a Phase I clinical study to evaluate a MAXY-4 therapeutic (designated by Astellas as ASP2408) for the treatment of rheumatoid arthritis and potentially other autoimmune indications. Perseid earned a $10.0 million payment from Astellas for the achievement of this clinical milestone.

In addition to our majority ownership of Perseid, our other significant programs and assets include a MAXY-G34 product candidate, which is designed to be an improved, next-generation pegylated, granulocyte colony stimulating factor, or G-CSF, for the treatment of chemotherapy-induced neutropenia, and which has potential application in the treatment of acute radiation syndrome, and approximately $128.0 million in cash, cash equivalents and marketable securities as of December 31, 2010 (including $25.7 million held by Perseid as of such date). We also remain eligible for a milestone payment of up to $30.0 million from Bayer HealthCare LLC, or Bayer, related to the sale of our hematology assets to Bayer in July 2008.

The consummation of the joint venture transaction with Astellas in September 2009 largely completed a multi-year strategic process to position our programs and assets in collaborations and other arrangements that are primarily supported by external parties. Since then, we have focused on managing these assets and arrangements to maximize the return to our stockholders. We expect to continue to realize value for our stockholders by focusing our efforts on the continued progress of Perseid and its collaborations with Astellas in an effort to increase the likelihood that Astellas will exercise its option to purchase our interest in Perseid.

In addition, given that we continue to have large cash reserves and a reduced ongoing financial commitment to the business contributed to Perseid, we expect to consider and evaluate additional distributions to our stockholders of a portion of our cash resources in excess of our current and longer term operational requirements, although none are currently contemplated. Such distributions may be accomplished through cash dividends, stock repurchases or other mechanisms and may be fully or partially taxable depending on the circumstances of such distribution. If appropriate opportunities become available, we may also consider and evaluate using a portion of our cash reserves to acquire additional businesses, assets, technologies, or products. Our plans with respect to any future distributions or acquisitions will be largely dependent upon the success of Perseid, whether Astellas

exercises its option to purchase Perseid, whether we receive the remaining milestone payment from Bayer, any future developments related to the success of our MAXY-G34 program and the future financial commitments and longer term operational requirements related to these assets.

Significant Developments

Significant developments during 2010 included:

- In January 2010, Perseid received a $5.0 million milestone payment from Astellas for the achievement of a preclinical milestone under its collaboration with Astellas to co-develop and commercialize its CTLA-4 Ig therapeutics.
- In January 2010, we sold substantially all of our vaccines assets, including the related government grants, to AltraVax, Inc., or AltraVax for an initial payment of $500,000. We received a second payment from AltraVax of $525,000 in December 2010 and AltraVax is obligated to pay us an additional amount of up to $625,000 by December 31, 2011, as the final payment of the purchase price for these assets.
- In March 2010, we repurchased 1,433,361 shares of our common stock from entities affiliated with GlaxoSmithKline plc. for an aggregate purchase price of approximately $8.0 million.
- In May 2010, we announced an open market stock repurchase program for the repurchase up to $10.0 million of our common stock through December 31, 2010, and we repurchased 1,204,604 shares under this program during 2010 at an aggregate purchase price of approximately $6.9 million.
- In July 2010, Perseid received another $5.0 million dollar payment from Astellas for the achievement of a second preclinical milestone under its collaboration agreement with Astellas.
- In July 2010, our option and license agreement with Cangene Corporation, or Cangene, under which we had granted Cangene an option to obtain an exclusive license to our MAXY-G34 therapeutic for use in treating acute radiation syndrome (ARS), expired and we are not eligible to receive any further payments under this agreement.
- In August 2010, our license agreement with sanofi pasteur, the vaccines division of the sanofi-aventis Group, relating to the development by sanofi of a vaccine for the dengue virus was terminated, and we are not eligible to receive any further payments from sanofi under this agreement.
- In October 2010, we sold substantially all of the patents and other intellectual property rights associated with our MolecularBreeding™ directed evolution platform to Codexis, Inc., or Codexis, and cancelled all payment and potential royalty obligations of Codexis to us relating to biofuels and other energy products, for $20.0 million.
- In December 2010, we distributed 5,445,274 shares of Codexis common stock, as well as approximately $29.2 million in cash, by way of pro rata special distributions to our stockholders.

At present, we expect our revenues and our research and development expenses to consist primary of related party revenues and research and development expenses recognized under Perseid's collaboration agreements with Astellas. We continue to maintain a strong cash position, with cash, cash equivalents and marketable securities totaling $128.0 million as of December 31, 2010. Of this amount, $25.7 million is held by Perseid and may only be used for Perseid's operations.

For the purposes of this report, our continuing operations consist of the results of Maxygen, Inc. and its wholly-owned subsidiaries, Maxygen Holdings (U.S.), Inc., Maxygen ApS and Maxygen Holdings, Inc., as well as its majority-owned subsidiaries, Perseid Therapeutics LLC, Maxygen Holdings LLC and Maxygen Holdings Ltd.

Critical Accounting Policies and Estimates

General

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make judgments, estimates and assumptions in the preparation of our consolidated financial statements and accompanying notes (see Note 1 of the Notes to Consolidated Financial Statements). Actual results could differ from those estimates. We believe the following are our critical accounting policies, including those that reflect the more significant judgments, estimates and assumptions we make in the preparation of our consolidated financial statements.

Variable Interest Entities

In June 2009, the Financial Accounting Standards Board, or FASB, issued guidance that amends the evaluation criteria to identify the primary beneficiary of a variable interest entity. Additionally, this guidance requires ongoing reassessments of whether an enterprise is the primary beneficiary of the variable interest entity. We adopted this new guidance as of the beginning of fiscal year 2010 and have applied such guidance in evaluating whether we should continue to consolidate Perseid and our other majority-owned subsidiaries. Determining the primary beneficiary requires significant judgment on the part of our management and is based on an analysis of all relevant facts and circumstances, including, but not limited to:

- our ability to direct the activities that most significantly affect the entity's economic performance; and
- whether we have an obligation to absorb losses or rights to receive benefits from the entity that could potentially be significant to the variable interest entity.

Based on our analysis, applying the guidance above, we have determined that we continue to be the primary beneficiary of Perseid and our other majority-owned subsidiaries and will continue to consolidate such subsidiaries. At each reporting date, we will reassess whether we are still the primary beneficiary of each majority-owned subsidiary. If we determine that we are no longer the primary beneficiary, we will deconsolidate such subsidiary and record our interest at its fair market value at the date on which we deconsolidate. We would then account for our interest using the equity accounting method.

Source of Revenue and Revenue Recognition Policy

We have generally recognized revenue from multiple element arrangements under collaborative research agreements, including license payments, research and development services, milestones, and royalties. Revenue arrangements with multiple deliverables are divided into separate units of accounting if certain criteria are met, including whether the delivered item has stand-alone value to the customer and whether there is objective and reliable evidence of the fair value of the undelivered items in the arrangement. The consideration we receive is allocated among the separate units of accounting based on their respective fair values, and the applicable revenue recognition criteria are considered separately for each of the separate units.

Non-refundable upfront payments received in connection with collaboration agreements, including license fees and technology advancement funding that is intended for the development of our core technologies, are deferred upon receipt and recognized as revenue over the period of delivery of the undelivered element, typically the relevant research and development periods specified in the agreement. Under arrangements where we expect our research and development obligations to be performed evenly over the specified period, the upfront payments are recognized on a straight-line basis over the period. Under arrangements where we expect our research and development obligations to vary significantly from period to period, we recognize the upfront payments based upon the actual amount of research and development efforts incurred relative to the amount of the total expected effort to be incurred by us. In cases where the planned levels of research services fluctuate substantially over the research term, this requires us to make critical estimates in both the remaining time period and the total expected costs of its obligations and, therefore, a change in the estimate of total costs to be incurred or in the remaining time period could have a significant impact on the revenue recognized in future periods.

Revenue related to collaborative research payments from a collaborator is recognized as research services are performed over the related funding periods for each contract. Under these agreements, we are typically required to perform research and development activities as specified in the respective agreement. Generally, the payments received are not refundable and are based on a contractual cost per full-time equivalent employee working on the project. Under certain collaborative research and development agreements, we and the collaborative partner may agree to share in the costs of research and development. In periods where we incur more costs than the collaborative partner, payments from the collaborative partner are included in collaborative research and development revenues and, in periods where the collaborative partner incurs more expenses than us, our payments to the collaborative partner are included in research and development expenses. Research and development expenses (including associated general and administrative expenses) under the collaborative research agreements approximate or exceed the research funding revenue recognized under such agreements over the term of the respective agreements. Deferred revenue may result when we do not incur the required level of effort during a specific period in comparison to funds received under the respective contracts.

Non-refundable payments received relating to substantive, at-risk incentive milestones, if any, are recognized as revenue upon achievement of the incentive milestone event when we have no future performance obligations related to the payment. Incentive milestone payments may be triggered either by the results of our research efforts or by events external to us, such as regulatory approval to market a product.

We are eligible to receive royalties from licensees, which are typically based on sales of licensed products to third parties. Royalties are recorded as earned in accordance with the contract terms when third party sales can be reliably measured and collectability is reasonably assured.

Revenue from the sale of pre-clinical program assets or license agreements for which no further performance obligations exist are recognized as revenue on the earlier of when payments are received or the amount can be reliably measured and collectability is reasonably assured.

Accounting for Clinical Trial Costs

We charge research and development costs, including clinical study costs, to expense when incurred, consistent with applicable accounting standards. Clinical study costs have historically been a significant component of research and development expenses. Most of our clinical studies are performed by third-party contract research organizations (CROs). The clinical trials generally have three distinctive stages:

- start-up—initial setting up of the trial;
- site and study management of the trial; and
- close down and reporting of the trial.

We review the list of expenses for the trial from the original signed agreements and categorize them according to these phases of activities of the clinical trial. The start-up activities, which include site recruitment, regulatory applications and investigator meetings, usually are performed reasonably uniformly and are performed by third-party CROs. Costs related to start-up activities are expensed uniformly over the start-up period which reflects the manner in which such costs are incurred. The start-up period is followed by the portion of the clinical trial in which patients are dosed with the drug under study and results are monitored and measured. CROs also perform this portion of the study, which comprises the major portion of the expense for conducting a clinical trial. The major driver of expense over this phase of a trial is the number of enrolled patients undergoing treatment, and as such we calculate costs attributable to activities performed in this phase of the trial on a per-patient basis, and expense those costs over the treatment phase based upon the stage of completion for each patient, as reported by the CRO. After the conclusion of the patient treatment portion of the trial there are a series of activities relating to the closedown of the study and data quality assurance and analysis. These activities are performed reasonably uniformly and are expensed ratably over the closedown period. Other costs, such as testing and drug material costs, are expensed as incurred, which is typically when the service has been rendered or the goods delivered.

CROs invoice us upon the occurrence of predetermined milestones (such as the enrollment of the first patient), however, the timing of these billings and our related payments often do not correspond directly to the level of contracted activities and the incurrence by us of a liability. In accordance with Generally Accepted Accounting Principles, or GAAP, to the extent contract payments are paid in advance of the activity, they are included in prepaid assets and expensed under the policy indicated above, and to the extent that billings are in arrears to performance of the relevant activities, they are reflected as an adjustment to the liability reflected in our financials at the time of performance of the activity.

In general, our service agreements permit us to terminate at will, although we would continue to be responsible for payment of all services completed (or pro-rata completed) at the time of notice of termination, plus any non-cancellable expenses that have been entered into by the CRO on our behalf.

We completed a Phase IIa clinical trial in December 2008. The start-up activities during this trial were conducted over a period of approximately six months, the site and study management activities were conducted over a period of approximately 18 months, and the close down activities were conducted over a period of approximately six months. The length of future clinical trials, and the various phases of the trials, will vary depending upon the nature of the trials.

Stock Based Compensation Expense

The accounting treatment for stock options, restricted stock units, restricted stock awards and shares purchased under our Employee Stock Purchase Plan, or ESPP, requires us to recognize the fair value of the equity-based awards. In addition, we are required to recognize the fair value of our liability-based awards, which as of December 31, 2010, consisted solely of contingent performance units, or CPUs. We estimate the fair value of stock options and ESPP shares using the Black-Scholes-Merton valuation model and for CPUs, we use a Monte Carlo simulation model. These models require the input of subjective assumptions, the most significant of which are our estimates of the expected volatility of the market price of our stock, and for our CPUs, the market price of Codexis' common stock as well, and the expected term of each award. We estimate expected volatility based on historical volatilities. The risk-free interest rate is based on the rates paid on securities issued by the U.S. Treasury with a term approximating the expected life of the option or CPU. The dividend yield is based on the projected annual dividend payment per share, divided by the stock price at the date of grant. For restricted stock units and restricted stock awards, we estimate fair value based on the closing price of our common stock on the date of grant.

For stock option awards to employees in 2010, the expected life of the stock options was calculated using the shortcut method permitted under applicable SEC accounting guidance. When establishing the expected life assumption in prior periods, we review annual historical employee exercise behavior of option grants with similar vesting periods. Due to the change in our structure and operations and the small number of individuals receiving option awards in 2009 and 2010, we no longer consider our historical experience or that of our peers to be representative of future expected life. Therefore in 2009, we changed to the shortcut method for establishing the expected life assumption. For non-employee awards, the expected life of the stock options was based on the life of the stock option. The computation of the expected volatility assumption used in the Black-Scholes-Merton calculations for new grants is based on historical volatilities. The risk-free interest rate is based on the rates paid on securities issued by the U.S. Treasury with a term approximating the expected life of the option. The dividend yield is based on the projected annual dividend payment per share, divided by the stock price at the date of grant. The assumptions used in calculating the fair value of share-based payment awards represent management's best estimates, but these estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change and we use different assumptions, our stock-based compensation expense could be significantly different from what we have recorded in the current period.

Stock-based compensation expense in the Consolidated Statements of Operations for the years ended December 31, 2008, 2009 and 2010 was as follows (in thousands):

	Year Ended December 31,		
	2008	2009	2010
Employee stock options	$4,731	$3,486	$1,500
Restricted stock units	3,213	3,854	(392)
Restricted stock awards	—	434	1,534
Consultant options	44	3	—
ESPP	194	138	—
Contingent performance units	—	—	884
Total stock-based compensation expense	$8,182	$7,915	$3,526

In 2009, we recorded stock compensation expense of $11.4 million as part of the restructuring charge which resulted from the accelerated vesting and the extension of the exercise period of certain stock options pursuant to our retention agreement with a certain current executive and the change in control agreements with certain former executives.

Restricted Stock

In September 2009, we granted restricted stock awards to certain employees and members of our board of directors under the 2006 Equity Incentive Plan, or 2006 Plan, representing an aggregate of 933,250 shares of our common stock. In 2010, we granted restricted stock awards to new employees and members of our board of directors representing an aggregate of 95,425 shares of our common stock. An exercise price and monetary payment are not required for receipt of restricted stock. Instead, consideration is furnished in the form of the participant's services to us. All of the restricted stock awards vest over four years. The 2006 Plan and related award agreement provide for forfeiture in certain events, such as voluntary termination of employment, and for acceleration of vesting in certain events, such as termination of employment without cause or a change in control of us. Compensation cost for these awards is based on the closing price of our common stock on the date of grant and recognized as compensation expense on a straight-line basis over the requisite service period. Given the relative lack of sufficient history of granting restricted stock awards coupled with the fact that the number of restricted stock awards outstanding are concentrated among a few individuals, we have not applied a forfeiture discount to our stock compensation expense for restricted stock awards.

For the years ended December 31, 2009 and 2010, stock-based compensation expense related to the grant of restricted stock awards was allocated as follows (in thousands):

	Year Ended December 31,	
	2009	2010
Research and development	$ 21	$ 20
General and administrative	413	1,514
Total stock-based compensation expense	$434	$1,534

Contingent Performance Units

In September 2009, we granted CPUs under the 2006 Plan to all employees and board members who held options to purchase our common stock, and prospectively, we also grant CPUs in connection with the grant of all new stock option awards. CPUs vest on the earliest to occur of (i) a change in control of Maxygen, (ii) a corporate dissolution or liquidation of Maxygen, or (iii) the fourth anniversary of the grant date (the settlement date), generally so long as the holder continues to provide services for us on a continuous basis from the grant

date to the settlement date. The CPUs are designed to protect holders of our stock options against a reduction in the share price of the our common stock resulting from past and potential future dividends or distributions to our stockholders, which could negatively affect outstanding options held by option holders of our stock since the options would not otherwise participate in any past or potential future dividends or distributions to the our stockholders. The earned value of any CPU will generally be settled in shares of our common stock, but may also be settled, in part, with cash or any property distributed by us. All unvested CPUs remaining following the settlement date will expire immediately.

As a result of our distribution of 5,445,274 shares of Codexis common stock and special cash distribution in the amount of $1.00 per share in December 2010, the value of the CPU awards became reasonably estimable for financial reporting purposes at December 31, 2010. We determined the fair value of the awards of approximately $2.8 million at December 31, 2010 based on a Monte Carlo simulation using the following assumptions:

	2010
Expected dividend yield	0%
Risk-free interest rate range	0.89% - 1.34%
Expected life	2.73 - 3.75 years
Expected volatility of Maxygen, Inc. common stock	65.2% to 69.1%
Expected volatility of Codexis common stock	60.81%

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at each reporting date, with a term commensurate with the estimated remaining expected life of the award. Expected life is based on the remaining time to settlement for each award. Expected volatility of both our common stock and Codexis common stock is based on the historical volatility, as available, of such stock commensurate for the expected life of each award.

We recognized approximately $884,000 of compensation expense in the three months ended December 31, 2010 related to these awards. As the CPUs are accounted for as liability awards, we will re-measure their fair value at each reporting date, and will record compensation expense utilizing a straight-line attribution method.

For the year ended December 31, 2010, stock-based compensation expense related to the grant of CPUs was allocated as follows (in thousands):

	Year Ended December 31, 2010
Research and development	$196
General and administrative	688
Total stock-based compensation expense	$884

Restricted Stock Units

During 2008, we granted restricted stock unit awards under our 2006 Plan representing an aggregate of 1,283,000 shares of our common stock. The restricted stock units granted represented a right to receive shares of common stock at a future date determined in accordance with the participant's award agreement. An exercise price and monetary payment were not required for receipt of restricted stock units or the shares issued in settlement of the award. Instead, consideration was furnished in the form of the participant's services to us. Substantially all of the restricted stock units were originally scheduled to vest over two years. However, in connection with the consummation of the transactions contemplated by our joint venture arrangement with Astellas (see Note 5 of the Notes to Consolidated Financial Statements), certain of these restricted stock units became fully vested on November 30, 2009. This did not affect the restricted stock units held by certain of our executive officers and former executive officers, who had different equity acceleration provisions in their

employment related agreements. See Note 13 of the Notes to Consolidated Financial Statements. In 2010, we recognized a credit to stock-based compensation expense of $392,000 related to the actual forfeiture rate of restricted stock units scheduled to vest in 2010 being greater than the estimated forfeiture rate for terminated employees. At December 31, 2010, there was no unrecognized compensation cost related to these awards.

For the years ended December 31, 2009 and 2010, stock-based compensation expense related to the grant of restricted stock units was allocated as follows (in thousands):

	Year Ended December 31,	
	2009	2010
Research and development	$1,958	$(286)
General and administrative	1,896	(106)
Total stock-based compensation expense	$3,854	$(392)

Profits Interest Units

Perseid's 2009 Equity Incentive Plan provides for the grant by Perseid of profits interest units, or PIUs, to all employees of Maxygen and Perseid who are currently providing services to Perseid. A PIU is a special type of limited liability company common unit that allows the recipient to participate in any future increase in the value of Perseid. The PIUs are designed to attract and retain employees of Perseid and to provide incentive to promote the success of Perseid through the advancement of the MAXY-4 program and other programs. The earned value of a PIU will generally be settled in cash. The PIUs are intended to meet the definition of a "profits interest" under I.R.S. Revenue Procedure 93-27 and I.R.S. Revenue Procedure 2001-43. Subject to the recipient remaining an employee or service provider of Perseid through each vesting date and subject to accelerated vesting, the PIUs will vest over four years. The potential value of a PIU, to the extent vested, will be equal to the deemed value of a Perseid common unit at the time of a liquidity event, such as a buy-out of Maxygen's equity interest in Perseid by Astellas or the sale of Perseid to another company, less the deemed value of a common unit at the time the PIU was granted.

In the event of a buy-out of Maxygen's equity interest in Perseid by Astellas, Astellas is obligated to purchase for cash all PIUs held by Perseid's then-current and former employees, consultants, directors and other service providers. This obligation of Astellas to purchase the PIUs is in addition to the purchase price to be paid by Astellas to Maxygen in exchange for its equity interest in Perseid. In the event of a liquidity event other than a buy-out by Astellas, such as an acquisition of Perseid by another party or a dissolution of Perseid, then the PIUs may be assumed by an acquirer, exchanged for cash at the fair market value of the PIUs, if any, or be replaced with other rights or property, at the discretion of the plan administrator. Under our accounting policies related to share-based compensation, we have determined that the fact that the PIUs will only have value upon the occurrence of a liquidity event represents a performance condition. As such, under applicable accounting standards, expense is only recognized if the performance condition is probable of occurring. As of December 31, 2010, we have concluded that it is not probable that a liquidity event will occur, and as such have not recorded compensation expense in our Consolidated Statement of Operations. The amount of unrecognized compensation expense is approximately $5.9 million as of December 31, 2010, $842,000 of which relates to PIUs that have vested through December 31, 2010. This unrecognized compensation expense represents the implied fair value of the PIUs as estimated based solely on Astellas' exercise price for the buyout of Maxygen's interest as of December 31, 2010. This amount will fluctuate in future periods based on the value or deemed value of Perseid. At the time we believe that a liquidity event becomes probable, as determined under applicable accounting standards, we will record a cumulative amount to compensation expense for services previously rendered. Any remaining unrecognized compensation expense would then be recognized over the then remaining service period. Also see Note 7 of the Notes to Consolidated Financial Statements. As of December 31, 2010, approximately 13.1 million PIUs were outstanding.

Results of Operations

Revenues

Our revenues have been derived primarily from collaboration agreements, technology and license arrangements, and government research grants and from the sale of certain assets. Total revenues were $37.6 million in 2010, $36.4 million in 2009 and $100.7 million in 2008. As discussed further below, the increase in revenues for the 2010 period primarily reflects an increase in related party revenues received by Perseid under its two collaboration agreements with Astellas. This increase was offset by a decrease in technology and license revenue from Codexis and a decrease in grant revenue due to the sale of our vaccine assets and related government grants to AltraVax in January 2010. Revenues in 2008 include the recognition of the $90.6 million we received under our agreements with Bayer in connection with the sale of our hematology assets and our license to Bayer of the MolecularBreeding™ directed evolution platform. Excluding revenue from the Bayer transaction, total revenues increased $26.3 million from 2008 to 2009, primarily as a result of an increase in revenues received under the collaboration agreements with Astellas.

Technology and license revenue was $1.5 million in 2010, $15,000 in 2009 and $90.6 million in 2008. The technology and licensing revenue in 2010 consisted of $1.0 million from the sale of our vaccine assets to AltraVax and the $500,000 non-refundable option fee we received from Cangene in 2009, which we recognized in the third quarter of 2010 as a result of the termination of our prior option and license agreement with Cangene in July 2010. Technology and license revenue in 2009 consisted primarily of certain miscellaneous licensing fees received from third parties. Technology and license revenue in 2008 consisted primarily of amounts received from Bayer in July 2008 in connection with the sale of our hematology assets and grant to Bayer of certain licenses to the MolecularBreeding™ directed evolution platform.

Related party revenue was $35.3 million in 2010, $31.8 million in 2009 and $5.1 million in 2008. The $3.5 million increase in related party revenue in the 2010 period includes an increase of $6.0 million under Perseid's two collaboration agreements with Astellas, offset by a $2.6 million decrease in revenues from our prior licensing agreement with Codexis. Related party revenues for 2010 included a $6.3 million increase in related party revenues received by Perseid under its collaboration agreement with Astellas for the discovery, research and preclinical development of certain protein therapeutics other than MAXY-4, a $770,000 increase in amounts recognized with respect to the $10.0 million upfront fee we received under the collaboration agreement for MAXY-4 and a decrease of $1.1 million in the net reimbursements under the collaboration agreement with Astellas for the MAXY-4 product candidates. The $26.7 million increase in related party revenue from 2008 to 2009 was primarily due to an increase of $13.4 million in net reimbursements under the collaboration agreement with Astellas for the MAXY-4 product candidates, Perseid's receipt of a $5.0 million milestone payment under that agreement, a $2.1 million increase in amounts recognized with respect to the $10.0 million upfront fee we received under that agreement, and $2.3 million of revenue that was recognized under the collaboration agreement for the development of proteins other than MAXY-4. The increase in related party revenue from 2008 to 2009 also included a $3.9 million increase in revenue recognized under our prior license agreement with Codexis.

Grant revenues were $733,000 in 2010, $4.5 million in 2009 and $5.1 million in 2008. Grant revenue in 2010 consisted solely of three non-recurring grants received under the Qualifying Therapeutics Discovery Program, or QTDP. The QTDP program was created by Congress in March 2010, as enacted under the Patient Protection and Affordable Care Act of 2010, and provided a tax credit or grant to eligible companies to cover certain costs and expenses in connection with qualified therapeutic discovery projects. The decrease in grant revenue from 2009 to 2010 reflects the elimination of government research grants from the National Institute of Health, or NIH, and the U.S. Department of Defense, or DOD, that were transferred to AltraVax as part of their acquisition of our vaccine assets in January 2010. The decrease in grant revenue from 2008 to 2009 was due to decreased external efforts on four NIH grants, partially offset by increased activity on two DOD grants. External costs were passed through to each grant and recognized as revenue on a cost reimbursable basis.

We expect that our future revenues will be derived primarily from Astellas under its collaboration agreements with Perseid. Excluding any potential milestone payments, we expect our total revenues in 2011 to decrease somewhat compared to 2010, primarily due to slightly lower levels of activities under Perseid's collaboration agreements with Astellas and the elimination of revenues under our prior license agreement with Codexis. Our revenues may fluctuate substantially based on the completion of any strategic transactions or new licensing agreements and our receipt of any development related milestones, royalties and other payments under such agreements. However, we cannot predict with any certainty whether we will enter into any strategic transaction or new licensing agreements or receive any milestone, royalty or other payments under any existing or future licensing or other agreements.

Research and Development Expenses

Our research and development expenses consist primarily of external collaborative research expenses (including contract manufacturing, contract research and clinical trial expenses), salaries and benefits, facility costs, supplies, research consultants, depreciation and stock compensation expense. Research and development expenses were $32.0 million in 2010, $36.6 million in 2009 and $46.3 million in 2008.

The decrease in our research and development expenses in 2010 was primarily due to decreased external collaborative research costs on the MAXY-4 program, which resulted from the timing of certain manufacturing and pre-clinical activities under Perseid's collaboration agreements with Astellas. The decrease in our research and development expenses for the 2010 and 2009 periods was also due to reduced salaries, benefits, stock compensation and other operating expenses resulting from a reduction in headcount completed in April 2009 and the termination of a senior R&D officer on October 31, 2009. The decrease in our research and development expenses from 2008 to 2009 was also due to the cessation of operations in Denmark in the first quarter of 2008, decreased external expenses associated with the suspended development of certain of our product candidates, including expenses related to clinical trials of our MAXY-G34 product candidates and the manufacture of MAXY-G34 and MAXY-VII product for clinical trials, and decreases in stock compensation expense.

Stock compensation expenses included in research and development expenses decreased from $3.6 million in 2009 to $421,000 in 2010, primarily due to a reduction in domestic headcount announced in October 2008 and completed in April 2009 and the termination of a senior R&D officer on October 31, 2009, which reduced the number of equity awards that were expensed during 2010.

Stock compensation expenses included in research and development expenses decreased from $4.5 million in 2008 to $3.6 million in 2009, primarily due to a reduction in domestic headcount announced in October 2008 and completed in April 2009, which reduced the number of equity awards that were expensed during 2009.

We do not track fully burdened research and development costs by project. However, we do estimate, based on full-time equivalent personnel effort, the percentage of research and development efforts (as measured in hours incurred, which approximates costs) undertaken for projects funded by collaborators and government grants, on the one hand, and projects funded by us, on the other hand. To approximate research and development expenses by funding category, the number of hours expended in each category has been multiplied by the approximate cost per hour of research and development effort and added to project-specific external costs. In the case where a collaborative partner is sharing the research and development costs, the expenses for that project are allocated proportionately between the collaborative projects funded by third parties and internal projects. We believe that presenting our research and development expenses in these categories will provide our investors with meaningful information on how our resources are being used.

The following table presents our approximate research and development expenses by funding category (in thousands):

	Year Ended December 31,		
	2008	2009	2010
Projects funded by third parties(1)	$ 1,106	$ —	$ —
Projects funded by related party(1)	2,652	15,559	25,182
Government grants	5,506	5,024	—
Internal projects(2)	37,010	16,057	6,853
Total	$46,274	$36,640	$32,035

(1) Research and development expenses related to collaborative projects funded by third parties may be less than the reported revenues due to the amortization of non-refundable upfront payments, as well as a portion of the collaborative research and development revenue that is charged for general and administrative expenses.

(2) Research and development expenses in the category "Internal projects" for the 2010 period consist of Perseid's funding of the MAXY-4 program and other projects under its collaboration with Astellas.

Our product development programs are at an early stage and may not result in any marketed products. Product candidates that may appear promising at early stages of development may not reach the market for a number of reasons. Product candidates may be found ineffective or cause harmful side effects during clinical trials, may take longer to progress through clinical trials than had been anticipated, may fail to receive necessary regulatory approvals, may prove impracticable to manufacture in commercial quantities at reasonable costs and with acceptable quality and may be barred from commercialization if they are found to infringe or otherwise violate a third party's intellectual property rights. In addition, competitors may develop superior competing products. Furthermore, it is uncertain which of our internally developed product candidates will be subject to future collaborative arrangements. The participation of a collaborative partner may accelerate the time to completion and reduce the cost to us of a product candidate or it may delay the time to completion and increase the cost to us due to the alteration of our existing strategy. The risks and uncertainties associated with our research and development projects are discussed more fully in the section of this report entitled "Item 1A—Risk Factors." Because of these risks and uncertainties, we cannot predict when or whether we will successfully complete the development of any of our product candidates or the ultimate product development cost in any particular case.

We expect our research and development expenses to increase somewhat in the future based on Perseid's preclinical and clinical development of MAXY-4, the cost of which Perseid will share with Astellas under the related collaboration agreement between the parties and the preclinical development of other product candidates, the cost of which we expect to be funded entirely by Astellas under the related collaboration agreement.

General and Administrative Expenses

Our general and administrative expenses consist primarily of personnel costs for finance, legal, general management, business development and human resources, insurance premiums and professional expenses, such as external expenditures for legal and accounting services, and stock compensation expense. General and administrative expenses were $12.7 million in 2010, $17.5 million in 2009 and $14.8 million in 2008. Included in general and administrative expenses were stock-based compensation expenses of $3.1 million in 2010, $4.3 million in 2009 and $3.6 million in 2008. General and administrative expenses in 2009 also included the $600,000 transaction bonus paid to Grant Yonehiro, the president and chief executive officer of Perseid, under his retention agreement in connection with consummation of our joint venture arrangement with Astellas.

The decrease in general and administrative expenses in 2010 compared to 2009 was primarily due to decreases for legal and accounting services, external consultants and financial advisors in connection with the consummation of various strategic transactions in 2009 and decreases in salaries, benefits and stock

compensation resulting from a reduction in headcount completed in April 2009 and the termination of two executive officers as of September 30, 2009.

The increase in general and administrative expenses in 2009 compared to 2008 was primarily due to increases for legal and accounting services, external consultants and financial advisors in connection with the consummation of various strategic transactions in 2009, and increased stock-based compensation primarily related to the accelerated vesting of restricted stock unit awards.

Our general and administrative expenses during 2011 are expected to be comparable to 2010, depending on, among other things, the levels of share-based payments granted in 2011, the use of external consultants, and expenditures for legal and accounting services.

Goodwill Impairment

In the second quarter of 2008, we performed an interim goodwill impairment test due to the significant decline of our stock price subsequent to the announcement on June 13, 2008 of certain patent matters related to our MAXY-G34 product candidate and concluded that the carrying value of the net assets exceeded our fair value, based on quoted market prices of our common stock. Accordingly, we performed an additional analysis, as required under applicable accounting standards, which indicated that an impairment loss was probable because the implied fair value of goodwill that was recorded on our balance sheet was zero. As a result, we recorded an estimated impairment charge of $12.2 million in 2008 relating to the write-off of our goodwill.

Restructuring Charges

We recorded a credit to restructuring charges of $98,000 in 2010 compared with restructuring charges of $16.0 million in 2009 and $2.0 million in 2008 primarily to reflect severance and other termination benefits for the affected employees. The credit recorded in 2010 relates to a reversal of our restructuring accrual for which we have no further payment obligations. In 2009, approximately $11.4 million of these restructuring charges related to the modification of existing option grants pursuant to our retention agreement with Mr. Yonehiro, the president and chief executive officer of Perseid, and the change of control agreements with our former executives. We recognized restructuring charges of $2.0 million in 2008, of which $0.8 million related to the cessation of operations at Maxygen ApS and $1.2 million related to the restructuring plan we implemented in October 2008 that resulted in the termination of approximately 30% of our workforce. We completed the activities related to this consolidation in April 2009 and we do not expect to incur any additional costs relating to that consolidation.

Gain on Distribution of Equity Securities

In connection with the distribution of a majority of our investment in Codexis to our stockholders on December 14, 2010, we recorded the fair value of $53.2 million for the 5,445,274 shares of Codexis common stock that were distributed. The fair value was determined based on the closing price of Codexis common stock on the December 14, 2010 distribution date. As of December 31, 2010, we held 515,876 shares of Codexis common stock, which primarily represent shares that are being retained by us on behalf of the holders of certain outstanding equity awards. As these shares are released to such holders in the future, we will recognize the fair value of such shares, on the date of release, within earnings. (See Note 2 under the heading Distribution of Codexis Common Stock and Cash)

Sale of Platform Technology

On October 28, 2010, we sold substantially all of the patents and other intellectual property rights associated with our MolecularBreeding™ directed evolution platform to Codexis for a purchase price of $20.0 million. We received $16.0 million in October 2010, and the remaining $4.0 million will be held in escrow for twelve months,

with $2.0 million of such amount to be held in escrow for a total of twenty-three months, in each case to satisfy any indemnification obligations we incur under the purchase agreement. The $20.0 million purchase price was recorded as Sale of platform technology in 2010.

Interest and Other Income

Interest and other income represents income earned on our cash, cash equivalents and marketable securities, foreign currency gains or losses related to Maxygen ApS, gain or loss on disposal of equipment and interest expense, if any. Amounts included in interest and other income is as follows (in thousands):

	Year Ended December 31,		
	2008	2009	2010
Interest income	$4,476	$987	$ 310
Change in value of stock portion of distribution payable	—	—	(135)
Foreign exchange gains (losses)	432	(15)	(155)
Gains on disposal of equipment	6	5	5
Total interest and other income	$4,914	$977	$ 25

The decrease in interest and other income from 2009 to 2010 reflects lower interest income resulting from lower interest rates and a $140,000 increase in foreign exchange loss. Additionally, the decrease in interest and other income over these periods reflects the change in value of the stock portion of distribution payable of $135,000. The decrease in interest and other income from 2009 to 2008 was primarily due to lower interest income resulting from significantly lower interest rates.

Net Income (Loss) Attributable to Non-Controlling Interest

Perseid began operations on September 18, 2009 in connection with the consummation of our joint venture transaction with Astellas. Perseid's net loss for 2010 was $2.6 million. As of December 31, 2010, Astellas held a 16.7% ownership percentage, and the $452,000 of net loss attributable to non-controlling interest reflects Astellas' portion of Perseid's 2010 net loss.

Provision for Income Taxes

During the year ended December 31, 2010, we recorded a $2.2 million tax benefit. This tax benefit relates to net operating loss carryforwards for tax purposes that we concluded are realizable based on income recognized in other comprehensive income related to the shares of Codexis common stock that were held by us as of December 31, 2010. This recognized benefit is offset by tax expense in other comprehensive income. For 2010 despite income before taxes, we did not incur a tax liability due to the losses associated with the sale of 21% of Maxygen Holdings LLC to a third party and the liquidation of Maxygen Holdings Ltd.

For 2009, we recognized a tax benefit of $588,000 due to the carryback of alternative minimum tax net operating losses to 2008, 2006 and 2004 and in 2010, and we received a refund of the alternative minimum tax charged in those years. In 2008, we utilized prior year federal net operating loss carryforwards to reduce the federal taxable income to zero for regular tax purposes. However, for federal purposes, we were subject to alternative minimum tax which was fully offset by the refundable research credit claimed under the provisions in the Housing and Economic Recovery Act of 2008. In 2008, we generated income from continuing operations in a foreign jurisdiction, however, no income tax expense was recorded as there were no taxes in this foreign jurisdiction.

Recent Accounting Pronouncements

In April 2010, the FASB issued an accounting standard update related to the milestone method of revenue recognition. The accounting standards update provides guidance on defining a milestone and determining when it

may be appropriate to apply the milestone method of revenue recognition for research or development arrangements. A company may make an accounting policy election to use the milestone method of revenue recognition for transactions within the scope of the amendments. The amendments will be effective in fiscal years beginning on or after June 15, 2010, and early adoption is permitted. We have evaluated the impact of adopting this guidance and believe it will not have a material effect on our financial statements.

In February 2010, the FASB issued guidance that removes the requirement for registrants to disclose the date through which management evaluated subsequent events in the financial statements, and was effective upon its issuance. We adopted the updated guidance upon issuance. The adoption of this new guidance did not have an impact on our financial statements.

In January 2010, the FASB issued guidance that amended the disclosure requirements related to recurring and nonrecurring fair value measurements. This guidance requires new disclosures on the transfers of assets and liabilities between Level 1 (quoted prices in active market for identical assets or liabilities) and Level 2 (significant other observable inputs) of the fair value measurement hierarchy, including the reasons for and the timing of the transfers. Additionally, this guidance requires a roll forward of activities on purchases, sales, issuance and settlements of the assets and liabilities measured using significant unobservable inputs (Level 3 fair value measurements). We have adopted this guidance beginning January 1, 2010, except for the disclosure on the roll forward activities for Level 3 fair value measurements, which will become effective for us beginning January 1, 2011. The adoption of this new guidance did not have a material impact on our financial statements.

In September 2009, the FASB amended the standards for revenue recognition for multiple deliverable revenue arrangements. As amended, the standard eliminates the residual method of allocation and adds the requirement to use the relative selling price method when allocating revenue in a multiple deliverable arrangement. When applying the relative selling price method, the selling price for each deliverable shall be determined using the vendor specific objective evidence of selling price, if it exists, otherwise third-party evidence of selling price. If neither vendor specific objective evidence nor third-party evidence of selling price exists for a deliverable, the vendor shall use its best estimate of the selling price for that deliverable when applying the relative selling price method. The accounting changes are effective for fiscal years beginning on or after June 15, 2010, with early adoption permitted. Adoption may either be on a prospective basis or by retrospective application. We are currently evaluating the impact of the amended standard.

In June 2009, the FASB issued guidance that amends the evaluation criteria to identify the primary beneficiary of a variable interest entity. Additionally, this guidance requires ongoing reassessments of whether an enterprise is the primary beneficiary of the variable interest entity. This guidance is effective for interim and annual reporting periods after November 15, 2009. We adopted this new guidance as of the beginning of fiscal year 2010, and we have applied such guidance in evaluating whether we are the primary beneficiary of Perseid and our other majority-owned subsidiaries and whether we should continue to consolidate such majority-owned subsidiaries. Based on our analysis, we have consolidated Perseid and our other majority-owned subsidiaries at December 31, 2010.

Liquidity and Capital Resources

Since inception, we have financed our continuing operations primarily through private placements and public offerings of equity securities, research and development funding from collaborators and government grants and through the sale or license of various assets. In October 2010, Codexis paid us a total purchase price of $20.0 million in connection with the sale of our MolecularBreeding™ directed evolution platform assets, of which $4.0 million will be held in escrow for twelve months, with $2.0 million of such amount to be held in escrow for a total of twenty-three months, in each case to satisfy any of our indemnification obligations under the purchase agreement. In September 2009, as a result of the consummation of the joint venture agreement between us and Astellas, we received $10.0 million from Astellas for its investment in Perseid. In May 2009, we received a non-refundable option fee of $500,000 from Cangene for the option to license certain MAXY-G34 related

intellectual property rights for the potential fulfillment of government contracts relating to the treatment of ARS. However, our option and license agreement with Cangene expired in July 2010 and we are not eligible for any future payments under this agreement.

In July 2008, we recognized $90.6 million in revenue from Bayer in connection with the sale of our hematology assets and the grant of certain license rights to the MolecularBreeding™ directed evolution platform, which included an upfront cash payment of $90.0 million. In September 2008, we received an upfront fee of $10.0 million from Astellas under the co-development and commercialization agreement with Astellas for our MAXY-4 product candidates (which agreement was assigned to Perseid). In October 2010, Perseid was awarded $733,000 in funding under the QTDP program.

In December 2009, we completed the repurchase of approximately 18.5% of our outstanding common stock in a modified "Dutch auction" tender offer for a total cost of approximately $39.2 million. In March 2010, we repurchased an additional 1.4 million shares of our common stock in a private transaction for an aggregate purchase price of approximately $8.0 million and, from June 1 through December 31, 2010, we repurchased an additional 1.2 million shares under an open market repurchase program at an aggregate purchase price of approximately $6.9 million. As of December 31, 2010, we had $128.0 million in cash and cash equivalents on a consolidated basis. Of this amount, $25.7 million is held by Perseid and may only be used for Perseid's operations.

In December 2010, we completed a distribution of a majority of our investment in Codexis to our stockholders. In aggregate, we distributed 5.4 million shares of Codexis common stock to our stockholders on December 14, 2010. The closing price of Codexis common stock on December 14, 2010 was $9.75. The remaining 515,876 shares of Codexis common stock that we held at December 31, 2010 represent shares that are being retained by us on behalf of the holders of certain outstanding equity awards, fractional shares of Codexis common stock for which we instead made a cash payment to our stockholders in lieu thereof, and shares required to be withheld in connection with the distribution under applicable tax laws. We also made a special cash distribution in the amount of $1.00 for each outstanding share of our common stock owned on the December 17, 2010 record date, equal to approximately $29.2 million in the aggregate. The cash distribution was paid on December 28, 2010.

We are not obligated to fund the operations or other capital requirements of Perseid. Astellas and Perseid are parties to agreements that require Astellas to fund or share certain expenses relating to the research and development activities of Perseid. Under a collaboration agreement between Astellas and Perseid, Astellas will fund substantially all of the costs, estimated at up to $30.0 million over the three-year option term and subject to certain limitations, related to the discovery, research and development by Perseid of multiple protein therapeutics (other than the MAXY-4 program). The ongoing development costs for the MAXY-4 program will be shared by Astellas and Perseid in accordance with the existing terms of the MAXY-4 collaboration agreement. Under certain circumstances, an Astellas subsidiary also will be required to provide Perseid with up to 18 months of transition funding in the form of revolving loans of up to $20.0 million on pre-agreed terms. See Note 5 of the Notes to Condensed Consolidated Financial Statements for a further discussion of these arrangements.

Net cash used in operating activities was $6.3 million in 2010 and $20.0 million in 2009 and net cash provided by operating activities was $59.4 million in 2008. The net cash used in operating activities in 2010 was primarily attributable from net income, adjusted to exclude certain non-cash and other items, and the receipt of $10.0 million in milestone payments from Astellas. For 2009, the uses of cash in operating activities were primarily to fund losses from continuing operations and to fund an increase in related party receivable. The net cash provided by operating activities during 2008 was primarily due to the receipt of $90.6 million from Bayer in connection with the sale of our hematology assets and the $10.0 million upfront payment received from Astellas, offset in part by cash used to fund our operating expenses.

Net cash provided by investing activities was $52.7 million in 2010, $17.3 million in 2009 and $16.4 million in 2008. The cash provided during 2010 was primarily related to the sale of platform technology to Codexis for $20.0 million and maturities of available-for-sale securities in excess of purchases. The cash provided during

2009 and 2008 was primarily related to maturities of available-for-sale securities in excess of purchases. We expect to continue to make investments in the purchase of property and equipment to support our operations. We may use a portion of our cash to acquire or invest in businesses, products or technologies, or to obtain the right to use such technologies.

Net cash used by financing activities was $44.4 million in 2010 and $26.3 million in 2009, compared with net cash provided by financing activities of $2.0 million in 2008. The cash used in 2010 was primarily used to fund the $29.2 million cash distribution to stockholders and $14.9 million to repurchase our common stock. The cash used during 2009 was due to $39.2 million used to repurchase our common stock in connection with the completion of our modified "Dutch auction" tender offer in December 2009, partially offset by the $10.0 million received from Astellas as its investment in Perseid. Cash provided during 2008 relates to proceeds from the sale of common stock in connection with our ESPP and the exercise of stock options by employees.

The following are contractual commitments as of December 31, 2010, associated with lease obligations, purchase obligations and license obligations (in thousands):

	Payments Due by Period				
Contractual Obligations	**Total**	**Less than 1 Year**	**1-3 Years**	**4-5 Years**	**More than 5 Years**
Operating lease obligations	$ 3,812	$ 873	$2,779	$160	$—
Purchase obligations	14,282	7,979	6,239	64	—
License obligations	245	245	—	—	—
Total	$18,339	$9,097	$9,018	$224	$—

We are eligible for a potential milestone payment of up to $30.0 million from Bayer based on the achievement of certain events related to the potential initiation of a phase II clinical trial of MAXY-VII and the satisfaction of certain patent related conditions associated with the MAXY-VII program. Under our joint venture arrangement with Astellas, Astellas has an option to acquire all of our ownership interest in Perseid at specified exercise prices that increase each quarter from the current option price of $76.0 million (through March 18, 2011) to $123.0 million over the term of the option, which expires on September 18, 2012 (the third anniversary of the closing). In addition, Perseid is eligible to receive potential milestone and event based payments from Astellas based on the achievement of certain events related to the development and commercialization of the MAXY-4 program. However, there can be no assurances that either we or Perseid will receive any milestone, event based payments or other proceeds under any of these agreements. In addition, any payments related to milestones achieved under the co-development and commercialization agreement between Perseid and Astellas for the MAXY-4 program would be paid to Perseid and, as a result, such funds would not be directly available to Maxygen.

As of December 31, 2010, we had $128.0 million in cash, cash equivalents and marketable securities on a consolidated basis. Of this amount, $25.7 million is held by Perseid and may only be used for Perseid's operations. We believe that our current cash, cash equivalents and short-term investments, together with funding expected to be received from collaborators and licensors, will be sufficient to satisfy our anticipated cash needs for working capital and capital expenditures for at least the next twelve months.

In addition, given that we continue to have large cash reserves and a reduced ongoing financial commitment to the business contributed to Perseid, our board of directors expects to consider and evaluate additional distributions to our stockholders of a portion of our cash resources in excess of our current and longer term operational requirements, although none are currently contemplated. Such distributions may be accomplished through cash dividends, stock repurchases or other mechanisms and may be fully or partially taxable depending on the circumstances of such distribution.

Item 7A QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks, including changes in interest rates, foreign currency exchange rates, and the price fluctuations of certain equity securities. To mitigate some foreign currency exchange rate risk, we from time to time enter into currency forward contracts. We do not use derivative financial instruments for speculative or trading purposes.

Interest Rate and Market Risk

The primary objective of our investment activities is to preserve principal while at the same time maximizing yields without significantly increasing risk. To achieve this objective, we maintain our portfolio of cash equivalents and short-term investments in a variety of securities, including corporate obligations and money market funds. At December 31, 2010, $127.7 million of our cash and cash equivalent balance is held in U.S. currency with the remaining $285,000 held in euros. As of December 31, 2010, 100% of our total portfolio was scheduled to mature in one year or less. The average investment yield for our total cash and cash equivalents of $128.0 million at December 31, 2010 was 0.155%.

We did not hold derivative instruments intended to mitigate interest rate risk as of December 31, 2010, and we have never held such instruments in the past. If market interest rates were to increase by 100 basis points, or 1%, from December 31, 2010 levels, the fair value of our portfolio would not materially change as all of our cash and cash equivalents at December 31, 2010 had overnight maturities.

Foreign Currency Exchange Risk

In 2010, excluding stock compensation and restructuring charges, approximately 29%, or $11.9 million, of our operating expenses were incurred in euros, primarily for contract manufacturing. As a result, our financial results may be affected by changes in the foreign currency exchange rates of the euro. To protect against reductions in value and the volatility of future cash flows caused by changes in foreign currency exchange rates, we from time to time enter into cash flow hedging arrangements. Currency forward contracts are utilized in these hedging arrangements. Our hedging arrangements are intended to reduce, but may not always eliminate, the impact of foreign currency exchange rate movements. Gains and losses on these foreign currency investments are generally offset by corresponding losses and gains on the related hedging instruments, resulting in negligible net exposure to us on the amounts hedged.

At December 31, 2010, we had a forward exchange contract outstanding in the amount of $93,000. The fair value of this contract of $7,000 is recorded as a component of other accrued liabilities at December 31, 2010.

Equity Price Risk

Our exposure to changes in equity security prices relates to our ownership of Codexis common stock. At December 31, 2010, we owned 515,876 shares of Codexis common stock and recorded the fair value for these shares of $5.5 million, as determined by the closing price of such stock on December 31, 2010. A hypothetical 10% change in the price of Codexis common stock would cause the fair value of $5.5 million reported at December 31, 2010 to change by $547,000. Market prices for equity securities in general are subject to fluctuation and consequently the amount realized in the subsequent sale or disposition of an investment may significantly differ from the reported market value. Fluctuation in the market price of a security may result from perceived changes in the underlying economic characteristics of the investee, the relative price of alternative investments and general market conditions. We do not hedge our exposure to equity security price risk.

Item 8 FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of
Maxygen, Inc.

We have audited the accompanying consolidated balance sheets of Maxygen, Inc. as of December 31, 2009 and 2010, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2010. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Maxygen, Inc. at December 31, 2009 and 2010, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Maxygen, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 8, 2011 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Palo Alto, California
March 8, 2011

MAXYGEN, INC.

CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)

	December 31, 2009	December 31, 2010
ASSETS		
Current assets:		
Cash and cash equivalents	$ 125,919	$ 128,027
Short-term investments	33,611	—
Related party receivable	13,608	5,071
Accounts receivable and other receivables	473	355
Available-for-sale investment in equity securities	—	5,468
Prepaid expenses and other current assets	1,849	2,997
Total current assets	175,460	141,918
Property and equipment, net	1,777	1,732
Other non-current assets	—	3,336
Total assets	$ 177,237	$ 146,986
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,239	$ 2,001
Accrued compensation	1,651	3,481
Accrued restructuring charges	4,384	—
Accrued project costs	4,794	3,311
Distribution payable	—	626
Other accrued liabilities	1,302	2,466
Related party deferred revenue	6,991	2,999
Deferred revenue	865	—
Total current liabilities	21,226	14,884
Non-current deferred revenue	500	—
Non-current distribution payable	—	1,899
Other non-current liabilities	—	436
Commitments and contingencies (Notes 7 and 10)		
Stockholders' equity:		
Preferred stock, $0.0001 par value, 5,000,000 shares authorized, no shares issued and outstanding at December 31, 2009 and December 31, 2010	—	—
Common stock, $0.0001 par value, 100,000,000 shares authorized, 31,448,056 and 29,210,411 shares issued and outstanding at December 31, 2009 and December 31, 2010, respectively	3	3
Additional paid-in capital	423,924	326,335
Accumulated other comprehensive income (loss)	(227)	2,977
Accumulated deficit	(272,096)	(203,212)
Total Maxygen, Inc. stockholders' equity	151,604	126,103
Non-controlling interests	3,907	3,664
Total stockholders' equity	155,511	129,767
Total liabilities and stockholders' equity	$ 177,237	$ 146,986

See accompanying notes.

MAXYGEN, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

	Year Ended December 31,		
	2008	2009	2010
Technology and license revenue	$ 90,584	$ 15	$ 1,543
Related party revenue	5,051	31,816	35,325
Grant revenue	5,074	4,545	733
Total revenues	100,709	36,376	37,601
Operating expenses:			
Research and development	46,274	36,640	32,035
General and administrative	14,845	17,494	12,675
Goodwill impairment	12,192	—	—
Restructuring charge	1,987	15,964	(98)
Total operating expenses	75,298	70,098	44,612
Income (loss) from operations	25,411	(33,722)	(7,011)
Gain on distribution of equity securities	—	—	53,180
Sale of platform technology	—	—	20,000
Interest and other income	4,914	977	25
Net income (loss) before income taxes	30,325	(32,745)	66,194
Income tax benefit	—	588	2,238
Net income (loss)	30,325	(32,157)	68,432
Net income (loss) attributable to non-controlling interest	—	245	(452)
Net income (loss) attributable to Maxygen, Inc.	$ 30,325	$(32,402)	$68,884
Basic net income (loss) per share attributable to Maxygen, Inc.	$ 0.82	$ (0.85)	$ 2.30
Diluted net income (loss) per share attributable to Maxygen, Inc.	$ 0.81	$ (0.85)	$ 2.29
Shares used in basic net income (loss) per share calculations	37,100	38,236	29,949
Shares used in diluted net income (loss) per share calculations	37,358	38,236	30,128

See accompanying notes.

MAXYGEN, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands, except share and per share data)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Non-Controlling Interests	Total Stockholders' Equity
	Shares	Amount					
Balance at January 1, 2008	36,926,566	$ 4	$423,541	$ (32)	$(270,019)	$ —	$153,494
Issuance of common stock upon exercise of options for cash and for services rendered	330,282	—	1,890	—	—	—	1,890
Issuance of common stock upon vesting of restricted stock units	68,619	—	(268)	—	—	—	(268)
Issuance of common stock under employee stock purchase plan	84,783	—	405	—	—	—	405
Issuance of common stock under 401(k) employer matching contribution	100,252	—	459	—	—	—	459
Stock compensation expense for consultant options	—	—	44	—	—	—	44
Stock based compensation expense under SFAS 123(R)	—	—	8,139	—	—	—	8,139
Components of comprehensive income:							
Net income	—	—	—	—	30,325	—	30,325
Change in unrealized gain on available-for-sale securities	—	—	—	24	—	—	24
Comprehensive income	—	—	—	—	—	—	30,349
Balance at December 31, 2008	37,510,502	4	434,210	(8)	(239,694)		194,512
Issuance of common stock upon exercise of options for cash and for services rendered	713,892	—	3,910	—	—	—	3,910
Issuance of common stock upon vesting of restricted stock units	452,749	—	(1,386)	—	—	—	(1,386)
Issuance of common stock under employee stock purchase plan	62,842	—	341	—	—	—	341
Issuance of common stock under 401(k) employer matching contribution	53,174	—	340	—	—	—	340
Stock compensation expense for consultant options	—	—	3			—	3
Stock based compensation expense under SFAS 123(R)	—	—	19,338	—	—	—	19,338
Repurchase of common stock	(7,345,103)	(1)	(39,170)	—	—	—	(39,171)
Sale of subsidiary shares to non-controlling interest	—	—	6,338	—	—	3,662	10,000
Components of comprehensive loss:							
Net loss	—	—	—	—	(32,402)	245	(32,157)
Change in unrealized gain on available-for-sale securities	—	—	—	(219)	—	—	(219)
Comprehensive loss	—	—	—	—	—	—	(32,376)
Balance at December 31, 2009	31,448,056	3	423,924	(227)	(272,096)	3,907	155,511
Issuance of common stock upon exercise of options for cash and for services rendered	82,133	—	243	—	—	—	243
Issuance of common stock upon vesting of restricted stock	318,187	—	(695)	—	—	—	(695)
Stock based compensation expense under SFAS 123(R)	—	—	2,642	—	—	—	2,642
Repurchase of common stock	(2,637,965)	—	(14,889)	—	—	—	(14,889)
Sale of subsidiary shares to non-controlling interest	—	—	(9)	—	—	209	200
Distribution of cash to common stockholders at $1.00 per share, including $891,082 due to holders of restricted stock awards	—	—	(30,058)	—	—	—	(30,058)
Distribution of equity securities to common stockholders, including 158,338 shares of Codexis common stock with a fair value of $1,678,383 payable to holders of restricted stock awards	—	—	(54,823)	—	—	—	(54,823)
Components of comprehensive income:							
Net income	—	—	—	—	68,884	(452)	68,432
Change in unrealized gain on available-for-sale investment in equity securities, net of tax effects	—	—	—	3,229	—	—	3,229
Change in unrealized gain on available-for-sale securities	—	—	—	(25)	—	—	(25)
Comprehensive income	—	—	—	—	—	—	71,636
Balance at December 31, 2010	29,210,411	$ 3	$326,335	$2,977	$(203,212)	$3,664	$129,767

See accompanying notes.

MAXYGEN, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2008	2009	2010
Operating activities			
Net income (loss)	$ 30,325	$ (32,157)	$ 68,432
Adjustments to reconcile net income (loss) from continuing operations to net cash provided by (used in) operating activities:			
Depreciation and amortization	1,447	1,048	909
Gain on disposal of property and equipment	—	—	(7)
Gain on distribution of equity securities	—	—	(53,180)
Sale of platform technology	—	—	(20,000)
Valuation of stock portion of distribution payable	—	—	135
Goodwill impairment	12,192	—	—
Non-cash stock compensation	8,598	8,251	3,526
Deferred income tax benefit	—	—	(2,238)
Non-cash restructuring charges	—	11,426	(98)
Common stock issued and stock options granted to consultants for services rendered	44	3	—
Changes in operating assets and liabilities:			
Related party receivable	(2,143)	(10,905)	8,537
Accounts receivable and other receivables	7,493	350	118
Prepaid expenses and other current assets	1,482	(648)	(1,148)
Deposits and other non-current assets	85	—	(3,336)
Accounts payable	(1,433)	(199)	762
Accrued compensation	(4,301)	(928)	946
Accrued restructuring charges	(3,299)	3,270	(4,286)
Accrued project costs	(352)	1,359	(1,483)
Other accrued liabilities	(29)	67	1,498
Taxes payable	—	—	—
Related party deferred revenue	—	(1,324)	(3,992)
Deferred revenue	9,244	436	(1,365)
Net cash provided by (used in) operating activities	59,353	(19,951)	(6,270)
Investing activities			
Purchases of available-for-sale securities	(81,948)	(55,230)	(11,926)
Maturities of available-for-sale securities	99,055	73,000	45,512
Proceeds from sale of platform technology	—	—	20,000
Acquisition of property and equipment	(734)	(478)	(857)
Net cash provided by investing activities	16,373	17,292	52,729
Financing activities			
Proceeds from issuance of common stock, net of stock repurchased to settle employee tax obligations	2,027	2,866	(452)
Sale of subsidiary shares to non-controlling interest	—	10,000	200
Cash distributions paid to common stockholders	—	—	(29,210)
Repurchase of common stock	—	(39,171)	(14,889)
Net cash provided by (used in) financing activities	2,027	(26,305)	(44,351)
Net increase (decrease) in cash and cash equivalents	77,753	(28,964)	2,108
Cash and cash equivalents at beginning of period	77,130	154,883	125,919
Cash and cash equivalents at end of period	$154,883	$125,919	$128,027
Supplemental Cash Flow Information			
Cash received for income taxes	$ —	$ —	$ 588

See accompanying notes.

1. Summary of Significant Accounting Policies

Organization and Principles of Consolidation

Maxygen, Inc. (the "Company") was incorporated under the laws of the State of Delaware on May 7, 1996. The Company is a biopharmaceutical company focused on developing improved versions of protein drugs through internal development and external collaborations and other arrangements. The Company began operations in March 1997 with the mission to develop important commercial products through the use of biotechnology. Since then, the Company has established a focus in human therapeutics, particularly on the development and commercialization of optimized protein pharmaceuticals.

The consolidated financial statements include the amounts of the Company and its wholly-owned subsidiaries, Maxygen Holdings (U.S.), Inc., Maxygen ApS (Denmark), which was acquired by the Company in August 2000, and Maxygen Holdings, Inc., as well as its majority-owned subsidiaries, Perseid Therapeutics LLC ("Perseid"), Maxygen Holdings LLC and Maxygen Holdings Ltd.

The Company is the primary beneficiary of each of its majority-owned subsidiaries, as determined under applicable accounting standards. In connection with the Company's joint venture arrangement with Astellas Pharma Inc. ("Astellas"), Astellas acquired a minority interest in Perseid. Amounts pertaining to the ownership interests held by Astellas in the operating results and financial position of Perseid are reported as a non-controlling interest. In addition, in May 2010, the Company sold a minority membership interest in Maxygen Holdings LLC, a newly formed majority-owned subsidiary, to a third party for $200,000 in cash and a contingent promissory note. Amounts pertaining to the ownership interest held by such third party in the operating results and financial position of Maxygen Holdings LLC are also reported as a non-controlling interest. At each reporting date, the Company will reassess whether it is still the primary beneficiary of each of its majority-owned subsidiaries. If the Company determines that it is no longer the primary beneficiary, the Company will deconsolidate such subsidiary and record its interest at the fair market value on the date which it deconsolidates, along with any gain or loss at the time of deconsolidation. The Company would then account for its interest using the equity accounting method.

The table below reflects a reconciliation of the equity attributable to non-controlling interests:

Non-controlling interests at December 31, 2009	$3,907
Net loss attributable to non-controlling interests	(452)
Increase in non-controlling interest for sale of interest in Maxygen Holdings LLC	209
Non-controlling interests at December 31, 2010	$3,664

Perseid Therapeutics LLC

The Company operates substantially all of its research and development operations through Perseid, a majority-owned subsidiary established in September 2009 in connection with the consummation of the transactions contemplated by the joint venture agreement, dated as of June 30, 2009 (the "Joint Venture Agreement"), between the Company and Astellas. Perseid is focused on the discovery, research and development of multiple protein pharmaceutical programs, including CTLA-4 Ig product candidates (designated as the MAXY-4 program) that are designed to be superior, next-generation CTLA-4 Ig therapeutics for the treatment of a broad array of autoimmune disorders, including rheumatoid arthritis, and transplant rejection. The Company owned 83.3% and Astellas owned 16.7% of Perseid as of December 31, 2010, based upon the voting rights of the issued and outstanding common and preferred units of Perseid. Significant intercompany transactions have been eliminated. The Company has included the operating results of Perseid in its Consolidated Financial Statements since September 18, 2009. The Company is not obligated to fund the operations or other capital requirements of Perseid. See Note 5.

Investment in Codexis, Inc.

The Company has a minority investment in Codexis, Inc. ("Codexis"), a biotechnology company focused on developing biocatalytic process technologies for certain pharmaceutical, energy and industrial chemical applications. The Company formed Codexis in January 2002 as a wholly owned subsidiary to operate its former chemicals business. The Company is not obligated to fund the operations or other capital requirements of Codexis. In April 2010, Codexis completed an initial public offering ("IPO") of its common stock and as a result, the Company recorded the fair value of its investment in Codexis within its Consolidated Balance Sheet. In December 2010, the Company distributed 5,445,274 shares of Codexis common stock to its stockholders and at December 31, 2010 the Company continued to hold 515,876 shares of Codexis common stock, which represent shares that are being retained by the Company on behalf of the holders of certain outstanding equity awards, fractional shares of Codexis common stock for which the Company instead made a cash payment to its stockholders in lieu thereof, and shares required to be withheld in connection with the distribution under applicable tax laws. These shares are classified on the Company's Consolidated Balance Sheet as Available-for-sale investment in equity securities. See Note 2 under the heading Distribution of Codexis Common Stock and Cash.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires the Company's management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash, Cash Equivalents and Investments

The Company considers all highly liquid investments with original maturity dates of three months or less, as of the date of purchase, to be cash equivalents. Cash equivalents include marketable debt securities, government and corporate debt obligations. Short-term investments include government and corporate debt obligations.

The Company's management determines the appropriate classification of debt securities as current or non-current at the time of purchase and reevaluates such designation as of each balance sheet date. The Company's debt securities are classified as available-for-sale and are carried at estimated fair value in cash equivalents and investments. Unrealized gains and losses for assets classified as available-for-sale are reported as accumulated other comprehensive income (loss) in stockholders' equity. The amortized cost of debt securities in this category is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization is included in interest and other income. Realized gains and losses on available-for-sale securities and declines in value deemed to be other than temporary, if any, are included in interest and other income. The cost of securities sold is based on the specific identification method. Interest and dividends on securities classified as available-for-sale are included in interest income.

Deriatives

The Company addresses certain financial exposures through a program of risk management that includes the use of derivative financial instruments. The Company in some instances has entered into foreign currency forward exchange contracts to reduce the effects of fluctuating foreign currency exchange rates on forecasted cash requirements.

The Company accounts for derivative instruments under applicable accounting standards that require all derivative instruments be reported on the balance sheet at fair value and establishes criteria for designation and evaluating effectiveness of hedging relationships.

Derivatives that are designated as foreign currency cash flow hedges are recognized on the balance sheet at their fair value. Changes in the fair value of derivatives that are highly effective as, and that are designated and qualify as, foreign currency cash flow hedges are recorded in other comprehensive income until the associated hedged transaction impacts earnings. Changes in the fair value of derivatives that are ineffective are recorded as interest and other income, in the period of change.

Under hedge accounting, the Company documents all relationships between hedging instruments and hedged items, as well as its risk-management objective and strategy for undertaking various hedge transactions. The Company also assesses, both at the hedge's inception and on an ongoing basis, whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items. When it is determined that a derivative is not highly effective as a hedge or that it has ceased to be a highly effective hedge, the Company discontinues hedge accounting prospectively. For the periods ended December 31, 2010 and 2009, the Company did not designate any of its forward exchange contracts or other derivatives as cash flow hedges.

The purpose of the hedging activities has been to minimize the effect of foreign currency exchange rate movements on payments to certain vendors in Europe. To date, foreign currency contracts have been denominated in Danish kroner and euros. At December 31, 2010, the Company had a forward exchange contract outstanding in the amount of $93,000. The fair value of this contract of $7,000 is recorded as a component of other accrued liabilities at December 31, 2010. The Company had no foreign currency contracts outstanding at December 31, 2009. During 2008, the Company recognized $386,000 of foreign exchange gains from the hedge contracts which were included within Interest and other income.

As a matter of policy, the Company has only entered into contracts with counterparties that have at least an "A" (or equivalent) credit rating. The counterparties to these contracts are major financial institutions. Exposure to credit loss in the event of nonperformance by any of the counterparties is limited to only the recognized, but not realized, gains attributable to the contracts. Management believes risk of loss is low and in any event would not be material. Costs associated with entering into such contracts have not been material to the Company's financial results. The Company does not utilize derivative financial instruments for trading or speculative purposes.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist of investments and accounts receivable. The Company is exposed to credit risks in the event of default by financial issuers or collaborators to the extent of the amount recorded on the balance sheet. The Company does not require collateral or other security to support the financial instruments subject to credit risk. A portion of the Company's accounts receivable balance at December 31, 2009, consisted of balances due from government agencies. Each grant agreement is subject to funding approvals by the U.S. government. Certain grant agreements provide an option for the government to audit the amount of research and development expenses, both direct and indirect, that have been submitted to the government agency for reimbursement. The Company does not require collateral or other security to support the financial instruments subject to credit risk.

Property and Equipment

Property and equipment, including the cost of purchased software, are stated at cost, less accumulated depreciation. Depreciation is provided using the straight-line method over the estimated useful life of the assets (generally three to five years). Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the assets.

Goodwill

Goodwill is tested for impairment at the reporting unit level at least annually, or whenever events or changes in circumstances indicate that it may be impaired, using a two step methodology as required by applicable accounting standards. Due to certain indicators of impairment observed in the second quarter of 2008, the Company performed an impairment assessment of its goodwill. As a result of this assessment, the Company determined that its goodwill was impaired, estimated its fair value to be zero and wrote down the carrying value of goodwill accordingly.

Long-Lived Assets

The Company reviews long-lived assets, including intangible assets, with finite lives for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable, such as a significant industry downturn, significant decline in the market value of the Company, or significant reductions in projected future cash flows. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying amount. The amount of the impairment loss, if any, is determined using discounted cash flows. In assessing the recoverability of long-lived assets, including intangible assets, the Company must make assumptions regarding estimated future cash flows and other factors to determine the fair value of the respective assets.

Revenue Recognition

The Company has generally recognized revenue from multiple element arrangements under collaborative research agreements, including license payments, research and development services, milestones, and royalties. Revenue arrangements with multiple deliverables are divided into separate units of accounting if certain criteria are met, including whether the delivered item has stand-alone value to the customer and whether there is objective and reliable evidence of the fair value of the undelivered items in the arrangement. The consideration the Company receives is allocated among the separate units of accounting based on their respective fair values, and the applicable revenue recognition criteria are considered separately for each of the separate units.

Non-refundable upfront payments received in connection with collaboration agreements, including license fees, and technology advancement funding that is intended for the development of the Company's core technologies, are deferred upon receipt and recognized as revenue over the period of delivery of the undelivered element, typically the relevant research and development periods specified in the agreement. Under arrangements where the Company expects its research and development obligations to be performed evenly over the specified period, the upfront payments are recognized on a straight-line basis over the period. Under arrangements where the Company expects its research and development obligations to vary significantly from period to period, the Company recognizes the upfront payments based upon the actual amount of research and development efforts incurred relative to the amount of the total expected effort to be incurred by the Company. In cases where the planned levels of research services fluctuate substantially over the research term, this requires the Company to make critical estimates in both the remaining time period and the total expected costs of its obligations and, therefore, a change in the estimate of total costs to be incurred or in the remaining time period could have a significant impact on the revenue recognized in future periods.

Revenue related to collaborative research payments from a collaborator is recognized as research services are performed over the related funding periods for each contract. Under these agreements, the Company is typically required to perform research and development activities as specified in the respective agreement. Generally, the payments received are not refundable and are based on a contractual cost per full-time equivalent

employee working on the project. Under certain collaborative research and development agreements, the Company and the collaborative partner may agree to share in the costs of research and development. In periods where the Company incurs more costs than the collaborative partner, payments from the collaborative partner are included in collaborative research and development revenues and, in periods where the collaborative partner incurs more expenses than the Company, the Company's payments to the collaborative partner are included in research and development expenses. Research and development expenses (including associated general and administrative expenses) under the collaborative research agreements approximate or exceed the research funding revenue recognized under such agreements over the term of the respective agreements. Deferred revenue may result when the Company does not incur the required level of effort during a specific period in comparison to funds received under the respective contracts.

Non-refundable payments received relating to substantive, at-risk incentive milestones, if any, are recognized as revenue upon achievement of the incentive milestone event because the Company has no future performance obligations related to the payment. Incentive milestone payments may be triggered either by the results of the Company's research efforts or by events external to the Company, such as regulatory approval to market a product.

The Company is eligible to receive royalties from licensees, which are typically based on sales of licensed products to third parties. Royalties are recorded as earned in accordance with the contract terms when third party sales can be reliably measured and collectibility is reasonably assured.

Revenue from the sale of pre-clinical program assets or license agreements for which no further performance obligations exist are recognized as revenue on the earlier of when payments are received or the amount can be reliably measured and collectibility is reasonably assured.

The Company has previously been awarded grants from various government agencies related to the Company's vaccines programs. The terms of these grant agreements ranged from one to five years with various termination dates, the last of which was July 2010. Revenue related to these grant agreements was recognized as the related research and development expenses were incurred. In January 2010, AltraVax, Inc. ("Altravax") acquired substantially all of the Company's vaccine assets, including the related government grants. See Note 2 under the heading Sale of Vaccine Assets.

Research and Development Expenses

Research and development expenses consist of costs incurred for both Company-sponsored and collaborative research and development activities. These costs include direct and research-related overhead expenses, which include salaries and other personnel-related expenses, facility costs, supplies and depreciation of facilities and laboratory equipment, as well as research consultants and the cost of funding research at universities and other research institutions, and are expensed as incurred. Costs to acquire technologies that are utilized in research and development and that have no alternative future use are expensed when incurred.

The Company does not track fully burdened research and development costs by project. However, the Company does estimate, based on full-time equivalent personnel effort, the percentage of research and development efforts (as measured in hours incurred, which approximates costs) undertaken for projects funded by the Company's collaborators and government grants, on the one hand, and projects funded by the Company, on the other hand. To approximate research and development expenses by funding category, the number of hours expended in each category has been multiplied by the approximate cost per hour of research and development effort and added to project-specific external costs. In the case where a collaborative partner is sharing the research and development costs, the expenses for that project are allocated proportionately between the

collaborative projects funded by third parties and internal projects. The Company believes that presenting its research and development expenses in these categories will provide its investors with meaningful information on how the Company's resources are being used.

The following table presents the Company's approximate research and development expenses by funding category (in thousands):

	Year Ended December 31,		
	2008	2009	2010
Projects funded by third parties(1)	$ 1,106	$ —	$ —
Projects funded by related party(1)	2,652	15,559	25,182
Government grants	5,506	5,024	—
Internal projects(2)	37,010	16,057	6,853
Total	$46,274	$36,640	$32,035

(1) Research and development expenses related to collaborative projects funded by third parties may be less than the reported revenues due to the amortization of non-refundable upfront payments, as well as a portion of the collaborative research and development revenue that is charged for general and administrative expenses.

(2) Research and development expenses in the category "Internal projects" for the 2010 period consist of Perseid's funding of the MAXY-4 program and other projects under its collaboration with Astellas.

Accounting for Clinical Trial Costs

The Company charges research and development costs, including clinical study costs, to expense when incurred, consistent with applicable accounting standards. Clinical study costs have historically been a significant component of research and development expenses. Most of the Company's clinical studies are performed by a third-party contract research organization (CRO). The clinical trials generally have three distinctive stages plus pass through costs:

- start-up—initial setting up of the trial;
- site and study management of the trial; and
- close down and reporting of the trial.

The Company reviews the list of expenses for the trial from the original signed agreements and categorizes them according to these phases of activities of the clinical trial. The start-up activities, which include site recruitment, regulatory applications and investigator meetings, usually are performed reasonably uniformly and are performed by third-party CROs. Costs related to start-up activities are expensed uniformly over the start-up period which reflects the manner in which such costs are incurred. The start-up period is followed by the portion of the clinical trial in which patients are dosed with the drug under study and results are monitored and measured. CROs also perform this portion of the study, which comprises the major portion of the expense for conducting a clinical trial. The major driver of expense over this phase of a trial is the number of enrolled patients undergoing treatment, and as such the Company calculates costs attributable to activities performed in this phase of the trial on a per-patient basis, and expenses those costs over the treatment phase based upon the stage of completion for each patient, as reported by the CRO. After the conclusion of the patient treatment portion of the trial there are a series of activities relating to the closedown of the study and data quality assurance and analysis. These activities are performed reasonably uniformly and are expensed ratably over the closedown period. Other costs, such as testing and drug material costs, are expensed as incurred, which is typically when the service has been rendered or the goods delivered.

CROs invoice the Company upon the occurrence of predetermined milestones (such as the enrollment of the first patient); however, the timing of these billings and the Company's related payments often does not correspond directly to the level of contracted activities and the incurrence by the Company of a liability. In accordance with Generally Accepted Accounting Principles (GAAP), to the extent contract payments are paid in advance of the activity, they are included in prepaid assets and expensed under the policy indicated above, and to the extent that billings are in arrears to performance of the relevant activities, they are reflected as an adjustment to the liability reflected in the Company's financials at the time of performance of the activity.

In general, the Company's service agreements permit it to terminate at will, although it would continue to be responsible for payment of all services completed (or pro-rata completed) at the time of notice of termination, plus any non-cancellable expenses that have been entered into by the CRO on the Company's behalf.

The Company completed a Phase IIa clinical trial in December 2008. The start-up activities during this trial were conducted over a period of approximately six months, the site and study management activities were conducted over a period of approximately 18 months, and the close down activities were conducted over a period of approximately six months. The length of future clinical trials, and the various phases of the trials, will vary depending upon the nature of the trials.

Restructuring Charges

Beginning in the third quarter of 2009, the Company implemented a restructuring plan in connection with the joint venture arrangement with Astellas that resulted in the termination of several employees, including members of the Company's senior management team. In October 2008, the Company implemented a restructuring plan that resulted in the termination of approximately 30% of its workforce. In November 2007, the Company implemented a plan to consolidate its research and development activities at its U.S. facilities that resulted in the cessation of research and development operations at Maxygen ApS.

In connection with these restructuring and consolidation plans, the Company recorded estimated expenses for severance and outplacement costs and other restructuring costs. Generally, costs associated with restructuring activities are recognized when they are incurred rather than at the date of a commitment to an exit or disposal plan. However, in the case of leases, the expense is estimated and accrued when the property is vacated or at the point when the Company ceases to use the leased equipment. Given the significance of, and the timing of the execution of such activities, this process is complex and involves periodic reassessments of estimates made at the time the original decisions were made, including estimating the salvage value of equipment consistent with abandonment date. In addition, a liability for post-employment benefits is recorded when payment is probable, the amount is reasonably estimable, the obligation is attributable to employees' services already rendered and the obligation relates to rights that have vested or accumulated.

Stock-Based Compensation

As of December 31, 2010, the Company had five stock option plans: the 2006 Equity Incentive Plan (the "2006 Plan"); the 1997 Stock Option Plan (the "1997 Plan"); the 1999 Nonemployee Directors Stock Option Plan (the "Directors' Plan"); the 2000 International Stock Option Plan (the "International Plan"); and the 2000 Non-Officer Stock Option Plan (the "2000 Plan"). These stock plans generally provide, or provided, for the grant of stock options to employees, directors and/or consultants. The 2006 Plan, which replaced the 1997 Plan as to future awards, also provides for the grant of additional equity-based awards, including stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units and dividend equivalents. In connection with stockholder approval of the 2006 Plan, the 1997 Plan was terminated as to future awards. The International Plan was also terminated as to future awards as a result of the cessation of operations at Maxygen ApS. Each of the Directors' Plan and the 2000 Plan expired in 2010. The Company also has an Employee Stock

Purchase Plan ("ESPP") that enables eligible employees to purchase Company common stock, however, effective from September 1, 2009, the Company suspended all future employee purchases of Company common stock under the ESPP.

In addition, Perseid adopted the 2009 Equity Incentive Plan (the "Perseid 2009 Plan"), pursuant to which equity awards may be granted to employees and other eligible service providers of Perseid or any parent or subsidiary thereof. The Perseid 2009 Plan provides for the grant of common units of Perseid as LLC profits interest units.

The Company recognizes the cost of employee services received in exchange for awards of equity instruments based upon the grant-date fair value of those awards. The fair value of stock options and ESPP shares is estimated using the Black-Scholes-Merton option valuation model. This model requires the input of subjective assumptions, including expected stock price volatility, estimated life and estimated forfeitures of each award.

For stock option awards to employees in 2009 and 2010, the expected life of the stock options was calculated using the shortcut method permitted under applicable SEC accounting guidance. When establishing the expected life assumption in prior periods, the Company reviews annual historical employee exercise behavior of option grants with similar vesting periods. Due to the change in the Company's structure and operations and the small number of individuals receiving option awards in 2009 and 2010, the Company no longer considers its historical experience or that of its peers to be representative of future expected life. Therefore in 2009, the Company changed to the shortcut method for establishing the expected life assumption. For non-employee awards, the expected life of the stock options was based on the life of the stock option. The computation of the expected volatility assumption used in the Black-Scholes-Merton calculations for new grants is based on historical volatilities. The risk-free interest rate is based on the rates paid on securities issued by the U.S. Treasury with a term approximating the expected life of the option. The dividend yield is based on the projected annual dividend payment per share, divided by the stock price at the date of grant.

Stock-based compensation expense recognized in the Consolidated Statements of Operations for the years ended December 31, 2008, 2009 and 2010 was as follows (in thousands):

	Year Ended December 31,		
	2008	2009	2010
Employee stock options	$4,731	$3,486	$1,500
Restricted stock units	3,213	3,854	(392)
Restricted stock awards	—	434	1,534
Consultant options	44	3	—
ESPP	194	138	—
Contingent performance units	—	—	884
Total stock-based compensation expense	$8,182	$7,915	$3,526

In 2009, the Company recorded stock compensation expense of $11.4 million as part of the restructuring charge. The expense resulted from the accelerated vesting and the extension of the exercise period of certain stock options pursuant to the Company's retention agreement with Grant Yonehiro, the president and chief executive officer of Perseid, and the change in control agreements with its former executives.

Stock Options and Employee Stock Purchase Plan

The exercise price of each stock option equals the closing market price of the Company's stock on the date of grant. Most options are scheduled to vest over four years and all options expire no later than 10 years from the

grant date. The fair value of each option grant is estimated on the date of grant using the Black-Scholes-Merton option pricing model. This model was developed for use in estimating the value of publicly traded options that have no vesting restrictions and are fully transferable. The Company's employee stock options have characteristics significantly different from those of publicly traded options.

Under the ESPP, eligible employees may purchase common stock at a discount, through payroll deductions, during defined offering periods. The price at which stock is purchased under the ESPP is equal to 85% of the lower of (i) the fair market value of the common stock on the first day of the offering period or (ii) the fair market value of the common stock on the purchase date. During the years ended December 31, 2008 and 2009, 84,783 and 62,842 shares of common stock were purchased pursuant to the ESPP. Compensation expense is calculated using the fair value of the employees' purchase rights under the Black-Scholes-Merton model. For the years ended December 31, 2008 and 2009, ESPP compensation expense was $194,000 and $138,000, respectively. Effective from September 1, 2009, the Company suspended all future employee purchases of Company common stock under the ESPP.

The weighted average assumptions used in the model for each employee population are outlined in the following table:

	2008	2009(1)	2010(1)
Expected dividend yield	0%	0%	0%
Risk-free interest rate range—Options	2.75% to 3.33%	2.77%	1.58 to 2.96%
Risk-free interest rate range—ESPP	1.62% to 4.98%	0.48% to 2.38%	—
Expected life—Options	5.72 years	6.26 years	6.26 years
Expected life—ESPP	0.08 years to 1.0 years	0.08 years to 0.99 years	—
Expected volatility—Options	50.61% to 59.33%	58.91%	57.62% to 58.64%
Expected volatility—ESPP	43.36% to 106.98%	47.15% to 113%	—

(1) Purchases of the Company's common stock under the Company's ESPP were suspended in September 2009.

A summary of the changes in stock options outstanding under the Company's equity-based compensation plans during the year ended December 31, 2010 is presented below:

	Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Options outstanding at January 1, 2010	8,603,725	$10.80	5.17	$786
Granted	55,425	$ 6.16		
Exercised	(128,874)	$ 4.27		
Canceled	(830,800)	$23.83		
Expired	(104,632)	$42.61		
Options outstanding at December 31, 2010	7,594,844	$ 9.01	4.47	$ 35
Options vested and expected to vest at December 31, 2010	7,524,955	$ 9.03	4.43	$ 35
Options exercisable at December 31, 2010	6,690,605	$ 9.36	3.91	$ 28

The intrinsic value of options exercised during the years ended December 31, 2010, 2009 and 2008 was $289,000, $2.5 million and $870,000, respectively. The estimated fair value of shares vested during the years ended December 31, 2010, 2009 and 2008 was $1.1 million, $7.0 million and $11.9 million, respectively. The

weighted average grant date fair value of options granted during the year ended December 31, 2010 was $6.16 per share. At December 31, 2010, the Company had $2.8 million of total unrecognized compensation expense, net of estimated forfeitures, related to stock options that will be recognized over the weighted average remaining vesting period of 2.6 years. Cash received from stock option exercises was $243,000 during the year ended December 31, 2010.

The following table summarizes outstanding and exercisable options at December 31, 2010:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number of Shares Outstanding	Weighted-Average Remaining Contractual Life (in years)	Weighted-Average Exercise Price	Number of Shares Exercisable	Weighted-Average Exercise Price
$3.39 – $6.49	520,301	7.62	$ 5.18	411,107	$ 5.23
$6.53 – $6.53	850,450	8.73	$ 6.53	127,315	$ 6.53
$6.63 – $7.22	774,238	4.01	$ 6.94	746,533	$ 6.95
$7.26 – $7.40	850,095	3.27	$ 7.34	828,675	$ 7.34
$7.51 – $7.89	956,564	5.08	$ 7.75	953,709	$ 7.75
$7.92 – $8.66	774,414	5.89	$ 8.36	756,264	$ 8.36
$9.54 – $10.64	990,300	3.78	$10.29	988,887	$10.29
$10.69 – $12.17	867,774	3.31	$11.51	867,407	$11.51
$12.29 – $14.14	783,583	0.64	$13.19	783,583	$13.19
$14.90 – $24.25	227,125	0.47	$18.28	227,125	$18.28
	7,594,844	4.47	$ 9.01	6,690,605	$ 9.36

Restricted Stock

In September 2009, the Company granted restricted stock awards to certain employees and members of its board of directors under the 2006 Plan representing an aggregate of 933,250 shares of Company common stock. In 2010, the Company granted restricted stock awards to new employees and members of its board of directors representing an aggregate of 95,425 shares of common stock. The Company did not grant any restricted stock awards prior to September 2009. An exercise price and monetary payment are not required for receipt of restricted stock. Instead, consideration is furnished in the form of the participant's services to the Company. All of the restricted stock awards vest over four years. The 2006 Plan and related award agreement provide for forfeiture in certain events, such as voluntary termination of employment, and for acceleration of vesting in certain events, such as termination of employment without cause or a change in control of the Company. Compensation cost for these awards is based on the closing price of the Company's common stock on the date of grant and recognized as compensation expense on a straight-line basis over the requisite service period. For the years ended December 31, 2009 and 2010, the Company recognized approximately $434,000 and $1.5 million, respectively, in stock-based compensation expenses related to these restricted stock awards. At December 31, 2010, the unrecognized compensation cost related to these awards was approximately $4.7 million, which is expected to be recognized on a straight-line basis over the requisite service period through October 2014.

A summary of the changes in restricted stock awards outstanding under the Company's equity-based compensation plans during the year ended December 31, 2010 is presented below:

	Shares	Weighted-Average Purchase Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Awards outstanding at January 1, 2010	933,250	$—	3.73	$5,683
Awards granted	95,425	—		
Released	(143,164)	—		
Forfeited	(39,000)	—		
Awards outstanding at December 31, 2010	846,511	$—	2.80	$3,327

Contingent Performance Units

In September 2009, the Company granted contingent performance units ("CPUs") under the 2006 Plan to all employees and board members who held options to purchase Company common stock, and prospectively, the Company also grants CPUs in connection with the grant of all stock option awards. CPUs vest on the earliest to occur of (i) a change in control of the Company, (ii) a corporate dissolution or liquidation of the Company, or (iii) the fourth anniversary of the grant date (the "Settlement Date"), generally so long as the holder continues to provide services for the Company on a continuous basis from the grant date to the Settlement Date. The CPUs are designed to protect holders of the Company's stock options against a reduction in the share price of the Company's common stock resulting from past or potential future dividends or distributions to the Company's stockholders, which could negatively affect outstanding options held by option holders of the Company since the options would not otherwise participate in any past or potential future dividends or distributions to the Company's stockholders. The earned value of any vested CPU will generally be settled in shares of common stock of the Company, but may also be settled, in part, with cash or any property distributed by the Company. All unvested CPUs remaining following the Settlement Date will expire immediately.

As a result of the Company's distribution of 5,445,274 shares of Codexis common stock and special cash distribution in the amount of $1.00 per share in December 2010, the value of the CPU awards became reasonably estimable for financial reporting purposes at December 31, 2010. The Company determined the fair value of the awards of approximately $2.8 million based on a Monte Carlo simulation using the following assumptions:

	2010
Expected dividend yield	0%
Risk-free interest rate range	0.89% – 1.34%
Expected life	2.73 – 3.75 years
Expected volatility of Maxygen, Inc. common stock	65.2% to 69.1%
Expected volatility of Codexis common stock	60.81%

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at each reporting date, with a term commensurate with the estimated remaining expected life of the award. Expected life is based on the remaining time to settlement for each award. Expected volatility of both Company common stock and Codexis common stock is based on the historical volatility, as available, of such stock commensurate for the expected life of each award.

The Company recognized approximately $884,000 of compensation expense in the year ended December 31, 2010 related to the CPUs. As the CPUs are accounted for as liability awards, the Company will re-measure their fair value at each reporting date, and will record compensation expense utilizing a straight-line attribution method.

As the earned distribution value of any vested CPU can be settled in shares of Company common stock, cash or the property distributed to stockholders, and because such property has an inherent ability to appreciate or depreciate in price by the Settlement Date, the Company has reserved, from its December 2010 distribution of Codexis common stock, a number of shares of Codexis common stock that it deems sufficient to settle its maximum potential liability related to this earned distribution value for each CPU. At December 31, 2010, the Company had reserved 347,813 shares of Codexis common stock for this purpose.

Restricted Stock Units

During 2008, the Company granted restricted stock unit awards under the 2006 Plan representing an aggregate of 1,283,000 shares of Company common stock. The restricted stock units granted represented a right to receive shares of common stock at a future date determined in accordance with the participant's award agreement. An exercise price and monetary payment were not required for receipt of restricted stock units or the shares issued in settlement of the award. Instead, consideration was furnished in the form of the participant's services to the Company. Substantially all of the restricted stock units were originally scheduled to vest over two years. However, in connection with the consummation of the transactions contemplated by the Joint Venture Agreement (see Note 5), certain of these restricted stock units became fully vested on November 30, 2009. This did not affect the restricted stock units held by the Company's executive officers and former executive officers, who had different equity acceleration provisions in their employment related agreements. Compensation cost for these awards was based on the estimated fair value of the Company's common stock on the date of grant and recognized as compensation expense on a straight-line basis over the requisite service period. For the year ended December 31, 2009 and 2008, the Company recognized $3.9 million and $3.2 million in stock-based compensation expense related to these restricted stock unit awards. In 2010, the Company recognized a credit to stock-based compensation expense of $392,000 resulting from the actual forfeiture rate of restricted stock units scheduled to vest in 2010 being greater than the estimated forfeiture rate of terminated employees. At December 31, 2010, there was no unrecognized compensation cost related to these awards.

Profits Interest Units

Perseid's 2009 Equity Incentive Plan provides for the grant by Perseid of profits interest units, or PIUs, to all employees of the Company and Perseid who are currently providing services to Perseid. A PIU is a special type of limited liability company common unit that allows the recipient to participate in any future increase in the value of Perseid. The PIUs are designed to attract and retain employees of Perseid and to provide incentive to promote the success of Perseid through the advancement of the MAXY-4 program and other programs. The earned value of a PIU will generally be settled in cash. The PIUs are intended to meet the definition of a "profits interest" under I.R.S. Revenue Procedure 93-27 and I.R.S. Revenue Procedure 2001-43. Subject to the recipient remaining an employee or service provider of Perseid through each vesting date and subject to accelerated vesting, the PIUs will vest over four years. The potential value of a PIU, to the extent vested, will be equal to the deemed value of a Perseid common unit at the time of a liquidity event, such as a buy-out of the Company's equity interest in Perseid by Astellas or the sale of Perseid to another company, less the deemed value of a common unit at the time the PIU was granted.

In the event of a buy-out of the Company's equity interest in Perseid by Astellas, Astellas is obligated to purchase for cash all PIUs held by Perseid's then-current and former employees, consultants, directors and other service providers. This obligation of Astellas to purchase the PIUs is in addition to the purchase price to be paid by Astellas to the Company in exchange for its equity interest in Perseid. In the event of a liquidity event other than a buy-out by Astellas, such as an acquisition of Perseid by another party or a dissolution of Perseid, then the PIUs may be assumed by an acquirer, exchanged for cash at the fair market value of the PIUs, if any, or be replaced with other rights or property, at the discretion of the plan administrator. Under the Company's

accounting policies related to share-based compensation, it has determined that the fact that the PIUs will only have value upon the occurrence of a liquidity event represents a performance condition. As such, under applicable accounting standards, expense is only recognized if the performance condition is probable of occurring. As of December 31, 2010, the Company has concluded that it is not probable that a liquidity event will occur, and as such have not recorded compensation expense in its Consolidated Statement of Operations. The amount of unrecognized compensation expense is approximately $5.9 million as of December 31, 2010, $842,000 of which relates to PIUs that have vested through December 31, 2010. This unrecognized compensation expense represents the implied fair value of the PIUs as estimated based solely on Astellas' exercise price for the buyout of the Company's interest as of December 31, 2010. This amount will fluctuate in future periods based on the value or deemed value of Perseid. At the time the Company believes that a liquidity event becomes probable, as determined under applicable accounting standards, it will record a cumulative amount to compensation expense for services previously rendered. Any remaining unrecognized compensation expense would then be recognized over the then remaining service period. Also see Note 7 of the Notes to Consolidated Financial Statements. As of December 31, 2010, approximately 13.1 million PIUs were outstanding.

Valuation and Expense Information

For the years ended December 31, 2008, 2009 and 2010, stock-based compensation expense related to employee stock options, restricted stock units, restricted stock awards and employee stock purchases, and stock-based compensation expense related to consultant stock options was allocated as follows (in thousands):

	Year ended December 31, 2008	Year ended December 31, 2009	Year ended December 31, 2010
Research and development	$4,539	$3,639	$ 421
General and administrative	3,643	4,276	3,105
Total stock-based compensation expense	$8,182	$7,915	$3,526

There was no capitalized stock-based employee compensation cost as of December 31, 2010. There were no recognized tax benefits related to stock-based compensation expense during the years ended December 31, 2010, 2009 or 2008.

Net Income (Loss) Per Share

Basic net income (loss) per share has been computed using the weighted-average number of shares of common stock outstanding during the period. During the periods in which the Company has net income, the diluted net income per share has been computed using the weighted average number of shares of common stock outstanding and other dilutive securities.

The following table presents a reconciliation of the numerators and denominators of the basic and diluted net income (loss) per share computations and the calculation of basic and diluted net income (loss) per share (in thousands, except per share data):

	Year Ended December 31,		
	2008	2009	2010
Numerator:			
Net income (loss) attributable to Maxygen, Inc.	$30,325	$(32,402)	$68,884
Denominator:			
Basic and diluted:			
Weighted-average shares used in computing basic net income (loss) per share	37,100	38,236	29,949
Effect of dilutive securities	258	—	179
Weighted-average shares used in computing diluted net income (loss) per share	37,358	38,236	30,128
Basic net income (loss) per share	$ 0.82	$ (0.85)	$ 2.30
Diluted net income (loss) per share	$ 0.81	$ (0.85)	$ 2.29

The total number of shares excluded from the calculations of diluted net income (loss) per share, prior to application of the treasury stock method, was approximately 10,265,000 stock options and 1,008,000 restricted stock units at December 31, 2008, approximately 8,604,000 stock options and 933,000 shares of restricted stock at December 31, 2009 and approximately 7,914,000 stock options and 15,000 shares of restricted stock at December 31, 2010.

Comprehensive Income (Loss)

Comprehensive income (loss) is primarily comprised of net income (loss), net unrealized gains or losses on available-for-sale securities, including the Company's equity investment in Codexis and its related tax effects, and foreign currency translation adjustments. The following table presents comprehensive income (loss) and its components (in thousands):

	Year Ended December 31,		
	2008	2009	2010
Net income (loss)	$30,325	$(32,402)	$68,884
Changes in unrealized gains on available-for-sale investment in equity securities, net of tax effects	—	—	3,229
Changes in unrealized gains (losses) on available-for-sale securities	24	(219)	(25)
Comprehensive income (loss) attributable to Maxygen, Inc.	30,349	(32,621)	72,088
Comprehensive income (loss) attributable to non-controlling interest	—	245	(452)
Comprehensive income (loss)	$30,349	$(32,376)	$71,636

The changes in unrealized gains on available-for-sale investment in equity securities of $3.2 million represent the fair value of approximately 515,876 shares of Codexis common stock owned by the Company, or

$5.4 million, less the estimated related tax effect of $2.2 million. The shares of Codexis common stock being retained by the Company represent shares reserved on behalf of the holders of certain outstanding equity awards, fractional shares of Codexis common stock for which the Company instead made a cash payment to its stockholders in lieu thereof, and shares required to be withheld in connection with the distribution under applicable tax laws. See Note 2 under the heading Distribution of Codexis Common Stock and Cash.

The components of accumulated other comprehensive income (loss) is as follows (in thousands):

	Year Ended December 31,	
	2009	2010
Unrealized gains on available-for-sale investment in equity securities	$ —	$ 5,468
Tax effects of available-for-sale investment in equity securities	—	(2,239)
Unrealized gain on available-for-sale securities	26	—
Unrealized losses on available-for-sale securities	(1)	—
Foreign currency translation adjustments	(252)	(252)
Accumulated other comprehensive income (loss)	$(227)	$ 2,977

Recent Accounting Pronouncements

In April 2010, the Financial Accounting Standards Board ("FASB") issued an accounting standard update related to the milestone method of revenue recognition. The accounting standards update provides guidance on defining a milestone and determining when it may be appropriate to apply the milestone method of revenue recognition for research or development arrangements. A company may make an accounting policy election to use the milestone method of revenue recognition for transactions within the scope of the amendments. The amendments will be effective in fiscal years beginning on or after June 15, 2010, and early adoption is permitted. The Company has evaluated the impact of adopting this guidance and believes it will not have a material effect on its financial statements.

In February 2010, the FASB issued guidance that removes the requirement for registrants to disclose the date through which management evaluated subsequent events in the financial statements, and was effective upon its issuance. The Company adopted the updated guidance upon issuance. The adoption of this new guidance did not have an impact on the Company's financial statements.

In January 2010, the FASB issued guidance that amended the disclosure requirements related to recurring and nonrecurring fair value measurements. This guidance requires new disclosures on the transfers of assets and liabilities between Level 1 (quoted prices in active market for identical assets or liabilities) and Level 2 (significant other observable inputs) of the fair value measurement hierarchy, including the reasons for and the timing of the transfers. Additionally, this guidance requires a roll forward of activities on purchases, sales, issuance and settlements of the assets and liabilities measured using significant unobservable inputs (Level 3 fair value measurements). The Company has adopted this guidance beginning January 1, 2010, except for the disclosure on the roll forward activities for Level 3 fair value measurements, which will become effective for the Company beginning January 1, 2011. The adoption of this new guidance did not have a material impact on the Company's financial statements.

In September 2009, the FASB amended the standards for revenue recognition for multiple deliverable revenue arrangements. As amended, the standard eliminates the residual method of allocation and adds the requirement to use the relative selling price method when allocating revenue in a multiple deliverable

arrangement. When applying the relative selling price method, the selling price for each deliverable shall be determined using the vendor specific objective evidence of selling price, if it exists, otherwise third-party evidence of selling price. If neither vendor specific objective evidence nor third-party evidence of selling price exists for a deliverable, the vendor shall use its best estimate of the selling price for that deliverable when applying the relative selling price method. The accounting changes are effective for fiscal years beginning on or after June 15, 2010, with early adoption permitted. Adoption may either be on a prospective basis or by retrospective application. The Company is currently evaluating the impact of the amended standards.

In June 2009, the FASB issued guidance that amends the evaluation criteria to identify the primary beneficiary of a variable interest entity. Additionally, this guidance requires ongoing reassessments of whether an enterprise is the primary beneficiary of the variable interest entity. This guidance is effective for interim and annual reporting periods after November 15, 2009. The Company adopted this new guidance as of the beginning of fiscal year 2010, and the Company has applied such guidance in evaluating whether it is the primary beneficiary of Perseid and its other majority-owned subsidiaries and whether it should continue to consolidate such majority-owned subsidiaries. Based on the Company's analysis, it has consolidated Perseid and its other majority-owned subsidiaries at December 31, 2010.

2. Asset Sales and Distributions and Licensing Transactions

Sale of Platform Technology to Codexis

On October 28, 2010, the Company entered into an Asset Purchase Agreement (the "Purchase Agreement") with Codexis and Codexis Mayflower Holdings, LLC, a wholly-owned subsidiary of Codexis ("Codexis Holdings"), pursuant to which Codexis Holdings acquired substantially all of the patents and other intellectual property rights associated with the Company's MolecularBreeding™ directed evolution platform. The assets acquired by Codexis Holdings include patents, trademarks, copyrights, software and certain assumed contracts. The assets acquired by Codexis Holdings did not include any patent rights covering the specific products under development by the Company or Perseid and the Company has retained all rights to its MAXY-G34 program.

The intellectual property assets and rights acquired by Codexis Holdings under the Purchase Agreement will continue to be subject to existing license rights previously granted by the Company to third parties, including Perseid, which retains exclusive licenses to use the MolecularBreeding™ directed evolution platform for the discovery, research and development of protein pharmaceuticals.

In connection with the assets acquired by Codexis Holdings under the Purchase Agreement, the Company also entered into a License Agreement with Codexis Holdings (the "License Agreement"), pursuant to which Codexis Holdings has granted to Maxygen certain license rights to the intellectual property assets acquired by Codexis Holdings to the extent necessary for the Company to fulfill its contractual obligations under the license agreements retained by the Company, such as the Company's license agreement with Perseid, and to permit the Company to practice any retained rights under such agreements. The License Agreement also provides for a grant by the Company of certain license rights to Codexis Holdings, including rights necessary for Codexis Holdings to fulfill its contractual obligations under the license agreements it has assumed under the Purchase Agreement. Under the License Agreement, the Company is obligated to continue to pay a portion of certain costs incurred by Codexis in connection with the continued prosecution and maintenance of the acquired patent rights.

Since Codexis Holdings now owns substantially all of the intellectual property rights that were subject to the Company's prior license agreement with Codexis, the Company and Codexis terminated that license agreement in connection with the assets acquired by Codexis Holdings under the Purchase Agreement. The Company's prior license agreement with Codexis was entered into by the parties in connection with the formation of Codexis

in March 2002 and granted to Codexis certain exclusive rights to the MolecularBreeding™ directed evolution platform for certain small molecule pharmaceutical, energy and industrial chemical applications. Under the license agreement, the Company was entitled to receive 20% of certain consideration received by Codexis from a third party licensee in connection with the commercialization of energy products made with a biocatalyst developed using the licensed technology. The Company was also eligible for a 2% royalty on net sales of any related energy product commercialized directly by Codexis. As a result of the termination of this license agreement, the Company is no longer eligible for any payments or potential royalties from Codexis.

In consideration for the assets acquired by Codexis Holdings under the Purchase Agreement and the termination of the Company's prior license agreement with Codexis, Codexis Holdings paid a total purchase price to the Company of $20.0 million, of which $4.0 million will be held in escrow for twelve months, with $2.0 million of such amount to be held in escrow for a total of twenty-three months, in each case to satisfy any indemnification obligations of the Company under the Purchase Agreement. Escrow amounts not used to satisfy such obligations or subject to pending claims will be released to the Company upon expiration of the applicable escrow term. The $20.0 million purchase price was recorded as Sale of platform technology on the Company's Consolidated Statement of Operations in 2010. The $4.0 million held in escrow was recorded on the Company's Consolidated Balance Sheet, with $2.0 million recorded within Prepaid expenses and other current assets and the remaining $2.0 million, non-current portion recorded within Other non-current assets.

Distribution of Codexis Common Stock and Cash

On December 16, 2010, the Company completed a distribution of a majority of the shares of Codexis common stock it held to the Company's stockholders. As a result of the distribution, each of the Company's stockholders received 0.187039 of a share of Codexis common stock for each outstanding share of Company common stock such stockholder held as of the December 3, 2010 record date, subject to a due bill process for shares of Company common stock traded between the record date and the December 15, 2010 ex-dividend date. The Company's stockholders received cash in lieu of any fraction of a Codexis share that they would have otherwise received in the distribution. In aggregate, the Company distributed 5,445,274 shares of Codexis common stock to its stockholders. The remaining 515,876 shares of Codexis common stock held by Maxygen at December 31, 2010 represent shares that are being retained by the Company on behalf of the holders of certain outstanding Company equity awards, fractional shares of Codexis common stock for which the Company instead made a cash payment to its stockholders in lieu thereof, and shares required to be withheld in connection with the distribution under applicable tax laws.

The fair value of $53.2 million for the shares of Codexis common stock distributed was reported as a Gain on distribution of equity securities on the Company's Consolidated Statement of Operations in the twelve month period ending December 31, 2010, with a corresponding reduction in Additional paid-in capital on the Company's Consolidated Balance Sheet at December 31, 2010. The fair value was determined based on the closing price of Codexis common stock on the December 14, 2010 distribution date.

The Company also made a special cash distribution in the amount of $1.00 for each outstanding share of Company common stock owned on the December 17, 2010 record date. The cash distribution was paid on December 28, 2010 and, consistent with the accounting for the Codexis common stock distribution, was recorded as a reduction in Additional paid-in capital on the Company's Consolidated Balance Sheet at December 31, 2010.

The entire portion of each distribution was treated as a tax-free distribution to the Company's stockholders for U.S. Federal income tax purposes, based on the determination that the Company did not have any current or cumulative earnings and profits in 2010 for U.S. tax purposes.

The remaining 515,876 shares of Codexis common stock held by Maxygen at December 31, 2010, which are classified as an Available-for-sale investment in equity securities on the Company's Consolidated Balance Sheet, include 158,338 shares that are reserved to settle the Company's obligation to holders of restricted stock awards to release the applicable portion of the Codexis stock and cash distributions upon the vesting of the underlying restricted stock award. The change in value of this obligation is charged to earnings. The current portion of this obligation is $626,000 and the non-current portion is $1.9 million with classification based on vesting provisions. For the year ended December 31, 2010, the Company recorded a charge of $135,000 related to the mark-to-market adjustment of this obligation, which was included in Interest and other income, net on the Company's Consolidated Statements of Operations. As the 515,876 shares of Codexis common stock are classified as an available-for-sale asset, unrealized gains and losses are recorded within Accumulated other comprehensive income (loss) on the Company's Consolidated Balance Sheet.

Sale of Hematology Assets and Grant of Licenses to Bayer HealthCare LLC

In July 2008, the Company sold its hematology assets, including MAXY-VII, the Company's factor VII program, and its assets related to factor VIII and factor IX, and granted certain licenses to the MolecularBreeding™ directed evolution platform to Bayer HealthCare LLC ("Bayer") and recognized $90.6 million of revenue in 2008 in connection with the transaction, which included an upfront cash payment of $90.0 million. The Company recognized these proceeds in 2008 as Technology and license revenue. The Company is also eligible to receive future cash milestone payments of up to an additional $30.0 million based on the achievement of certain events related to the potential initiation of a phase II clinical trial of MAXY-VII. The milestone payment is also subject to the satisfaction of certain patent related conditions with half of the potential $30.0 million milestone payment subject to the satisfaction of certain patent related conditions in the United States and the remaining half of the potential milestone payment subject to the satisfaction of similar patent related conditions in certain European countries. To date, all of the patent related conditions have been satisfied. However, there can be no assurances that these conditions will remain satisfied at the time of achievement of the events related to the phase II clinical trial, if it occurs. The failure to satisfy these patent related conditions at that time could reduce the potential milestone payment to the Company by 25%, 50% or 75%, or could result in no payment of the potential milestone payment.

Option and License Agreement for MAXY-G34

On May 6, 2009, the Company entered into an option and license agreement with Cangene Corporation ("Cangene") pursuant to which the Company granted Cangene options to obtain certain licenses to intellectual property rights associated with the Company's MAXY-G34 program to fulfill potential future government contracts related to the development, manufacture and procurement of MAXY-G34 for the treatment or prevention of neutropenia associated with acute radiation syndrome ("ARS"). ARS is an acute and potentially life threatening illness caused by exposure to ionizing radiation over a very short period of time.

In July 2010, the agreement with Cangene expired as a result of the decision by the Biomedical Advanced Research and Development Authority (BARDA), an agency within the U.S. Department of Health and Human Services, to eliminate Cangene from the competitive range with respect to its bid on a contract for developing a treatment for ARS. Under the agreement, Cangene paid the Company an upfront option fee of $500,000, which was recorded as non-current deferred revenue upon receipt. If Cangene had been awarded the government development contract and exercised the option, the Company would have been eligible to receive additional payments from Cangene, including licensing fees and a specified percentage of any net contract revenues recognized by Cangene under the government contract. As a result of the expiration, the Company is no longer eligible for any further payments under the agreement. As a result of the expiration of the agreement, the Company recognized the upfront option fee as revenue in the third quarter of 2010.

The Company continues to retain all rights to MAXY-G34 for commercial development of all therapeutic areas, including all rights for chemotherapy-induced neutropenia and ARS indications, and it is continuing to evaluate the potential further development of the MAXY-G34 program for both indications.

Sale of Vaccines Assets

On January 5, 2010, the Company consummated a transaction with AltraVax pursuant to which AltraVax acquired substantially all of the Company's vaccines assets, including the related government grants. Under the arrangement, the Company received an upfront payment of $500,000 and a second payment of $525,000 in December 2010, and AltraVax is obligated to pay the Company an additional amount of up to $625,000 by December 31, 2011, as the final payment of the purchase price. The Company is also eligible to receive a certain percentage of any revenue received by AltraVax under contracts involving the Company's vaccines technology that are entered into by AltraVax for a period of up to two years after the payment by AltraVax of the total purchase price. As part of the transaction, the Company also entered into a license agreement under which it granted AltraVax certain exclusive licenses in the vaccines field and certain non-exclusive licenses in the adjuvants field to the MolecularBreeding™ directed evolution platform and certain ancillary technologies, in each case, subject to existing third party rights to such licensed assets and technology. In October 2010, the Company sold substantially all of the patents and other intellectual property rights associated with the MolecularBreeding™ directed evolution platform to Codexis (see above). However, the license agreement between the Company and AltraVax and the licenses granted to AltraVax thereunder remain in effect, and the Company has been granted a license back from Codexis sufficient to satisfy the Company's license obligations to AltraVax.

The initial payment of $500,000 was recognized as revenue in the three months ended March 31, 2010 as no further performance obligations existed at that date. The second payment of $525,000 was recognized as revenue upon receipt in the three months ended December 31, 2010. Any further amounts receivable pursuant to this transaction will be recognized as revenue on the earlier of when payments are received or the amounts can be reliably measured and collectability is reasonably assured.

3. Cash Equivalents and Investments

The Company's cash equivalents and investments as of December 31, 2010 were as follows (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Money market funds	$ 128,027	$ —	$—	$ 128,027
Available-for-sale investment in equity securities	—	5,468	—	5,468
Total	128,027	5,468	—	133,495
Less amounts classified as cash equivalents	(128,027)	—	—	(128,027)
Total investments	$ —	$5,468	$—	$ 5,468

The Company's cash equivalents and investments as of December 31, 2009 were as follows (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Money market funds	$ 125,919	$—	$—	$ 125,919
U.S. government agency securities	33,586	26	(1)	33,611
Total	159,505	26	(1)	159,530
Less amounts classified as cash equivalents	(125,919)	—	—	(125,919)
Total investments	$ 33,586	$ 26	$ (1)	$ 33,611

Realized gains or losses on the maturity of available-for-sale securities for 2010, 2009 and 2008 were insignificant. The net change in unrealized holding gains (losses) on available-for-sale securities included in Accumulated other comprehensive income (loss) were unrealized gains of $5.4 million in 2010, which were primarily related to the valuation of available-for-sale investment in equity securities. The net change in unrealized gains (losses) on available-for-sale securities included in Accumulated other comprehensive income (loss) were unrealized losses of $219,000 in 2009 and unrealized gains of $24,000 in 2008. None of the investments at December 31, 2010 have been in a continuous unrealized loss position for greater than twelve months. At December 31, 2010, all investments had a contractual maturity of less than one year.

4. Collaborative Agreements

During 2010, 2009 and 2008, the Company recognized revenue primarily from the two collaboration agreements with Astellas described below. Total revenue recognized under these collaboration agreements was $33.3 million in 2010, $27.2 million in 2009 and $4.4 million in 2008.

Astellas (MAXY-4)

In September 2008, the Company entered into a co-development and collaboration agreement with Astellas, relating to the development and commercialization of the Company's MAXY-4 product candidates for autoimmune diseases and transplant rejection. Under the agreement, the Company received an upfront fee of $10.0 million. Astellas also paid for the first $10.0 million of certain preclinical development costs that would otherwise have been shared by the parties. This agreement was assigned to Perseid on September 18, 2009, in connection with the consummation of the Joint Venture Agreement. In 2010, the Company recognized $4.5 million of the $10.0 million upfront fee, which was fully amortized as of December 31, 2010. The Company also recorded Related party revenue of $15.2 million, earned as net reimbursement of its research and development activities under this agreement. In addition, the Company recorded $5.0 million in Related party revenue as a result of the achievement of a preclinical milestone in June 2010.

Astellas (Other Products)

In September 2009, in connection with the consummation of the Joint Venture Agreement, Perseid entered into a collaboration agreement with Astellas relating to the discovery, research and development by Perseid of multiple protein therapeutics (other than the MAXY-4 program). Under this agreement, Astellas funds substantially all of the costs, estimated at up to $30.0 million over three years and subject to certain limitations, of Perseid's discovery, research and development activities. In 2010, the Company recognized $8.6 million of related party revenue attributable to this agreement.

5. Perseid Therapeutics LLC

On June 30, 2009, the Company entered into the Joint Venture Agreement with Astellas relating to the establishment of Perseid. Pursuant to the Joint Venture Agreement, the Company contributed substantially all of its programs and technology assets in protein pharmaceuticals, including the Company's MAXY-4 co-development and commercialization agreement with Astellas (but excluding its MAXY-G34 program), in exchange for an ownership interest in Perseid. At the closing, each of the Company and Astellas also invested $10.0 million of cash in Perseid. As a result of these contributions and investments, the Company has an ownership interest in Perseid of approximately 83.3% and Astellas has the remaining ownership interest of approximately 16.7%. Astellas has been granted an option to acquire all of the Company's ownership interest in Perseid at specified exercise prices that increase each quarter from the current option price of $76.0 million (through March 18, 2011) to $123.0 million over the term of the buy-out option, which expires on September 18, 2012 (the third anniversary of the closing).

Pursuant to the Joint Venture Arrangement, Astellas and Perseid entered into a new collaboration agreement pursuant to which Astellas funds substantially all of the costs, estimated at up to $30.0 million over the three-year option term and subject to certain limitations, related to the discovery, research and development by Perseid of multiple protein therapeutics (other than the MAXY-4 program). Astellas also has been granted an option to obtain an exclusive license to any one product developed by Perseid under this agreement, and to proprietary products of Astellas, if any, which Astellas and Perseid agree to develop under that agreement. This product option is subject to certain conditions and is exercisable only if Astellas does not exercise its buy-out option prior to expiration of its term. The on-going development costs for the MAXY-4 program will be shared by Astellas and Perseid in accordance with the existing terms of the MAXY-4 co-development and commercialization agreement.

To support the research and development operations of Perseid, the Company also entered into a technology license agreement with Perseid under which the Company granted Perseid certain exclusive licenses to use the MolecularBreeding™ directed evolution platform and ancillary protein expression technologies for the discovery, research and development of protein pharmaceuticals, subject to certain existing licenses and other limitations. In October 2010, the Company sold substantially all of the patents and other intellectual property rights associated with this technology platform to Codexis. However, the license agreement between the Company and Perseid remains in effect, and the Company has been granted a license back from Codexis sufficient to satisfy the Company's license obligations to Perseid.

In the event Astellas does not exercise the buy-out option prior to the expiration of the three-year option term, all rights to the protein therapeutics developed by Perseid (with the exception of any products for which Astellas has exercised its license option) will be retained by Perseid. In the event that Astellas does not exercise its buy-out option and does not exercise its product option under the above-referenced collaboration agreement, an Astellas subsidiary will be required to provide Perseid with up to 18 months of transition funding in the form of revolving loans of up to $20.0 million on pre-agreed terms in accordance with a form bridge loan agreement.

As a result of this transaction, substantially all of the Company's protein therapeutics business and research and development operations are now operated through Perseid. The Company includes the results of Perseid in its consolidated financial statements, with the minority interest of Astellas in Perseid reflected in the Company's Consolidated Balance Sheet as Non-controlling interests. However, the Company is not obligated to fund the operations or other capital requirements of Perseid.

6. Properties and Equipment

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

	December 31,	
	2009	2010
Leasehold improvements	$ 3,427	$ 3,839
Machinery and laboratory equipment	11,924	10,898
Computer equipment and software	2,380	2,423
Furniture and fixtures	1,459	1,459
	19,190	18,619
Less accumulated depreciation and amortization	(17,413)	(16,887)
Property and equipment, net	$ 1,777	$ 1,732

7. Commitments

Operating Leases and Material Contracts

The Company has entered into various operating leases for its facilities and certain computer equipment and material contracts. The facility leases were amended in February 2010 and expire in 2015 and include scheduled rent increases that will be recognized on a straight-line basis over the term of the leases. The material contracts expire on various dates through 2015.

As of December 31, 2010, minimum annual rental commitments under operating leases are as follows (in thousands):

Year Ending December 31,	
2011	$ 9,098
2012	5,930
2013	1,820
2014	1,269
2015	222
	$18,339

Total rent expense was $907,000 in 2010, $1.2 million in 2009 and $1.5 million in 2008.

Profits Interest Units

Perseid's 2009 Equity Incentive Plan provides for the grant by Perseid of profits interest units, or PIUs, to all employees of the Company and Perseid who are currently providing services to Perseid. A PIU is a special type of limited liability company common unit that allows the recipient to participate in any future increase in the value of Perseid. The PIUs are designed to attract and retain employees of Perseid and to provide incentive to promote the success of Perseid through the advancement of the MAXY-4 program and other programs. The earned value of a PIU will generally be settled in cash. The PIUs are intended to meet the definition of a "profits interest" under I.R.S. Revenue Procedure 93-27 and I.R.S. Revenue Procedure 2001-43. Subject to the recipient remaining an employee or service provider of Perseid through each vesting date and subject to accelerated vesting, the PIUs will vest over four years. The potential value of a PIU, to the extent vested, will be equal to the

deemed value of a Perseid common unit at the time of a liquidity event, such as a buy-out of the Company's equity interest in Perseid by Astellas or the sale of Perseid to another company, less the deemed value of a common unit at the time the PIU was granted.

In the event of a buy-out of the Company's equity interest in Perseid by Astellas, Astellas is obligated to purchase for cash all PIUs held by Perseid's then-current and former employees, consultants, directors and other service providers. This obligation of Astellas to purchase the PIUs is in addition to the purchase price to be paid by Astellas to the Company in exchange for its equity interest in Perseid. In the event of a liquidity event other than a buy-out by Astellas, such as an acquisition of Perseid by another party or a dissolution of Perseid, then the PIUs may be assumed by an acquirer, exchanged for cash at the fair market value of the PIUs, if any, or be replaced with other rights or property, at the discretion of the plan administrator. Under the Company's accounting policies related to share-based compensation, it has determined that the fact that the PIUs will only have value upon the occurrence of a liquidity event represents a performance condition. As such, under applicable accounting standards, expense is only recognized if the performance condition is probable of occurring. As of December 31, 2010, the Company has concluded that it is not probable that a liquidity event will occur, and as such have not recorded compensation expense in its Consolidated Statement of Operations. The amount of unrecognized compensation expense is approximately $5.9 million as of December 31, 2010, $842,000 of which relates to PIUs that have vested through December 31, 2010. This unrecognized compensation expense represents the implied fair value of the PIUs as estimated based solely on Astellas' exercise price for the buyout of Maxygen's interest as of December 31, 2010. This amount will fluctuate in future periods based on the value or deemed value of Perseid. At the time the Company believes that a liquidity event becomes probable, as determined under applicable accounting standards, it will record a cumulative amount to compensation expense for services previously rendered. Any remaining unrecognized compensation expense would then be recognized over the then remaining service period. As of December 31, 2010, approximately 13.1 million PIUs were outstanding.

8. Stockholders' Equity

Maxygen Preferred Stock

The Company is authorized, subject to limitations prescribed by Delaware law, to provide for the issuance of preferred stock in one or more series, to establish from time to time the number of shares included within each series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series (but not below the number of shares of such series then outstanding) without any further vote or action by the stockholders.

401(k) Savings Plan

The Company has a savings plan that qualifies as a deferred salary arrangement under Section 401(k) of the Internal Revenue Code (the "401(k) Plan"). Under the 401(k) Plan, participating employees may defer a percentage (not to exceed 100%) of their eligible pretax earnings up to the Internal Revenue Service's annual contribution limit. All employees of the Company age 18 years or older are eligible to participate in the 401(k) Plan. The Company is not required to contribute to the 401(k) Plan, but beginning in 2001 elected to match contributions of its participating employees in an amount up to a maximum of the lesser of (i) 50% of the employee's 401(k) yearly contribution or (ii) 6% of the employee's yearly base salary. The matching contributions were made in the form of newly issued shares of Company common stock as of each June 30 and December 31. All matching contributions vested immediately. The fair value of the Company's matching contribution to the 401(k) Plan was $340,000 in 2009 and $459,000 in 2008. In September 2009, the Company discontinued matching contributions under the 401(k) Plan.

2006 Equity Incentive Plan

The Company's stockholders approved the 2006 Plan on May 30, 2006. The 2006 Plan replaced the 1997 Plan. The 2006 Plan provides for the grant of stock options (both nonstatutory and incentive stock options), stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units and dividend equivalents to employees (including officers), directors and consultants of the Company and its subsidiaries and affiliates. No equity awards may be granted under the 2006 Plan after February 7, 2016. The maximum term of the options granted under the 2006 Plan is ten years. Equity awards granted under the 2006 Plan vest and become exercisable pursuant to a vesting schedule determined by the administrator of the plan. The 2006 Plan does not provide for annual increases in the number of shares available for issuance under the 2006 Plan. At December 31, 2010, 4,049,423 shares remained available for future awards under the 2006 Plan.

1997 Stock Option Plan

The Company's stockholders originally approved the 1997 Plan on March 30, 1997. The 1997 Plan, which was scheduled to expire in March 2007, was replaced by the 2006 Plan. The maximum term of the options granted under the 1997 Plan is ten years. In connection with the stockholder approval of the 2006 Plan, shares available for future awards under the 1997 Plan were transferred to the 2006 Plan, and the 1997 Plan was terminated as to future awards. As a result, no shares remained available for future awards under the 1997 Plan at December 31, 2010.

1999 Nonemployee Directors Stock Option Plan

The Company's stockholders approved the Directors' Plan on December 14, 1999. The Directors' Plan expired on September 29, 2009. Under the Directors' Plan, prior to its expiration, each nonemployee director was automatically granted a nonstatutory stock option to purchase 20,000 shares of common stock on the date upon which such person first became a director. At the first board meeting immediately following each annual stockholders' meeting, each non-employee director was also automatically granted a nonstatutory option to purchase 5,000 shares of common stock. The exercise price of options granted under the Directors' Plan was equal to the fair market value of the common stock on the date of grant. Options have a term of ten years. Generally, each initial grant made under the Directors' Plan vested as to 25% of the shares subject to the option at the end of each year. Each subsequent grant generally vested in full one year after the date of grant. As a result of the expiration of the Directors' Plan, no shares remained available for future awards under this plan at December 31, 2010.

2000 International Stock Option Plan

The Company's board of directors adopted the International Plan on April 10, 2000 and amended it on March 1, 2001. The International Plan was not approved by the Company's stockholders, as no such approval was required. As a result of the cessation of research and development operations at Maxygen ApS in 2007, the Company discontinued the International Plan as to future awards. As a result, no shares remained available for future awards under the International Plan at December 31, 2010.

2000 Non-Officer Employee Stock Option Plan

The Company's board of directors adopted the 2000 Plan on December 6, 2000. The 2000 Plan was not approved by the Company's stockholders, as no such approval was required. The 2000 Plan expired on December 6, 2010. Under the 2000 Plan, prior to its expiration, the board of directors was authorized to issue nonqualified stock options to employees (other than executive officers and stockholders owning 10% or more of

the Company's common stock) and consultants of the Company or any of its affiliates. The maximum term of the options granted under the 2000 Plan is ten years. The 2000 Plan provided for annual increases in the number of shares available for issuance on the first day of each year equal to the greater of (i) 250,000 shares and (ii) 0.7% of the outstanding shares on the date of the annual increase, or a lower amount determined by the board of directors. As a result of the expiration of the 2000 Plan, no shares remained available for future awards under this plan at December 31, 2010.

Activity under the 2006 Plan, the 1997 Plan, the Directors' Plan, the International Plan and the 2000 Plan was as follows:

		Options and Awards Outstanding	
	Shares Available	Number of Shares	Weighted-Average Exercise Price Per Share
Balance at January 1, 2008	7,997,261	10,891,770	$13.20
Shares authorized	258,485	—	
Options/RSUs granted	(2,682,116)	2,682,116	$ 2.95
Options exercised / RSUs vested	—	(437,282)	$ 4.32
Options/RSUs cancelled	1,841,956	(1,803,575)	$10.70
Options expired	61,000	(61,000)	$10.52
Balance at December 31, 2008	7,476,586	11,272,029	$11.52
Shares authorized	262,571	—	
Options/RSUs/RSAs granted	(1,837,500)	1,837,500	$ 6.49
Options exercised/RSUs vested	—	(1,700,832)	$ 2.35
Options/RSUs cancelled	2,112,606	(1,871,722)	$20.72
Options/RSUs expired(1)	(75,000)	—	$ —
Balance at December 31, 2009	7,939,263	9,536,975	$ 9.73
Options/RSUs/RSAs granted	(150,850)	150,850	$ 6.14
Options exercised/RSAs vested (or released)	—	(272,038)	$ 2.02
Options/RSAs cancelled	1,127,017	(974,432)	$24.90
Options/RSUs expired(2)	(4,866,007)	—	$ —
Balance at December 31, 2010	4,049,423	8,441,355	$ 8.10

(1) Reflects plan shares that were terminated as a result of the expiration of the Directors' Plan on September 29, 2009.

(2). Reflects plan shares that were terminated as a result of the expiration of the Non-Officer Plan and the International Plan.

1999 Employee Stock Purchase Plan

The Company's stockholders approved the ESPP on December 14, 1999. The ESPP is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code. A total of 400,000 shares of the Company's common stock were initially reserved for issuance under the ESPP. The ESPP permits eligible employees to purchase common stock at a discount, but only through payroll deductions, during defined offering periods. The price at which stock is purchased under the ESPP is equal to 85% of the lower of (i) the fair market value of the common stock on the first day of the offering period or (ii) the fair market value of the common

stock on the purchase date. In addition, the ESPP provides for annual increases in the number of shares available for issuance under the purchase plan on the first day of each year, beginning January 1, 2001, equal to the lesser of 200,000 shares, 0.75% of the outstanding shares on the date of the annual increase, or a lower amount determined by the board of directors. The ESPP will terminate in September 2019, unless terminated earlier in accordance with the provisions of the ESPP. In 2009 and 2008, 62,842 shares and 84,783 shares of common stock were purchased pursuant to the ESPP, respectively. No shares were purchased during 2010. The weighted average fair value of purchase rights granted during the year was $2.22 in 2009 and $2.29 in 2008. At December 31, 2010, 1,446,179 shares remained available for purchase under the ESPP; however, effective from September 1, 2009, the Company has suspended all future employee purchases of Company common stock under the ESPP. As a result, the number of shares available for issuance under the ESPP has not been increased for 2010 or 2011.

Perseid 2009 Equity Incentive Plan

On September 18, 2009, Perseid adopted the Perseid 2009 Plan, pursuant to which equity awards may be granted to employees and other eligible service providers of Perseid or any parent or subsidiary thereof. The Perseid 2009 Plan provides for the grant of Perseid common units as PIUs. A total of 15.0 million common units are reserved for issuance as PIUs under the Perseid 2009 Plan, subject to adjustment in the event of certain changes in the capitalization of Perseid affecting common units. The Perseid 2009 Plan is administered by the board of managers of Perseid, which has the discretion to select service providers who will receive awards, the terms and conditions of such awards (consistent with the terms of the plan), and to make all other determinations necessary or advisable in administering the Perseid 2009 Plan. Perseid has also adopted a form of PIU award agreement for use under the Perseid 2009 Plan. Grants of PIUs will generally vest as determined by the administrator and require the participant to continue as a service provider through the relevant vesting date. PIUs that have not vested upon the participant's termination of service generally will be forfeited at no cost to Perseid. At December 31, 2010, approximately 13.1 million PIUs were outstanding.

Common Stock

At December 31, 2010, the Company had reserved shares of common stock for future issuance as follows:

2006 Equity Incentive Plan	5,083,210
2000 Non-Officer Employee Stock Option Plan	1,718,135
2000 International Stock Option Plan	517,861
1999 Employee Stock Purchase Plan	1,446,179
1999 Nonemployee Directors Stock Option Plan	210,000
1997 Stock Option Plan	4,961,572
	13,936,957

Repurchase of Common Stock

Since December 2009, the Company has repurchased a total of 9,983,068 shares of its common stock for a total cost of approximately $54.1 million. Of this total, 7,345,103 shares were repurchased in December 2009 pursuant to a modified "Dutch auction" tender offer at a total cost of approximately $39.2 million. In March 2010, the Company repurchased 1,433,361 shares from entities affiliated with GlaxoSmithKline plc at a per share price of $5.55, and an additional 1,204,604 shares were repurchased during 2010 as part of the Company's open market repurchase program at an average price of $5.72. Including commissions and fees, the aggregate cost of the repurchases in 2010 was approximately $14.9 million.

9. Income Taxes

Worldwide income (loss) from continuing operations before provision for income taxes consists of the following (in thousands):

	Year Ended December 31,		
	2008	2009	2010
United States	$(4,504)	$(31,309)	$66,194
Foreign	34,829	(1,436)	—
Income (loss) before income taxes	$30,325	$(32,745)	$66,194

For 2010, the Company recognized a tax benefit of $2.2 million related to net operating losses that management concluded may be realizable based on income recognized in Other comprehensive income related to the Company's shares of Codexis common stock held as of December 31, 2010. This recognized benefit is offset by tax expense in Other comprehensive income. For 2009 the Company recognized a tax benefit of $588,000 due to the carryback of alternative minimum tax net operating losses to 2008, 2006 and 2004 and received a refund of the alternative minimum tax charged in those years. In 2008, the Company utilized prior year federal net operating loss carryforwards to reduce the federal taxable income to zero for regular tax purposes. However, for federal purposes, the Company was subject to alternative minimum tax which was fully offset by the refundable research credit claimed under the provisions in the Housing and Economic Recovery Act of 2008. In 2008, the Company generated income from continuing operations in a foreign jurisdiction, however, no income tax expense was recorded as there are no taxes in this foreign jurisdiction.

During 2010, the Company's total deferred tax assets decreased by $882,000 related primarily to decreases in tax credit carryforward amounts, accrued expenses and a decrease in the investments in subsidiaries. The decreases were offset, by increases in federal and state net operating loss carryforwards and in capital loss carryforwards. During 2009, the Company's total deferred tax assets increased by $11.8 million due primarily to increases in federal and state net operating loss carryforwards and deferred taxes related to deductible stock option compensation.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets are as follows (in thousands):

	December 31,	
	2009	2010
Net operating loss carryforwards	$ 19,291	$ 25,598
Research credits	5,608	4,924
Capital loss carryforwards	—	3,076
Capitalized research	1,614	947
Investment in subsidiary	5,744	2,203
Stock based compensation	13,084	13,091
Accrued expenses and other	6,105	725
Total deferred tax assets	51,446	50,564
Total deferred tax liabilities	(162)	(2,228)
Valuation allowance	(51,284)	(48,336)
Net deferred tax assets and liabilities	$ —	$ —

The valuation allowance decreased by $2.9 million in 2010 and increased by $11.9 million in 2009. In assessing the realizability of deferred tax assets, the Company considered whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The Company considered future earnings, future taxable income, and the scheduled reversal of deferred taxes in making this assessment. Based on this assessment, the deferred tax assets have been fully offset by a valuation allowance at December 31, 2010 and 2009.

As of December 31, 2010, the Company had net operating loss carryforwards for federal income tax purposes of approximately $59.3 million, which expire in the years 2022 through 2030, and federal research and development tax credit carryforwards of approximately $3.3 million, which expire in the years 2012 through 2030. As of December 31, 2010, the Company had net operating loss carryforwards for state income tax purposes of approximately $90.9 million that expire in the years 2015 through 2030 and state research and development tax credits of approximately $3.9 million that have no expiration date. As a result of the Company's decision to cease operations in Denmark, it has written off its net operating loss carryforwards and therefore, as of December 31, 2008, the Company had no net operating loss carryforwards for foreign income tax purposes that it expects to use due to the cessation of operations in Denmark.

Approximately $4.3 million of the valuation allowance for deferred tax assets relates to benefits of stock options deductions that, when recognized, will be allocated directly to additional paid-in capital.

Utilization of the Company's net operating loss carryforwards may be subject to substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. Such an annual limitation could result in the expiration of the net operating loss carryforwards before utilization.

A reconciliation of income taxes at the statutory federal income tax rate to income taxes included in the Consolidated Statements of Operations is as follows (in thousands):

	December 31,		
	2008	2009	2010
U.S. federal taxes (benefit)			
At statutory rate	$ 10,614	$(12,120)	$ 23,168
State taxes (net of federal)	(37)	(1,863)	359
Stock related deductions	48	2,193	191
Loss on sale of investment in subsidiary	—	—	(5,988)
U.S. loss on liquidation of foreign subsidiary	—	—	(18,468)
Unbenefitted foreign losses	244	9	—
Lower tax rates in other jurisdictions	(13,043)	494	376
Other	786	(1,221)	1,072
Foreign deferred tax adjustments	4,799	—	—
Change in valuation allowance	(3,411)	11,920	(2,948)
Total	$ —	$ (588)	$ (2,238)

The Company did not incur a tax liability in 2010 due to the loss on sale of a 21% interest in Maxygen Holdings LLC to a third party and the U.S. loss on the liquidation of Maxygen Holdings Ltd.

At December 31, 2010, the Company had a liability for unrecognized tax benefits of approximately $1.1 million (none of which, if recognized, would favorably affect the Company's effective tax rate). The Company does not believe there will be any material changes in its unrecognized tax positions over the next twelve months.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

	Amount (in thousands)
Balance at January 1, 2009	$1,912
Increases (decrease) related to prior year tax positions	(94)
Increases related to current year tax positions	—
Settlements	—
Reductions due to lapse of applicable statute of limitations	—
Balance at December 31, 2009	$1,818
Increases (decrease) related to prior year tax positions	(694)
Increases related to current year tax positions	—
Settlements	—
Reductions due to lapse of applicable statute of limitations	—
Balance at December 31, 2010	$1,124

Interest and penalty costs related to unrecognized tax benefits, if any, are classified as a component of Interest income and other income (expense), net in the accompanying Consolidated Statements of Operations. The Company, however, did not recognize any interest and penalty expense related to unrecognized tax benefits for the years ended December 31, 2010, 2009 and 2008.

The Company files income tax returns in the U.S. federal jurisdiction, California and Denmark. The Company is subject to U.S. federal and state income tax examination for calendar tax years ending 1998 through 2010. Additionally, the Company is subject to various international tax examinations for the calendar tax years ending 2004 through 2010. Danish tax authorities are currently auditing the Company's Danish tax filings for the years 2005 through 2009. The Company does not believe that there will be any material tax exposure as a result of this audit.

10. Litigation

In December 2001, a lawsuit was filed in the U.S. District Court for the Southern District of New York against the Company and its chief executive officer and chief financial officer at the time of the initial public offering, together with certain underwriters of the Company's initial public offering and secondary public offering of common stock. The complaint, which alleges claims under Sections 11, 12(a)(2) and 15 of the Securities Act of 1933 and Section 10(b) of the Securities Exchange Act of 1934, is among the so-called "laddering" cases that have been commenced against over 300 companies that had public offerings of securities in 1999 and 2000. The complaint has been consolidated with other laddering claims in a proceeding styled *In re Initial Public Offering Securities Litigation*, No. 21 MC 92 (SAS), pending before the Honorable Shira A. Scheindlin. In February 2003, the court dismissed the Section 10(b) claim against the Company's former officers. As previously reported, the parties to these cases reached an agreement to settle all claims against all defendants, on terms that would have no material impact on the Company. On October 6, 2009, the Court approved the settlement, over a number of objections. The formal judgment approving the settlement of the Company action was entered November 24, 2009. Multiple notices of appeal from that judgment were filed with the U.S. Court of Appeals for the Second Circuit by various persons with interests in aspects of the settlement. Several of those persons subsequently withdrew their appeals, but two objectors continue to pursue relief from the Second Circuit. We cannot predict the outcome of the appeal. Should the settlement approval be overturned, the parties could return to active litigation. In such an event, the Company would intend to defend itself vigorously. However, if the outcome of any such litigation were adverse to the Company and if the Company was required to pay significant damages, its business could be significantly harmed.

On July 30, 2007, the Company received a demand letter, addressed to its board of directors, from counsel for Vanessa Simmonds, a purported stockholder of the Company, concerning alleged violations by unspecified persons and entities of Section 16(b) of the Securities Exchange Act of 1934 Act in connection with the Company's initial public offering. On October 5, 2007, a complaint was filed in the U.S. District Court for the Western District of Washington against certain underwriters of the Company's initial public offering of common stock alleging Section 16(b) violations by such underwriters. The complaint named the Company as a nominal defendant, but plaintiff seeks no relief against the Company. An amended complaint was filed on February 28, 2008. Similar actions were filed by the same plaintiff in the same court against underwriters involved with the initial public offerings of some 50 other companies' common stock. The cases were related before the Honorable James L. Robart, who dismissed the actions by order dated March 12, 2009; the action against the Company was dismissed without prejudice. Plaintiff filed notice of appeals with respect to these dismissals (including the dismissal of the action involving the Company) with the U.S. Court of Appeals for the Ninth Circuit. The underwriters filed a cross appeal seeking to convert the dismissals of certain of the actions (including the action against the Company) to dismissals with prejudice. On December 2, 2010, the Ninth Circuit issued an opinion that affirmed the dismissal of the action involving the Company and converted that dismissal to a dismissal with prejudice. The opinion also disposed of appeals of the other related lawsuits. The Court amended its opinion on January 18, 2011, in a manner that did not affect the Court's disposition of the case involving the Company. Simmonds and the underwriters subsequently asked the Ninth Circuit to stay its decision to permit them to seek review in the United States Supreme Court, and the Ninth Circuit granted those requests. As of this writing, no petition has been filed seeking Supreme Court review. The Company cannot predict the outcome of further appeals should any party seek Supreme Court review. In any event, because the Simmonds action seeks no relief against the Company, the Company does not believe that any claims in the action, if successfully pursued, would have a material effect on its business.

The Company is not currently a party to any other material pending legal proceedings. From time to time, the Company becomes involved in claims and legal proceedings that arise in the ordinary course of its business. The Company does not believe that the resolution of these claims will have a material adverse effect on its financial statements.

11. Segment and Geographic Information

The Company's focus during the past several years has principally been in the field of human therapeutics. As such, the Company has determined that it operates in one segment because operating results are reported only on an aggregate basis to the Company's chief operating decision maker.

The Company's primary country of operation is the United States, its country of domicile. Revenues are attributed to countries based on the location of collaborators. Long-lived assets include property and equipment.

	Year Ended December 31,		
	2008	2009	2010
		(in thousands)	
Revenues			
United States	$ 96,321	$ 9,190	$ 4,297
Japan	4,388	27,186	33,304
Total revenue	$100,709	$36,376	$37,601

	December 31,	
	2009	2010
	(in thousands)	
Long-Lived Assets		
United States	$1,777	$1,732
Total long-lived assets	$1,777	$1,732

Major customers (excluding grant agencies) that represent more than 10% of total Company revenue are presented in the following table:

	2008	2009	2010
Customer A	0.7%	13.0%	—
Customer B	90.0%	—	—
Customer C	—	75.0%	89.0%

No other collaborator or licensee has comprised more than 10% of revenue in any period presented. The collaboration and licensing agreements that generated revenue in 2010, 2009 and 2008 are summarized in Notes 2 and 4.

12. Guarantees and Indemnifications

Applicable accounting standards require that upon issuance of a guarantee, the guarantor must recognize a liability for the fair value of the obligations it assumes under that guarantee.

As permitted under Delaware law and in accordance with the Company's Bylaws, the Company indemnifies its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company's request in such capacity. The indemnification agreements with the Company's officers and directors terminate upon termination of their employment, but the termination does not affect claims for indemnification relating to events occurring prior to the effective date of termination. The maximum amount of potential future indemnification is unlimited; however, the Company's director and officer insurance policy reduces the Company's exposure and may enable the Company to recover a portion of any future amounts paid. The Company believes that the fair value of these indemnification agreements is minimal. Accordingly, the Company has not recorded any liabilities for these agreements as of December 31, 2010.

In addition, the Company customarily agrees in the ordinary course of its business to indemnification provisions in its collaboration and licensing agreements, in agreements relating to the sale of assets, in various agreements involving parties performing services for the Company in the ordinary course of business and in its real estate leases. With respect to lease agreements, the indemnification provisions typically apply to claims asserted against the landlord relating to personal injury or property damage caused by the Company, to violations of law by the Company or to certain breaches of the Company's contractual obligations. The indemnification provisions appearing in the Company's collaboration and licensing agreements and in agreements relating to the sale of assets are similar, but in addition provide some limited indemnification for the collaborator, licensee or purchaser of assets in the event of third party claims alleging infringement of certain intellectual property rights or ownership rights. In each of the cases above, the indemnification obligation generally survives the termination of the agreement for some extended period, although the obligation typically has the most relevance during the contract term and for a short period of time thereafter. The maximum potential amount of future payments that the Company could be required to make under these provisions can be unlimited, but is sometimes limited by the value of payments made under the agreement or by an escrow amount. For example, in connection with our sale

of intellectual property assets to Codexis in October 2010, $4.0 million of the $20.0 million purchase price will be held in escrow for twelve months, with $2.0 million of such amount to be held in escrow for a total of twenty-three months, in each case to satisfy any of the Company's indemnification obligations under the purchase agreement. The Company has purchased insurance policies covering personal injury, property damage and general liability that reduce its exposure for indemnification and would enable it in many cases to recover a portion of any future amounts paid. The Company has never paid any material amounts to defend lawsuits or settle claims related to these indemnification provisions. Accordingly, the Company believes the estimated fair value of these indemnification arrangements is minimal. Accordingly, the Company has not recorded any liabilities for these agreements as of December 31, 2010.

13. Restructuring Charges

2009 U.S. Restructuring

Beginning in the third quarter of 2009, the Company implemented a restructuring plan in connection with the Company's joint venture agreement with Astellas that resulted in the termination of several employees, including members of the Company's senior management team. Under change of control agreements the Company entered into with each terminated executive officer, each executive received a lump sum severance payment equal to three times his base salary. In addition, the vesting schedule of each of the executive's outstanding equity awards was accelerated in full as of the date of termination and the post-termination exercise period of the executive's outstanding stock options and other awards was automatically extended to their full original term; provided that shares underlying restricted stock units were delivered to the executive at such later time as specified in the change of control agreements. Under these agreements, subject to certain limitations, the Company is also required to pay all of the costs for each terminated executive's continued group health, dental and vision coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended (COBRA), while the executive remains entitled to coverage under COBRA. As a result of this restructuring plan, the Company recorded restructuring charges of approximately $16.0 million in 2009, which includes $11.4 million of non-cash stock-based compensation. Expenses related to the acceleration of these executive's equity awards were recognized as general and administrative expense in the third quarter of 2009. Substantially all of the severance and one-time termination benefits have been paid as of December 31, 2010.

2008 U.S. Restructuring

In October 2008, the Company implemented a restructuring plan that resulted in the termination of approximately 30% of its workforce through the end of April 2009. As a result of this restructuring plan, the Company recorded restructuring charges of approximately $1.2 million, primarily in the fourth quarter of 2008. The restructuring charges were primarily associated with one-time termination benefits, the majority of which were paid out during the first quarter of 2009. The Company completed the activities related to this restructuring plan in April 2009.

2007 Denmark Restructuring

In November 2007, the Company implemented a restructuring plan that resulted in the cessation of research and development operations at Maxygen ApS and the elimination of all employment positions at that site. As a result of these actions, a charge of $5.2 million was recorded in the year ended December 31, 2007 and $799,000 was recorded in the year ended December 31, 2008. The Company reversed the remaining balance of $98,000 related to this restructuring in 2010.

The activity in the restructuring accrual related to the actions described above for the year ended December 31, 2010 was as follows (in thousands):

	Balance at December 31, 2009	Charges during fiscal year 2010	Non-cash charges	Cash payments during 2010	As at December 31, 2010 Balance at December 31, 2010	Total Costs to Date	Total Expected Costs
2009 U.S. Restructuring							
Employee severance and other benefits charges	$4,282	$—	$—	$(4,282)	$—	$15,866	$15,866
2008 U.S. Restructuring							
Employee severance and other benefits charges	4	—	—	(4)	—	1,184	1,184
2007 Denmark Restructuring							
Employee severance and other benefits charges	98	(98)	—	—	—	5,286	5,286
Contract termination and other associated costs	—	—	—	—	—	725	725
	$4,384	$(98)	$—	$(4,286)	$—	$23,061	$23,061

The activity in the restructuring accrual related to the actions described above for the year ended December 31, 2009 was as follows (in thousands):

	Balance at December 31, 2008	Charges during fiscal year 2009	Non-cash charges	Cash payments during 2009	As at December 31, 2009 Balance at December 31, 2009	Total Costs to Date	Total Expected Costs
2009 U.S. Restructuring							
Employee severance and other benefits charges	$ —	$15,866	$(11,425)	$ (159)	$4,282	$15,866	$15,866
2008 U.S. Restructuring							
Employee severance and other benefits charges	1,096	—	—	(1,092)	4	1,188	1,188
2007 Denmark Restructuring							
Employee severance and other benefits charges	—	98	—	—	98	5,384	5,384
Contract termination and other associated costs	18	—		(18)	—	725	725
	$1,114	$15,964	$(11,425)	$(1,269)	$4,384	$23,163	$23,163

14. Related Party Transactions

Astellas

The Company and Perseid are parties to various agreements with Astellas and/or its affiliates. On June 30, 2009, the Company entered into the Joint Venture Agreement relating to the establishment of Perseid, a majority-owned subsidiary of the Company focused on the discovery, research and development of multiple protein pharmaceutical programs, including the Company's MAXY-4 program and other early stage programs. Perseid began operations upon consummation of the transactions contemplated by the Joint Venture Agreement on September 18, 2009. See Note 5.

Waverley

On April 1, 2006, the Company entered into a consulting agreement with Waverley Associates, Inc. ("Waverley"), a private investment firm for which Mr. Isaac Stein is the president and sole stockholder. Mr. Stein also currently serves as executive chairman of the Company's board of directors. The consulting agreement was most recently amended in September 2009 to provide for an increase in the amount of consulting fees payable to Waverley to $50,000 per month. The consulting agreement, as amended to date, also provides for automatic renewal of the agreement for successive one-year terms and a two-year notice period for termination of the agreement by either party. For the years ended December 31, 2010, 2009 and 2008, total expense under this arrangement was approximately $600,000, $374,000 and $290,000, respectively.

Codexis

The Company was previously party to a license agreement with Codexis under which the Company had granted to Codexis certain exclusive rights to its MolecularBreeding™ directed evolution platform for certain small molecule pharmaceutical, energy and industrial chemical applications. This license agreement was terminated on October 28, 2010 in connection with the sale by the Company to Codexis of substantially all of the intellectual property rights associated with this technology platform (see Note 2 under the heading Sale of Platform Technology to Codexis). Under this former license agreement, the Company was entitled to receive a portion of certain consideration received by Codexis in connection with the use of the licensed rights. During the years ended December 31, 2010, 2009 and 2008, the Company recognized revenues under the license agreement of approximately $2.0 million, $4.6 million and $664,000, respectively, as a result of payments received by Codexis, including $3.2 million recognized by the Company in the first quarter of 2009 in connection with the purchase of Codexis preferred stock by Royal Dutch Shell. The payments from Codexis are included in related party revenue in the Condensed Consolidated Statements of Operations. As a result of the termination of this license agreement, the Company is no longer eligible for any payments or royalties from Codexis. The former license agreement with Codexis is discussed more fully in Note 2 under the heading Sale of Platform Technology to Codexis.

15. Fair Value

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

Assets and liabilities recorded at fair value in the Consolidated Financial Statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels directly related to the amount of subjectivity associated with the inputs to valuation of these assets and liabilities, are as follows:

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

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

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities and which reflect management's best estimate of what market

participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

The following tables represent the Company's fair value hierarchy for its financial assets (cash equivalents and investments) measured at fair value on a recurring basis as of December 31, 2010 and December 31, 2009 (in thousands):

	As of December 31, 2010			
	Estimated Fair Value	Level 1	Level 2	Level 3
Assets recorded on the balance sheet:				
Money market funds	$128,027	$128,027	$—	$—
Available-for-sale investment in equity securities	5,468	5,468	—	—
Total	$133,495	$133,495	$—	$—
Liabilities:				
Forward exchange contracts	$ 7	$ —	$ 7	$—
Stock portion of distribution payable	1,678	1,678	—	—
Total	$ 1,685	$ 1,678	$ 7	$—

	As of December 31, 2009			
	Estimated Fair Value	Level 1	Level 2	Level 3
Assets:				
Money market funds	$125,919	$125,919	$ —	$—
U.S. government agency securities	33,611	—	33,611	—
Total	$159,530	$125,919	$33,611	$—

As of December 31, 2010, the Company held 515,876 shares of Codexis common stock, which is reflected on the Company's Consolidated Balance Sheet as Available-for-sale investment in equity securities for $5.5 million. As the fair value of the Company's investment in Codexis' common stock was based on the $10.60 closing price of such stock on December 31, 2010, and because an active market exists for such shares, the Company has classified the fair value of this asset as a Level 1 asset within the fair value hierarchy. The Company historically accounted for its investment in Codexis under the equity method of accounting, but as a result of the Codexis IPO and subsequent distribution of approximately 5.4 million shares of Codexis common stock by the Company in December 2010, the Company has accounted for its investment in Codexis at December 31, 2010 as an available-for-sale investment.

At December 31, 2010, the Company had foreign currency contracts outstanding in the form of a forward exchange contract in the amount of $93,000. The fair value of the contract of $7,000 is reported as a financial liability in the table above under the Level 2 heading. The fair value of this derivative is determined by a third-party valuation service using a market-based valuation approach. The Company did not have any financial liabilities that were required to be measured at fair value on a recurring basis as of December 31, 2009, nor any financial assets or liabilities that were required to be measured at fair value on a non-recurring basis as of December 31, 2010 or December 31, 2009.

At December 31, 2010, the Company had an obligation to distribute approximately 158,338 shares of Codexis common stock to holders of the Company's restricted stock awards. The fair value of this obligation of

$1.7 million is determined based on the $10.60 closing price of such stock on December 31, 2010. As this fair value was based on a quoted price in active market, the Company classified this liability as a Level 1 liability within the fair value hierarchy and as the Stock portion of distribution payable in the table above.

16. Goodwill

In the second quarter of 2008, the Company performed an additional goodwill impairment test due to the significant decline of its stock price subsequent to the announcement on June 13, 2008 of certain patent matters related to the Company's MAXY-G34 product candidate, and concluded that the carrying value of the net assets exceeded the Company's fair value, based on quoted market prices of the Company's common stock. Accordingly, the Company performed an additional analysis, as required under applicable accounting standards, which indicated that an impairment loss was probable because the implied fair value of goodwill recorded on the Company's balance sheet was zero. As a result, the Company recorded an estimated impairment charge of $12.2 million in 2008 relating to the write-off of its goodwill.

17. Quarterly Financial Data

QUARTERLY FINANCIAL DATA
(unaudited)

	Quarter Ended			
	March 31,	June 30,	Sept. 30,	Dec. 31,
	(in thousands, except per share data)			
2010				
Technology and license revenue	$ 511	$ —	$ 504	$ 528
Related party revenue	10,565	14,264	5,887	4,609
Grant revenue	330	(330)	—	733
Total revenues	11,406	13,934	6,391	5,870
Operating expenses:				
Research and development	10,804	9,779	6,125	5,327
General and administrative	2,995	2,801	2,745	4,134
Restructuring charge	—	(98)	—	—
Total operating expenses	13,799	12,482	8,870	9,461
Income (loss) from operations	(2,393)	1,452	(2,479)	(3,591)
Gain on distribution of equity securities	—	—	—	53,180
Sale of platform technology	—	—	—	20,000
Interest and other income (expense)	(33)	228	(160)	(10)
Net income (loss) before income taxes	$ (2,426)	$ 1,680	$ (2,639)	$69,579
Income tax benefit (expense)	—	297	1,752	189
Net income (loss)	$ (2,426)	$ 1,977	$ (887)	$69,768
Less: Net income (loss) attributable to non-controlling interest	(430)	467	(341)	(148)
Net income (loss) attributable to Maxygen, Inc.	$ (1,996)	$ 1,510	$ (546)	$69,916
Basic net income (loss) per share attributable to Maxygen, Inc.	$ (0.06)	$ 0.05	$ (0.02)	$ 2.40
Diluted net income (loss) per share attributable to Maxygen, Inc.	$ (0.06)	$ 0.05	$ (0.02)	$ 2.39
Shares used in basic net income (loss) per share calculations	31,115	31,091	29,402	29,132
Shares used in diluted net income (loss) per share calculations	31,115	31,302	29,402	29,313

	Quarter Ended			
	March 31,	June 30,	Sept. 30,	Dec. 31,
	(in thousands, except per share data)			
2009				
Technology and license revenue	$ 5	$ —	$ 5	$ 5
Related party revenue	7,602	5,525	6,675	12,014
Grant revenue	907	1,264	1,115	1,259
Total revenues	8,514	6,789	7,795	13,278
Operating expenses:				
Research and development	7,033	7,418	11,099	11,090
General and administrative	2,885	5,568	6,468	2,573
Restructuring charge	98	—	12,152	3,714
Total operating expenses	10,016	12,986	29,719	17,377
Loss from operations	(1,502)	(6,197)	(21,924)	(4,099)
Interest and other income	382	328	166	101
Net loss before income taxes	$(1,120)	$(5,869)	$(21,758)	$(3,998)
Income tax benefit	—	—	—	588
Net loss	$(1,120)	$(5,869)	$(21,758)	$(3,410)
Less: Net income (loss) attributable to non-controlling interest	—	—	(86)	331
Net loss attributable to Maxygen, Inc.	$(1,120)	$(5,869)	$(21,672)	$(3,741)
Basic and diluted net loss attributable to Maxygen, Inc.	$ (0.03)	$ (0.15)	$ (0.57)	$ (0.10)
Shares used in basic and diluted net loss per share calculations	37,900	38,159	38,316	38,570

18. Subsequent Events

In January 2011, a Phase I clinical study to evaluate a next-generation CTLA4-Ig therapeutic (designated by Astellas as ASP2408) that is being developed by Perseid for the treatment of rheumatoid arthritis and potentially other autoimmune indications, was initiated. It is the first clinical trial being conducted under Perseid's collaboration with Astellas, which is sponsoring the clinical trial. Perseid earned a $10.0 million payment from Astellas for the achievement of this clinical milestone, which will be recorded as revenue in the quarter ended March 31, 2011.

Item 9 CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

Item 9A CONTROLS AND PROCEDURES

Evaluation of Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 ("the Exchange Act")) as of the end of the period covered by this report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective in reaching a reasonable level of assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time period specified in the Securities and Exchange Commission's rules and forms.

Changes in Internal Control

There has been no change in our internal controls over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during our most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting.

Annual Report on Internal Control Over Financial Reporting

Company management is responsible for establishing and maintaining adequate internal control over financial reporting. Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2010. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in "Internal Control—Integrated Framework." Based on the assessment using those criteria, management believes that, as of December 31, 2010, our internal control over financial reporting was effective.

Ernst & Young LLP, an independent registered public accounting firm, assessed the effectiveness of our internal controls over financial reporting as of December 31, 2010 and has issued an unqualified opinion. Their report appears below.

Limitations on the Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures and internal controls over financial reporting will prevent all error 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 will be met. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Item 9B OTHER INFORMATION

Not applicable.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of
Maxygen, Inc.

We have audited Maxygen, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Maxygen, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Maxygen, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2010, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the 2010 consolidated financial statements and our report dated March 8, 2011 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Palo Alto, California
March 8, 2011

PART III

Item 10 DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

We have adopted a written code of ethics that applies to our senior financial officers, including our principal executive officer, principal financial officer and principal accounting officer. We have posted the text of such code of ethics on our website (www.maxygen.com). We intend to satisfy the disclosure requirement of Item 5.05 of Form 8-K regarding an amendment to, or a waiver from, a provision of our code of ethics that applies to our principal executive officer, principal financial officer, or principal accounting officer by posting such information on our website.

The remaining information required by this item is incorporated by reference from the sections captioned "Election of Directors," "Executive Officers," "Section 16(a) Beneficial Ownership Reporting Compliance" and "Board of Directors' Meetings and Committees—Audit Committee" contained in the 2011 Proxy Statement.

Item 11 EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference from the sections captioned "Executive Compensation," "Director Compensation," "Compensation Committee Report" and "Compensation Committee Interlocks and Insider Participation" contained in the 2011 Proxy Statement.

Item 12 SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item is incorporated by reference from the sections captioned "Security Ownership of Certain Beneficial Owners and Management" and "Securities Authorized for Issuance Under Equity Compensation Plans" contained in the 2011 Proxy Statement.

Item 13 CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference from the sections captioned "Related Party Transactions" and "Board of Directors' Meetings and Committees" contained in the 2011 Proxy Statement.

Item 14 PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference from the section captioned "Ratification of Selection of Independent Registered Public Accounting Firm" contained in the 2011 Proxy Statement.

PART IV

Item 15 EXHIBITS, FINANCIAL STATEMENT SCHEDULES

15(a)(1) Financial Statements. The following documents are being filed as part of this report:

15(a)(2) Financial Statement Schedules. Financial statement schedules have been omitted because they are either presented elsewhere, are inapplicable or are immaterial as defined in the instructions.

15(a)(3) Exhibits.

See attached Exhibit Index.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

MAXYGEN, INC.

March 8, 2011

By: /s/ JAMES R. SULAT
James R. Sulat
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John M. Borkholder, his or her true and lawful attorney-in-fact and agent, with full power of substitution and re-substitution, for him or her and in his or her name, place and stead, in any and all capacities to sign any and all amendments to this Report on Form 10-K, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ JAMES R. SULAT **James R. Sulat**	Chief Executive Officer (Principal Executive Officer), Chief Financial Officer (Principal Financial and Accounting Officer) and Director	March 8, 2011
/s/ ISAAC STEIN **Isaac Stein**	Executive Chairman of the Board	March 8, 2011
/s/ LOUIS G. LANGE **Louis G. Lange**	Director	March 8, 2011
/s/ KENNETH B. LEE, JR. **Kenneth B. Lee, Jr.**	Director	March 8, 2011
/s/ ERNEST MARIO **Ernest Mario**	Director	March 8, 2011
/s/ GORDON RINGOLD **Gordon Ringold**	Director	March 8, 2011

EXHIBIT INDEX

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
2.1+	Technology Transfer Agreement, dated as of July 1, 2008, by and among Maxygen, Inc., Maxygen Holdings Ltd., Maxygen ApS and Bayer HealthCare LLC	10-Q/A	000-28401	2.1	1/9/2009	
2.1.1+	Intellectual Property Cross License Agreement, dated as of July 1, 2008, by and among Maxygen, Inc., Maxygen Holdings Ltd., Maxygen ApS and Bayer HealthCare LLC	10-Q/A	000-28401	2.1.1	1/9/2009	
2.1.2+	License Agreement, dated as of July 1, 2008, by and between Maxygen, Inc. and Bayer HealthCare LLC	10-Q/A	000-28401	2.1.2	1/9/2009	
2.2	Master Joint Venture Agreement, dated as of June 30, 2009, by and among Maxygen, Inc., Astellas Pharma Inc. and Astellas Bio Inc.	8-K	000-28401	2.1	7/1/2009	
2.2.1	Asset Contribution Agreement, dated as of September 18, 2009, by and between Maxygen, Inc. and Perseid Therapeutics LLC	8-K	000-28401	2.1.1	9/21/2009	
2.2.2	Other Products Collaboration Agreement, dated as of September 18, 2009, by and between Perseid Therapeutics LLC and Astellas Pharma Inc. (Form)	8-K	000-28401	2.1.2	7/1/2009	
2.2.3	Technology License Agreement, dated as of September 18, 2009, by and between Maxygen, Inc. and Perseid Therapeutics LLC	8-K	000-28401	2.1.2	9/21/2009	
2.2.4	Limited Liability Company Agreement of Perseid Therapeutics LLC, dated as of September 18, 2009	8-K	000-28401	2.1.3	9/21/2009	
2.2.5	Series A and Series B Preferred Unit Purchase Agreement, dated as of September 18, 2009, by and among Maxygen, Inc., Astellas Bio, Inc. and Perseid Therapeutics LLC	8-K	000-28401	2.1.4	9/21/2009	
2.2.6	Investors' Rights Agreement, dated as of September 18, 2009 by and between Perseid Therapeutics LLC and the persons and entities listed on Exhibit A thereto	8-K	000-28401	2.1.5	9/21/2009	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
2.2.7	Co-Sale Agreement, dated as of September 18, 2009, by and among Perseid Therapeutics LLC, Maxygen, Inc. and Astellas Bio Inc.	8-K	000-28401	2.1.6	9/21/2009	
2.2.8	Voting Agreement, dated as of September 18, 2009, by and among Perseid Therapeutics LLC, Maxygen, Inc. and Astellas Bio Inc.	8-K	000-28401	2.1.7	9/21/2009	
2.3	Asset Purchase Agreement, dated as of October 28, 2010, between Maxygen, Inc., Codexis, Inc. and Codexis Mayflower Holdings, LLC	8-K	000-28401	2.1	8/28/2010	
2.3.1	License Agreement, dated as of October 28, 2010, between Maxygen, Inc. and Codexis Mayflower Holdings, LLC	8-K	000-28401	2.1.1	8/28/2010	
3.1	Amended and Restated Certificate of Incorporation	10-Q	000-28401	3.1	8/14/2000	
3.2	Amended and Restated Bylaws	8-K	000-28401	3.1	9/07/2007	
4.1	Specimen Common Stock Certificate	S-1	333-89413	4.1	11/22/1999	
10.1+	Technology Transfer Agreement, dated March 14, 1997 (effective March 1, 1998), among Maxygen, Inc., Affymax Technologies N.V. and Glaxo Group Limited, as amended	S-1	333-89413	10.3	12/15/1999	
10.2+	Co-Development and Commercialization Agreement, dated as of September 18, 2008, by and between Astellas Pharma Inc. and Perseid Therapeutics LLC (as successor to Maxygen, Inc.)	10-Q	000-28401	10.1	11/07/2008	
10.3	Lease, dated as of October 21, 1998, between Metropolitan Life Insurance Company and Maxygen, Inc.	S-1	333-89413	10.4	10/20/1999	
10.3.1	First Amendment to Lease, dated as of February 26, 1999, by and between Metropolitan Life Insurance Company and Maxygen, Inc.	S-1	333-89413	10.5	10/20/1999	
10.3.2	Second Amendment to Lease, dated as of October 24, 2000, by and between Metropolitan Life Insurance Company and Maxygen, Inc.	10-K	000-28401	10.6	3/21/2001	
10.3.3	Third Amendment to Lease, dated October 22, 2003, by and between Metropolitan Life Insurance Company and Maxygen, Inc.	10-K	000-28401	10.15	3/12/2004	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
10.3.4	Fourth Amendment to Lease dated December 15, 2004 by and between Metropolitan Life Insurance Company and Maxygen, Inc.	10-K	000-28401	10.13	3/14/2005	
10.3.5	Fifth Amendment to Lease dated as of August 24, 2006, by and between Metropolitan Life Insurance Company and Maxygen, Inc.	8-K	000-28401	10.2	8/25/2006	
10.3.6	Sixth Amendment to Lease dated as of January 23, 2009, by and between Metropolitan Life Insurance Company and Maxygen, Inc.	10-K	000-28401	10.10.6	3/11/2009	
10.3.7	Assignment and Assumption of Lease and Seventh Amendment to Lease, effective January 29, 2010, by and between Metropolitan Life Insurance Company, Maxygen, Inc. and Perseid Therapeutics LLC	8-K	000-28401	10.1	2/10/2010	
10.4	Lease, dated December 15, 2004, between Metropolitan Life Insurance Company and Maxygen, Inc.	10-K	000-28401	10.14	3/14/2005	
10.4.1	First Amendment to Lease, dated as of August 24, 2006, by and between Metropolitan Life Insurance Company and Maxygen, Inc.	8-K	000-28401	10.1	8/25/2006	
10.4.2	Second Amendment to Lease, dated as of January 23, 2009, by and between Metropolitan Life Insurance Company and Maxygen, Inc.	10-K	000-28401	10.11.2	3/11/2009	
10.4.3	Assignment and Assumption of Lease and Third Amendment to Lease, effective January 29, 2010, by and between Metropolitan Life Insurance Company, Maxygen, Inc. and Perseid Therapeutics LLC	8-K	000-28401	10.2	2/10/2010	
*10.5	Form of Executive Officer and Director Indemnification Agreement	S-1	333-89413	10.7	10/20/1999	
*10.6	Offer Letter to James Sulat dated September 22, 2009	8-K	000-28401	10.1	9/28/2009	
*10.7	Form of Change of Control Agreement (James Sulat)	8-K	000-28401	10.2	9/28/2009	
*10.8	Retention Agreement, dated June 30, 2009, between Maxygen, Inc. and Grant Yonehiro	8-K	000-28401	10.2	7/1/2009	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
*10.9	Amended and Restated Change of Control Agreement, dated June 30, 2009, between Maxygen, Inc. and Grant Yonehiro (expired on December 31, 2009)	8-K	000-28401	10.3	7/1/2009	
*10.10	Contingent Offer Letter to Grant Yonehiro from Maxygen, Inc. dated June 26, 2009	8-K	000-28401	10.4	7/1/2009	
*10.11	Description of Non-Employee Director Compensation	10-K	000-28401	10.13	3/11/10	
*10.12	Form of Amended and Restated Executive Officer Change of Control Agreement with Former Officers	8-K	000-28401	2.1	7/1/2009	
*10.13	Form of Consulting Agreement (together with a schedule identifying substantially identical agreements between the Company and each of its former executive officers identified thereon)	10-Q	000-28401	10.7	11/5/09	
*10.14	Consulting Agreement, between Maxygen, Inc. and Waverley Associates, Inc., dated as of April 1, 2006	8-K	000-28401	10.1	4/04/2006	
*10.14.1	Letter Agreement (re extension of Consulting Agreement), between Maxygen, Inc. and Waverley Associates, Inc., dated as of December 19, 2007	10-K	000-28401	10.18.1	3/07/2008	
*10.14.2	Letter Agreement (re amendment of Consulting Agreement), between Maxygen, Inc. and Waverley Associates, Inc., dated as of May 27, 2008	10-Q	000-28401	10.2	8/05/2008	
*10.14.3	Letter Agreement (re amendment of Consulting Agreement), between Maxygen, Inc. and Waverley Associates, Inc., dated as of October 13, 2009	10-Q	000-28401	10.4	11/5/09	
*10.15	1997 Stock Option Plan, as amended, with applicable option agreement	10-Q	000-28401	10.1	8/14/2002	
*10.16	Form of Amendment to Stock Option Agreements	8-K	000-28401	10.2	6/30/2006	
*10.17	1999 Nonemployee Directors Stock Option Plan, as amended, with applicable option agreement	10-Q	000-28401	10.3	8/14/2001	
*10.18	1999 Employee Stock Purchase Plan, as amended	10-K	000-28401	10.11	3/21/2001	
*10.19	2000 International Stock Option Plan, as amended, with applicable option agreement	10-K	000-28401	10.6	3/25/2002	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
10.20	2000 Non-Officer Stock Option Plan, as amended, with applicable option agreement	S-8	333-57486	99.3	3/23/2001	
*10.21	2006 Equity Incentive Plan (including related form of stock option agreement)	8-K	000-28401	10.4	6/30/2006	
*10.21.1	Form of Restricted Stock Award Agreement under 2006 Equity Incentive Plan	10-Q	000-28401	10.5	11/5/2009	
*10.21.2	Form of Amended and Restated Restricted Stock Unit Award Agreement under 2006 Equity Incentive Plan	10-K	000-28401	10.9.1	3/11/2009	
*10.21.3	Form of Contingent Performance Unit Award Agreement under 2006 Equity Incentive Plan	10-Q	000-28401	10.6	11/5/09	
*10.22	Perseid Therapeutics LLC 2009 Equity Incentive Plan (including related form of profits interest unit agreement)	8-K	000-28401	10.1	9/21/09	
10.23+	License Agreement, dated as of March 28, 2002, between Maxygen, Inc. and Codexis, Inc. (terminated as of October 28, 2010)	10-K/A	000-28401	10.19	10/24/2008	
10.23.1+	Amendment No. 1 to License Agreement, dated as of September 13, 2002, between Maxygen, Inc. and Codexis, Inc. (terminated as of October 28, 2010)	10-K/A	000-28401	10.19.1	10/24/2008	
10.23.2	Amendment No. 2 to License Agreement, dated as of October 1, 2002, between Maxygen, Inc. and Codexis, Inc. (terminated as of October 28, 2010)	10-K	000-28401	10.19.2	3/07/2008	
10.23.3+	Amendment No. 3 to License Agreement, dated as of August 22, 2006, between Maxygen, Inc. and Codexis, Inc. (terminated as of October 28, 2010)	10-K/A	000-28401	10.19.3	10/24/2008	
10.23.4+	Side Letter, dated February 18, 2005, regarding License Agreement, dated as of March 28, 2002, between Maxygen, Inc. and Codexis, Inc. (terminated as of October 28, 2010)	10-Q	000-28401	10.3	5/06/2008	
10.23.5+	Side Letter, dated September 11, 2007, regarding License Agreement, dated as of March 28, 2002, between Maxygen, Inc. and Codexis, Inc. (terminated as of October 28, 2010)	10-Q	000-28401	10.4	5/06/2008	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
10.23.6+	Side Letter, dated September 24, 2007, regarding License Agreement, dated as of March 28, 2002, between Maxygen, Inc. and Codexis, Inc. (terminated as of October 28, 2010)	10-Q	000-28401	10.5	5/06/2008	
21.1	List of Subsidiaries					X
23.1	Consent of Independent Registered Public Accounting Firm					X
24.1	Power of Attorney (included on signature page)					X
31.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X

* Management contract or compensatory plan or arrangement.

\+ Confidential treatment has been granted with respect to portions of the exhibit. A complete copy of the agreement, including the redacted terms, has been separately filed with the Securities and Exchange Commission.

Exhibit 31.1

Certification of Chief Executive Officer and Chief Financial Officer
Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, James R. Sulat, certify that:

1. I have reviewed this annual report on Form 10-K of Maxygen, Inc.;

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 8, 2011

/s/ James R. Sulat

James R. Sulat
Chief Executive Officer & Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, James R. Sulat, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge the Annual Report of Maxygen, Inc. on Form 10-K for the annual period ended December 31, 2010 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of Maxygen, Inc.

By: /s/ James R. Sulat
Name: James R. Sulat
Title: Chief Executive Officer &
Chief Financial Officer
Date: March 8, 2011

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OFFICERS

James R. Sulat
Chief Executive Officer, Chief Financial Officer and Director

Grant Yonehiro
Senior Vice President; Chief Executive Officer and President of Perseid Therapeutics LLC

John Borkholder
General Counsel & Secretary

BOARD OF DIRECTORS

Isaac Stein, Executive Chairman
President, Waverley Associates, Inc.

James R. Sulat
Chief Executive Officer and Chief Financial Officer

Louis G. Lange
Partner, Asset Management Company; Senior Advisor, Gilead Sciences, Inc.

Kenneth B. Lee, Jr.
General Partner, Hatteras Venture Partners, LLC

Ernest Mario
Chairman and Chief Executive Officer, Capnia, Inc.

Gordon Ringold
Senior Director, University of California, Santa Cruz, Silicon Valley Initiatives; Executive Chairman, Alavita Pharmaceuticals, Inc.

STOCKHOLDER INFORMATION

Corporate Headquarters
Maxygen, Inc.
515 Galveston Drive
Redwood City, CA 94063
(650) 298-5300

Transfer Agent
Computershare Trust Company, N.A.
P.O. Box 43078
Providence, RI 02940-3078

Courier/Registered Mail:
Computershare Trust Company, N.A.
250 Royall Street
Canton, MA 02021
(781) 575-2879
(800) 952-9245 Hearing Impaired
www.computershare.com

Common Stock
Maxygen, Inc. common stock is listed on the Nasdaq Global Market under the symbol MAXY

Independent Registered Public Accountants
Ernst & Young LLP
Palo Alto, CA

Investor Relations Contact
Linda Chrisman
Maxygen, Inc.
515 Galveston Drive
Redwood City, CA 94063
(650) 298-5351

For additional information regarding Maxygen, including access to press releases, financial information, SEC filings, webcasts and stock quotes, please visit our website at www.maxygen.com.