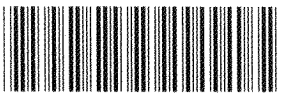
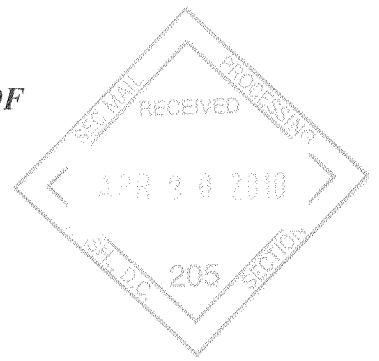
maxygen



Maxygen Annual Report 2009

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, 2009

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, 2009, 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 $172,306,000. 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, 2010, there were 32,383,666 shares of the registrant's common stock outstanding.

Documents Incorporated by Reference

Certain portions of the registrant's proxy statement for the 2010 Annual Meeting of Stockholders (hereinafter referred to as the "2010 Proxy Statement") are incorporated by reference into Part III of this report.

TABLE OF CONTENTS

This report and the disclosures herein include, on a consolidated basis, the business and operations of Maxygen, Inc. and its wholly-owned subsidiaries, Maxygen ApS, Maxygen Holdings Ltd. and Maxygen Holdings (U.S.), Inc., as well as its majority-owned subsidiary, Perseid Therapeutics LLC. 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.

We own or have rights to various copyrights, trademarks and trade names used in our business, including Maxygen®, MaxyScan® and MolecularBreeding.™ Other service marks, trademarks and trade names referred to in this report, and in the documents incorporated by reference in this report, are the property of their respective owners. The use of the word "partner" and "partnership" does not mean a legal partner or legal partnership.

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 Maxygen expresses 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 interests in Perseid Therapeutics LLC;
- our implementation of any distribution of a portion of our cash resources to stockholders or our failure to implement any such distribution;
- 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 our MolecularBreeding™ directed evolution platform and other technologies and processes;
- 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. 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.

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 MolecularBreeding™ 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. 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.

Our Strategy

The consummation of the joint venture transaction with Astellas 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. In addition to our majority ownership of Perseid, we continue to retain a number of significant assets, including approximately $159.5 million in cash, cash equivalents and marketable securities as of December 31, 2009 (including $20.3 million held by Perseid as of such date); our MAXY-G34 program (including a licensing arrangement with Cangene Corporation, or Cangene, for Acute Radiation Syndrome (ARS)); a 21% ownership interest in Codexis, Inc., or Codexis, as of December 31, 2009 and a revenue stream from Maxygen's biofuels license to Codexis; a potential $30.0 million milestone payment from Bayer HealthCare LLC, or Bayer; and our MolecularBreeding™ platform and intellectual property portfolio (including certain additional fields of application of the technology platform not yet licensed). Over the next several years, our focus will be to manage these arrangements to maximize the return to our stockholders.

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 $57.0 million (through March 18, 2010) 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. 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. Perseid's operations are expected 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, 2009, we had an ownership interest of approximately 83.3% in Perseid and Astellas owned the remaining ownership interest of approximately 16.7%.

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, or RA, is a chronic autoimmune disease characterized by chronic pain and disability of the peripheral joints. RA 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 RA focus upon the greater than four million moderate-to-severe patients diagnosed with this severely debilitating condition in the developed world.

The MAXY-4 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 RA 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 2009, sales of Orencia®, which was launched in the United States during 2006 and in the European Union during 2007, were approximately $602.0 million. In addition to the RA 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 will continue to co-develop with Astellas MAXY-4 product candidates for autoimmune indications in North America and European countries. Astellas has been granted 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 has also been granted 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. In January 2010, Perseid received a $5.0 million payment from Astellas for achievement of a preclinical milestone under this agreement. 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 new 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, will include $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.

For two years from the effective date of the agreement, 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 have granted a license to Perseid to certain of our assets and proprietary technologies, including assets and technologies related to our 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.

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 products such as MAXY-G34 may also have potential application in the treatment of 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. G-CSF is a natural protein that functions by stimulating the body's bone marrow to produce more white blood cells.

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 G-CSF products were approximately $5.0 billion in 2009.

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.

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 the potential 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.

Cangene Option and License Arrangement for ARS

In May 2009, we entered into an option and license agreement with Cangene pursuant to which we have 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 are 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 is awarded one or more applicable government contracts and exercises an option for a license.

Under the agreement, the option period for the initial license is one year, but may be extended under certain circumstances. If Cangene is awarded a specified government contract and exercises its option for an initial license, Cangene is obligated to pay us a license fee of $12.5 million. Under the initial license and any subsequent license, we would also be entitled to continuing license fees from Cangene equal to a specified percentage of any net contract revenues recognized by Cangene under an applicable government contract. Cangene's obligation to pay such license fees would continue until the later of the expiration of certain related patent claims licensed under the agreement or seven years from Cangene's exercise of its option for the initial license.

In addition, at any time prior to the second anniversary of Cangene's exercise of its option for the initial license, Cangene may elect to obtain a fully paid automatic grant of the initial license and subsequent license for a one-time payment to us of $30.0 million. Upon such payment, Cangene would no longer be obligated to pay us any further license fees (other than any amounts due to us at the time of such election). If Cangene were to make this election within five days following the exercise of the option for the initial license, the $12.5 million option exercise fee for the initial license would be credited against the $30.0 million payment. However, there can be no assurances that Cangene will be awarded any government development contracts for the use of MAXY-G34 or that Cangene will be able to commence or continue the development of MAXY-G34 for ARS under any such government contracts.

We retain all rights to MAXY-G34 for commercial development of therapeutic areas outside of the ARS indication, including all rights for chemotherapy-induced neutropenia indications.

Codexis, Inc.

We have a minority investment in Codexis. We formed Codexis in January 2002 as a wholly owned subsidiary to operate our former chemicals business. As of December 31, 2009, we owned approximately 21% of the issued and outstanding capital stock of Codexis, including Codexis common stock and various classes of Codexis preferred stock convertible into common stock. We are not obligated to fund the operations or other capital requirements of Codexis. In December 2009, Codexis filed a registration statement on Form S-1 with the Securities and Exchange Commission relating to the proposed initial public offering of shares of its common stock, however, such registration statement is not yet effective and there can be no assurances that Codexis will successfully complete an initial public offering.

Licensing Arrangement

In connection with the formation of Codexis, we entered into a license agreement with Codexis pursuant to which we granted to Codexis certain exclusive rights to our MolecularBreeding™ directed evolution platform for certain small molecule pharmaceutical, energy and industrial chemical applications. In partial consideration for the rights granted to Codexis under the license agreement, we received shares of Codexis common and preferred stock.

In 2006, in connection with the collaboration arrangement between Codexis and Shell Oil Products US, or Shell, we amended the license agreement to expand the scope of the license to include certain applications relating to energy, including biofuels. If Codexis sublicenses its rights under the license agreement to a third party for the development and commercialization of an energy product, we will be eligible for 20% of all consideration that Codexis receives from any such sublicensee, including Shell. Specifically, Codexis will owe us fees in connection with consideration Codexis receives in the form of (1) up-front option and/or license fees, (2) FTE funding for biofuels research, (3) milestone payments, (4) payments from the sale of its equity securities and (5) payments in connection with the commercialization of energy products made with a biocatalyst developed using the licensed technology. In the case of consideration received from the sale by Codexis of its equity securities to certain third parties, including Shell, Codexis is obligated to pay us 20% of any excess paid above $3.97 per share, the price per share of Codexis' Series D preferred stock. With regard to FTE funding, Codexis is obligated to pay us 20% of any excess received above a specified amount, which was initially $350,000 per year starting in November 2006, but is adjusted annually to reflect annual changes in the consumer price index.

In addition, if Codexis directly commercializes an energy product that is made using any biocatalyst developed from the technology licensed from us, we will be eligible for a 2% royalty on any net sales by Codexis of the energy product and on amounts received from any sublicense or third party for the use of the energy product, to the extent that Codexis utilizes such energy product to provide services to such sublicense or third party. Codexis is also obligated to reimburse up to 20% of the costs incurred by us related to the prosecution and maintenance of the patents we licensed to Codexis relating to our core technology. Further, in the event that any subsidiary or affiliate of Codexis develops and/or sells any energy applications using the licensed technology, Codexis is obligated to transfer to us a percentage of the value of the subsidiary or affiliate that is attributable to the technology and give us an option to acquire a percentage of the other consideration that Codexis invests in such affiliate or subsidiary.

Except as described above, the license agreement does not otherwise provide for the payment by us or to us of any amounts for license fees, milestone payments or royalties. The license agreement expires upon the last to expire of the patent rights licensed under the agreement but may be terminated earlier by us under certain circumstances, including a material breach by Codexis of certain obligations under the license agreement.

Following the termination or expiration of the license agreement, Codexis would retain a license for an additional fifty (50) years to certain rights and materials transferred by us to Codexis under the agreement.

During 2009, 2008 and 2007, we recognized approximately $4.6 million, $664,000 and $8.3 million, respectively, in revenue from Codexis under this 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.

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 our MolecularBreeding™ technology platform to Bayer. We recognized revenues of $90.6 million in connection with these transactions, which included receipt of an up-front cash payment of $90.0 million. Our MAXY-VII product candidates were designed to be a superior next-generation factor VIIa product 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 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 our MolecularBreeding™ technology 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 our MolecularBreeding™ technology 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 our MolecularBreeding™ technology 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 our MolecularBreeding™ technology platform for various applications that have been excluded from the scope of the license. These excluded uses include specific applications related to our existing business and other areas of interest, such as 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, such as agricultural and chemical applications. Bayer is also prohibited from using its licensed rights to the MolecularBreeding™ technology platform in a fee for service arrangement with any third party.

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.

Vaccines

We believe that our proprietary technologies have the potential to transform the design and development of vaccines through the optimization of properties that allow for the generation of broad and strong immune responses. Our vaccine research program has 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. In 2005, the NIH awarded us two competitive grants, including $11.7 million over approximately five years as part of the HIV Research and Development, or HIVRAD, program. The HIVRAD grant provided funds for the use of our MolecularBreeding™ directed evolution platform to generate novel HIV-1 antigens potentially capable of inducing broad antibody responses to multiple strains of the HIV-1 virus. The NIH also awarded us a Phase I grant in 2005 and two additional grants in 2006 totaling $500,000 from the NIH Small Business Innovation Research, or SBIR, program to fund investigations into the effect on immunogenicity of secondary modifications to a specific HIV-1 envelope protein. As part of the SBIR program, the NIH also awarded us one grant totaling $1.0 million over two years for work on vaccines for equine encephalitis. In August 2008, we announced the award of a two-year, $3.4 million grant from the United States Department of Defense to develop technology to advance vaccine research and development. We worked in collaboration with Monogram Biosciences, Inc., Aldevron LLC and the Scripps Research Institute with respect to these government-funded projects.

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. Under the arrangement, we received an up-front payment and AltraVax is obligated to pay us the remaining purchase price over the next two years. 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 our MolecularBreeding™ directed evolution platform and certain ancillary technologies, in each case, subject to existing third party rights to such licensed assets and technology.

In addition, in December 2007, we licensed our proprietary dengue virus antigen technology to sanofi pasteur, the vaccines division of the sanofi-aventis Group. Under the terms of the agreement, we have transferred to sanofi pasteur a portfolio of preclinical dengue antigens for development and worldwide commercialization of a second generation dengue vaccine. We received an upfront fee and are eligible to receive up to an additional $23.0 million of event-based payments under the agreement, as well as royalties on any product sales. Our rights under the sanofi agreement were not acquired by AltraVax as part of the transaction described above.

Our Technologies

MolecularBreeding™ Directed Evolution Technology Platform

Our MolecularBreeding™ directed evolution technology platform mimics the natural events of evolution. First, genes are subjected to DNAShuffling recombination technologies, generating a diverse library of gene variants. Second, our proprietary MaxyScan screening platform selects 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, the initial lead candidates are then used as the genetic starting material for additional rounds of shuffling. 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.

Step One: DNAShuffling Recombination Technologies

Our DNAShuffling recombination technologies work as follows: a single gene or multiple genes are cleaved into fragments and recombined, creating a population of new gene variants. The new genes created by DNAShuffling are then selected for one or more desired characteristics. This selection process yields a population of genes that becomes the starting point for the next cycle of recombination. As with classical breeding of plants and animals, this process is repeated until genes expressing the desired properties are identified.

DNAShuffling can be used to evolve properties that are coded for by single genes, multiple genes or entire genomes. By incorporating naturally-existing diversity, DNAShuffling ultimately generates libraries with high fitness levels. Coupled with high-throughput screening methods, this process can reduce the cost and time associated with identifying multiple potential products.

Step Two: MaxyScan Screening

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, 96-well protein expression systems using E. coli or mammalian cells, FACS sorting, Biacore, ELISA, cell-based bioassays and animal models.

We have access to multiple sources of genetic starting material. In addition to the wealth of publicly available genetic sequence information, we have typically been able to access our collaborators' proprietary genes for use outside their specific fields of interest. Furthermore, we are able to inexpensively obtain our own genetic starting material or information, either through our own in-house efforts or through collaborations with third parties. This information and such materials when coupled with our DNAShuffling recombination technologies, can provide a virtually infinite amount of new, proprietary gene variants.

Other Technologies

In addition to our proprietary MolecularBreeding™ technology 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.

We also have rights to use certain technology developed by Avidia, Inc. (formerly Avidia Research Institute), or Avidia, which was acquired by Amgen Inc. in October 2006. Under a cross license agreement we entered into with Avidia, we have exclusive and non-exclusive license rights to use certain Avidia technology to develop and commercialize therapeutic products directed to certain specific targets, including CD40, CD-40 ligand, CTLA-4, CD28, B.7.1 (CD80), B.7.2 (CD86), p40 (subunit of IL-12 and IL-23), TPO, any interferon and/ or interferon receptor, TPO/IL3 and TNF/IL-1. The cross license agreement does not provide for the payment by us or to us of any amounts for license fees, milestone payments or royalties. The cross license agreement has a twenty-five (25) year term, but may terminate earlier based on the expiration of the patent rights licensed under the agreement. Following the expiration of the cross license agreement, the licenses granted under the agreement become perpetual on a country-by-country basis.

Under the cross license agreement, Avidia also granted us certain limited options to acquire additional licenses to develop and commercialize other therapeutic products researched by Avidia. The grant of an additional license would require us to enter into a separate product license agreement for any such product with Amgen Mountain View Inc. (as successor to Avidia) on pre-agreed terms that would include the payment by us to Amgen Mountain View Inc. of royalties based on net sales of the products subject to the product license agreement and milestone payments based upon our achievement of certain regulatory and clinical milestones for such product, up to an aggregate of $19.8 million. To date, we have not entered into a product license agreement for any such product.

Intellectual Property and Licensing Arrangements

Pursuant to a technology transfer agreement we entered into with Affymax Technologies N.V. and Glaxo Group Limited (each of which was then a wholly-owned subsidiary of what is now GlaxoSmithKline plc), we were assigned all the patents, applications and know-how related to our MolecularBreeding™ directed evolution platform, subject to certain internal research rights retained by GlaxoSmithKline plc. Affymetrix, Inc. retains an exclusive, royalty-free license under some of the patents and patent applications previously owned by Affymax for use in the diagnostics and research supply markets for specific applications. In addition, Affymax assigned jointly to us and to Affymetrix a family of patent applications relating to circular PCR techniques.

We have an extensive patent portfolio including over 80 issued U.S. patents and over 50 foreign patents relating to our proprietary MolecularBreeding™ directed evolution platform. Additionally, we have over 20 pending U.S. patent applications and over 50 pending foreign counterpart applications relating to our MolecularBreeding™ directed evolution platform and specialized screening technologies, and the application of these technologies to the development of protein pharmaceuticals and other industries, including agriculture, vaccines, gene therapy and chemicals.

Perseid's patent portfolio consists of one pending U.S. application and one pending international (PCT) application for its MAXY-4 product candidates. For our MAXY-G34 product candidates, our patent portfolio consists of six U.S. patents, five pending U.S. applications, 16 foreign patents and eight pending foreign applications.

Our expanding patent estate provides us with an increasingly broad and unique platform from which to create and potentially improve protein-based therapeutic products. Patents owned by us or for which we have exclusive licenses cover a broad range of activities surrounding recombination-based directed molecular evolution including:

- methods for template-based gene recombination to produce chimeric genes, including use of single or double-stranded templates;

- methods for recombining nucleic acid segments produced by incomplete nucleic acid chain extension reactions to produce chimeric genes, including the staggered extension process (StEP);
- methods utilizing reiterative screening or only a single cycle of screening;
- methods of combining any mutagenesis technique with DNA recombination methods to produce new chimeric genes;
- methods using synthesized nucleic acid fragments;
- in vivo and in vitro recombination methods of the above, in a variety of formats;
- methods of screening directed evolution libraries;
- methods for ligation- and single-stranded template-based recombination and reassembly;
- mutagenesis, including codon and gene site saturation mutagenesis, used in conjunction with recombination and reassembly;
- cell-based recombination methods; and
- fluorescence-, bioluminescence-, and nutrient-based screening methods, including the use of ultra-high throughput FACS-based methods for screening diverse variants.

Such patents reinforce our preeminent position as an industry leader in recombination-based directed molecular evolution technologies for the preparation of chimeric genes for commercial applications.

In addition to the patents that we own directly, we have also exclusively licensed patent rights and technology for specific uses from Novozymes A/S, the California Institute of Technology, the University of Washington and GGMJ Technologies, L.L.C. These licenses give us rights to an additional 18 issued U.S. patents, 12 granted foreign patents and over 10 pending U.S. and foreign counterpart applications.

We have also received from Affymax (when it was a subsidiary of what is now GlaxoSmithKline plc) a worldwide, non-exclusive license to certain Affymax patent applications and patents related to technology for displaying multiple diverse proteins on the surface of bacterial viruses.

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.

In July 2005, our European Patent 0752008, covering our first generation directed molecular evolution technologies, was the subject of an opposition proceeding before the European Patent Office. All claims of the patent were upheld as valid with minor amendments. We appealed this decision to the Appeals Division, which decided in a December 2007 hearing to maintain the patent with claims slightly broader than those maintained in the opposition proceeding. In October 2005, the Australian Patent Office found, in an opposition proceeding regarding our Australian patent application No. 703264 that corresponds to European Patent 0752008, 89 of our claims to be patentable as presented. In February 2006, our European Patent 0876509, covering one embodiment of our second-generation directed molecular evolution technologies, was the subject of an opposition proceeding before the European Patent Office. The opposition board revoked the patent on the grounds of lack of inventive step. We appealed this decision to the appeals board of the European Patent Office and in February 2008, the Appeals Division reversed the decision of the opposition board and maintained the patent.

We have granted exclusive and non-exclusive licenses to our proprietary MolecularBreeding™ technology platform and ancillary technologies to third parties in various fields, including: 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 Codexis, in the fields of certain small molecule pharmaceutical, energy and industrial chemical applications; to Pioneer Hi-Bred International, Inc., a wholly owned subsidiary of E.I. du Pont de Nemours and Company, in the agricultural field; to Bayer in the fields of hematology, cardiovascular and women's healthcare; and to AltraVax in the vaccines and adjuvants fields. We have retained certain additional fields of application of the technology platform that have not yet been licensed.

Manufacturing

We rely on third party manufacturers and collaborators to produce our compounds for 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, 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.

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 FDA and other regulatory approvals of products, and manufacturing and marketing products.

We are a leader in 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, the University of California 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 $36.6 million in 2009, $46.3 million in 2008 and $59.9 million in 2007. 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.

Geographic Distribution

Prior to March 2008, we had operations in two geographic locations, the United States and Denmark. In November 2007, we implemented a plan to consolidate our research and development activities at our U.S. facilities. The consolidation resulted in the cessation of our research and development operations in Denmark. In addition, certain of our collaborators and licensees are based outside the United States. Additional information required by this item is included in Note 13 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, 2010, we had 64 employees, 46 of whom were employed directly by Perseid. None of our employees or Perseid's employees is represented by a labor union, and we consider our employee relations to be good.

Corporate Background and History

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.

Our operations were originally focused on the application of our MolecularBreeding™ directed evolution platform and other technologies to the development of multiple products in a broad range of industries, including human therapeutics, chemicals and agriculture. In August 2000, to complement and expand our human therapeutics operations, we established our Danish subsidiary, Maxygen ApS, through the acquisition of ProFound Pharma A/S, a privately held Danish biotechnology company. In 2002, we formed two wholly owned subsidiaries, Codexis, Inc. and Verdia, Inc., to operate our chemicals and agriculture businesses.

Over the past several years, we shifted our primary focus to the development of protein pharmaceuticals. Accordingly, in 2004, we sold Verdia to Pioneer Hi-Bred International, Inc., a wholly owned subsidiary of E.I. du Pont de Nemours and Company, for $64.0 million in cash. Codexis received financing from third party investors and operated as independent subsidiary beginning in September 2002 and, in February 2005, our voting rights in Codexis were reduced below 50%. During 2008, we closed our facilities at Maxygen ApS and consolidated our operations at our U.S. headquarters. In 2009, we transferred substantially all of our research and development operations to Perseid in connection with our joint venture arrangement with Astellas and implemented a revised corporate strategy focused on the management of our various assets and strategic arrangements to maximize the return to our stockholders over the next several years.

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 recent changes in our management team have 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. 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. For example, the shares that we own of Codexis, Inc. common and preferred stock represent shares of a private company that are not freely tradeable and we cannot predict the likelihood or length of time for Codexis to achieve a liquidity event, if any, for its shares, such as an initial public offering or a sale of the company. 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, 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 $57.0 million (through March 18, 2010) 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 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 expected to be funded almost entirely by Astellas through these two agreements (including through the potential 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 payment of 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.

In addition to revenues we recognize through Perseid's collaboration agreements with Astellas, we have a license agreement with Codexis that we expect to generate revenue for the remainder of 2010, and we expect that a substantial portion of our revenue for the foreseeable future will result from these sources. If these agreements are materially amended, terminated, or we sell any such asset, and we are unable to enter into new agreements, our revenues, financial position and results of operations would be materially adversely affected.

We may implement one or more 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 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 and, in March 2010, we repurchased and additional 1,433,361 shares of our common stock in a private transaction for an aggregate purchase price of approximately $8.0 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. 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, or if Codexis fails to consummate an initial public offering or other liquidity event, we may not have sufficient cash resources to maintain the operations of Perseid or adequately protect our investment in Codexis.

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.

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. The recent reduction of our workforce and the continued review of our strategic options may create 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, one responsible for the operations of Maxygen and one responsible for the operations of 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 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, 2009, we had an accumulated deficit of $272.1 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, 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.

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

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.

Moreover, although we have granted an option to license certain MAXY-G34 intellectual property rights to Cangene Corporation, or Cangene, for the fulfillment of government contracts related to the treatment of acute radiation syndrome, there can be no assurance that Cangene will pursue or be awarded any such government contracts or, if any such government contracts are awarded to Cangene, that it will exercise its option for such license rights. Any such failure could adversely affect our ability to realize any value from this program.

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 design around our patented technologies or products. In addition, others may challenge or invalidate our patents or 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 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 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.

Our clinical development strategy, which relies on third party contract research organizations, exposes us to additional risk.

We do not have the ability to independently conduct clinical trials for our product candidates in the United States and other countries, and therefore have relied on third parties, such as contract research organizations, to assist us in designing our clinical trials, preparing documents for submission to regulatory authorities, obtaining regulatory approval to conduct clinical trials, enrolling qualified patients, conducting and maintaining our clinical trials, and analyzing the results of such trials. If these third parties do not successfully carry out their contractual duties, do not conduct the clinical trials in accordance with planned deadlines and 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 trials, if any, and delay 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. For example, after promising preclinical and early clinical data from our lead MAXY-alpha product candidate, clinical trials of this product candidate were terminated in 2007 after an unexpected reduction of the pharmacodynamic and pharmacokinetic effects was observed and antibodies binding to MAXY-alpha were identified in a Phase I repeat-dosing trial. 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 our 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;
- 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;
- 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. 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.

The Committee for Medicinal Products for Human Use (CHMP) of the European Agency for the Evaluation of Medicinal Products (EMEA) has adopted guidelines for assessing the comparability of biosimilar products including G-CSF. The basis for such approvals in the European Union will be proof of comparability of the new protein drug to the prior drug, which will require clinical studies of the biosimilar protein drug.

In the United States, there is presently no legislation that specifically addresses the regulatory process for approval of biosimilar protein drugs, and to date only a biosimilar human growth hormone and certain insulin products have been approved by the FDA under a new drug application (NDA) in accordance with Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act. However, legislation has been introduced into both the U.S. Senate and House of Representatives that addresses the development path and requirements for biosimilar protein drugs. It is not clear whether such legislation will be enacted into law, and if passed, what the substance of such legislation will be. However, any law that permits the approval of biosimilars would likely lead to the eventual introduction of biosimilar protein products in the United States, 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.

Risks Related To Our Industry

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 U.S. Food and Drug Administration (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 receives 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, 2009, we had $159.5 million in cash, cash equivalents and marketable securities, of which, $20.3 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.

Risks Related To an Investment in Our Securities

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 the twelve months ended December 31, 2009, the price of our common stock on the Nasdaq Global Market ranged from $4.78 to $9.49. 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 distribution of a portion of our cash resources to stockholders;
- announcements or events related to Codexis, including its consummation or failure to consummate an initial public offering or other liquidity event;
- 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

As of March 1, 2010, we leased an aggregate of 56,980 square feet of office and laboratory facilities in Redwood City, California. Beginning on April 1, 2010, the size of our leased facilities will be reduced to 43,272 square feet to reflect a planned reduction of general office space under our amended leases. 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. For additional information regarding our lease obligations, see Note 9 of the Notes to Consolidated Financial Statements.

Item 3 LEGAL PROCEEDINGS

The information included in Note 12 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, 2009, 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, 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
Year ended December 31, 2008		
First Quarter	$8.69	$5.50
Second Quarter	7.48	3.33
Third Quarter	5.28	3.28
Fourth Quarter	9.22	2.95

Holders

As of February 28, 2010, there were 201 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

We have never declared or paid any cash dividends on our capital stock. Our payment of any future dividends will be at the discretion of our board of directors.

Issuer Purchases of Equity Shares

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, 2009.

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
Oct. 1, 2009 through Oct. 31, 2009	—	—	—	—
Nov. 1, 2009 through Nov. 30, 2009	—	—	—	—
Dec. 1, 2009 through Dec. 31, 2009	7,345,103	$5.30	7,345,103	—
Total	7,345,103	$5.30	7,345,103	—

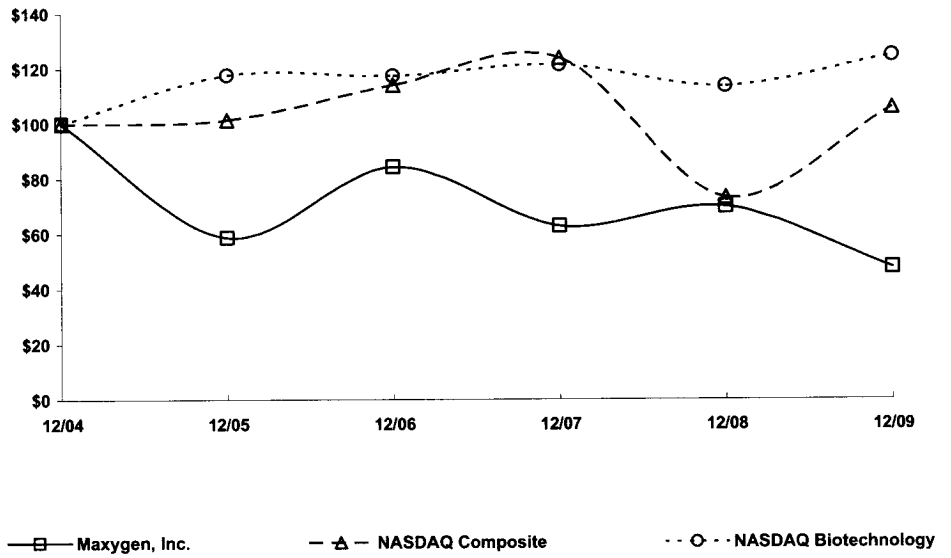
(1) On December 30, 2009, we repurchased 7,345,103 shares of common stock pursuant to a modified "Dutch auction" tender offer that expired on December 23, 2009.

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

Company Stock Price Performance[1]

The following graph shows the cumulative total stockholder return of an investment of $100 in cash on December 31, 2004 through December 31, 2009 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. 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 12/31/04 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

Total Return Analysis

	12/31/2004	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009
Maxygen, Inc.	$100.00	$ 58.72	$ 84.21	$ 62.78	$ 69.74	$ 47.62
Nasdaq Composite Index	$100.00	$101.33	$114.01	$123.71	$ 73.11	$105.61
Nasdaq Biotechnology Index	$100.00	$117.54	$117.37	$121.37	$113.41	$124.58

[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. Historical results include the consolidated operations of Codexis, Inc. for all periods through February 28, 2005. After that date, we account for Codexis, Inc. under the equity method of accounting.

	Year Ended December 31,				
	2005	2006	2007	2008	2009
	(in thousands, except per share data)				
Consolidated Statements of Operations Data:					
Collaborative research and development revenue	$ 11,490	$ 20,527	$ 8,718	$ —	$ —
Technology and license revenue	104	17	1,514	90,584	15
Related party revenue	—	—	8,286	5,051	31,816
Grant revenue	2,907	4,477	4,639	5,074	4,545
Total revenues	14,501	25,021	23,157	100,709	36,376
Operating expenses:					
Research and development	41,904	49,130	59,851	46,274	36,640
General and administrative	13,221	17,559	14,951	14,845	17,494
Goodwill impairment	—	—	—	12,192	—
Restructuring charge	—	—	5,212	1,987	15,964
Total operating expenses	55,125	66,689	80,014	75,298	70,098
Income (loss) from operations	(40,624)	(41,668)	(56,857)	25,411	(33,722)
Interest income and other income (expense), net	5,572	8,524	7,542	4,914	977
Equity in net loss of minority investee(1)	—	(1,000)	—	—	—
Gain on sale of equity investment(2)	—	17,802	—	—	—
Income (loss) from continuing operations	(35,052)	(16,342)	(49,315)	30,325	(32,745)
Cumulative effect adjustment(3)	16,616	—	—	—	—
Net income (loss) before income taxes	(18,436)	(16,342)	(49,315)	30,325	(32,745)
Income tax benefit (expense)	—	(140)	—	—	588
Net income (loss)	(18,436)	(16,482)	(49,315)	30,325	(32,157)
Net income attributable to non-controlling interest	—	—	—	—	245
Subsidiary preferred stock accretion(4)	(167)	—	—	—	—
Net income (loss) attributable to common stockholders of Maxygen, Inc.	$(18,603)	$(16,482)	$(49,315)	$ 30,325	$(32,402)
Basic net income (loss) per share:					
Continuing operations	$ (0.98)	$ (0.46)	$ (1.34)	$ 0.82	$ (0.85)
Cumulative effect adjustment	$ 0.46	$ —	$ —	$ —	$ —
Applicable to common stockholders	$ (0.52)	$ (0.46)	$ (1.34)	$ 0.82	$ (0.85)
Diluted net income (loss) per share:					
Continuing operations	$ (0.98)	$ (0.46)	$ (1.34)	$ 0.81	$ (0.85)
Cumulative effect adjustment	$ 0.46	$ —	$ —	$ —	$ —
Applicable to common stockholders	$ (0.52)	$ (0.46)	$ (1.34)	$ 0.81	$ (0.85)
Shares used in basic net income (loss) per share calculations	35,765	36,046	36,787	37,100	38,236
Shares used in diluted net income (loss) per share calculations	35,765	36,046	36,787	37,358	38,236

(1) 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 under the equity method of accounting as of December 31, 2006.

(2) 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 by Amgen Inc.

(3) The cumulative effect adjustment in the year ended December 31, 2005 resulted from the deconsolidation of Codexis, Inc. as of February 28, 2005. To reflect what our basis in Codexis would have been under equity accounting, we recorded a cumulative effect adjustment of $16.6 million in the first quarter of 2005, which reduced our net loss in 2005 and brought our investment basis in Codexis to zero as of February 28, 2005.

(4) The subsidiary preferred stock accretion in the year ended December 31, 2005 resulted from the redemption premium for series B redeemable convertible preferred stock issued by Codexis in 2002. The accretion was recorded as subsidiary preferred stock accretion on the Consolidated Statements of Operations and as a reduction of additional paid-in capital and an increase to minority interest on the Consolidated Balance Sheets. Since we no longer consolidate the financial position of Codexis, as of February 28, 2005, we no longer recognized accretion for the Codexis redemption premium. We also no longer reflect amounts as minority interest on the Consolidated Balance Sheets. We recorded a $2.3 million adjustment to additional paid-in capital in the three month period ended March 31, 2005 to eliminate the reduction of additional paid-in capital that had resulted from Codexis' preferred stock accretion prior to February 28, 2005.

	December 31,				
	2005	2006	2007	2008	2009
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents and investments	$ 188,323	$ 182,876	$ 145,813	$ 206,483	$ 159,530
Working capital	152,230	175,356	138,171	195,234	154,243
Total assets	214,523	205,647	172,709	213,557	177,237
Accumulated deficit	(204,222)	(220,704)	(270,019)	(239,694)	(272,096)
Total Maxygen, Inc. stockholders' equity	197,344	189,799	153,494	194,512	151,604
Non-controlling interest	—	—	—	—	3,907
Total stockholders' equity	197,344	189,799	153,494	194,512	155,511

QUARTERLY FINANCIAL DATA
(unaudited)

	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 income and other income (expense), net	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)
Net loss per share attributable to Maxygen, Inc.—basic and diluted:	$ (0.03)	$ (0.15)	$ (0.57)	$ (0.10)
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

	Quarter Ended			
	March 31,	June 30,	Sept. 30,	Dec. 31,
	(in thousands, except per share data)			
2008				
Technology and license revenue	—	—	90,227	357
Related party revenue	157	120	480	4,294
Grant revenue	1,286	1,037	1,417	1,334
Total revenues	1,443	1,157	92,124	5,985
Operating expenses:				
Research and development	13,106	12,534	10,257	10,377
General and administrative	3,513	5,031	3,321	2,980
Goodwill impairment	—	12,192	—	—
Restructuring charge	533	266	—	1,188
Total operating expenses	17,152	30,023	13,578	14,545
Income (loss) from operations	(15,709)	(28,866)	78,546	(8,560)
Interest income and other income (expense), net	1,991	759	1,323	841
Net income (loss) attributable to Maxygen, Inc.	$(13,718)	$(28,107)	$79,869	$(7,719)
Basic net income (loss) attributable to Maxygen, Inc.	$ (0.37)	$ (0.76)	$ 2.15	$ (0.21)
Diluted net income (loss) attributable to Maxygen, Inc.	$ (0.37)	$ (0.76)	$ 2.14	$ (0.21)
Shares used in basic net income (loss) per share calculations	36,996	37,046	37,140	37,219
Shares used in diluted net income (loss) per share calculations	36,996	37,046	37,308	37,219

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 MolecularBreeding™ 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. 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.

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. In addition to our majority ownership of Perseid, we continue to retain a number of significant assets, including approximately $159.5 million in cash, cash equivalents and marketable securities as of December 31, 2009 (including $20.3 million held by Perseid as of such date); our MAXY-G34 program (including a licensing arrangement with Cangene Corporation, or Cangene, for Acute Radiation Syndrome (ARS)); a 21% ownership interest in Codexis, Inc., or Codexis, as of December 31, 2009 and a revenue stream from Maxygen's biofuels license to Codexis; a potential $30.0 million milestone payment from Bayer HealthCare LLC, or Bayer; and our MolecularBreeding™ platform and intellectual property portfolio (including certain additional fields of application of the technology platform not yet licensed). Over the next several years, our focus will be to manage these arrangements to maximize the return to our stockholders.

2009 Highlights

As noted above, during 2009, we 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. Highlights during 2009 included:

- In May 2009, we entered into an agreement with Cangene pursuant to which we granted Cangene an option to obtain an exclusive license to our proprietary MAXY-G34 protein therapeutic for use in treating acute radiation syndrome (ARS). We received an up-front payment of $500,000 and may be eligible to receive certain future payments from Cangene.
- In September 2009, we consummated the joint venture arrangement with Astellas pursuant to which we contributed substantially all of our protein pharmaceutical programs and related assets, including our MAXY-4 program, to Perseid. We substantially restructured our operations and management in connection with this transaction.
- In December 2009, we completed the repurchase of 7,345,103 shares of our common stock (approximately 18.5% of the shares outstanding) pursuant to a modified "Dutch auction" tender offer for a total cost of approximately $39.2 million. In March 2010, we repurchased an additional 1,433,361

shares of our common stock in a private transaction for an aggregate purchase price of approximately $8.0 million.

- In December 2009, we entered into an arrangement with AltraVax, Inc., or AltraVax, for the sale of our vaccines assets. We received an up-front payment from AltraVax upon the initial closing, which occurred in January 2010, and AltraVax is obligated to pay us the remainder of the purchase price over the next two years, plus a percentage of certain payments received by AltraVax.
- In December 2009, Perseid achieved a preclinical milestone under its collaboration with Astellas to co-develop and commercialize next-generation CTLA-4 Ig therapeutics. Perseid received a $5.0 million payment from Astellas in January 2010 for achievement of this milestone.

Revenues

To date, we have generated revenues from collaboration agreements, technology and license arrangements, and government research grants and from the sale of certain assets. Our total revenues were $36.4 million in 2009, $100.7 million in 2008 and $23.2 million in 2007. Revenues for 2009 included $27.2 million in related party revenues received by Perseid under its two collaboration agreements with Astellas; 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. Revenues for 2008 included recognition of the $90.6 million we received under our agreements with Bayer HealthCare LLC, or Bayer, in connection with the sale of our hematology assets and the license of our MolecularBreeding™ technology platform. Revenues for 2007 included $8.7 million of collaborative research and development revenue under a co-development and commercialization agreement with Roche for our MAXY-VII product candidates that was terminated in April 2007, as well as $8.3 million in related party revenue received from Codexis under our license agreement with Codexis.

Revenues from our collaboration research and development agreements previously included revenues from Astellas prior to the consummation of our joint venture arrangement with Astellas on September 18, 2009. As the result of this transaction, $4.4 million of revenues received from Astellas during 2008 have been reclassified as related party revenue. For 2009, we recorded $27.2 million in related party revenues from Astellas. We received no other collaborative research and development revenue in 2008 or 2009.

During 2009, 2008 and 2007, we also recorded $4.6 million, $664,000 and $8.3 million in revenue from related party under our license agreement with Codexis. These revenues reflect amounts due to us from payments received by Codexis under its collaboration arrangement with Shell Oil Products US 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.

We expect that our future revenues will be derived primarily from Astellas under its collaboration agreements with Perseid, as well as from Codexis under our existing licensing arrangement. We expect our total revenues to increase in 2010 compared to 2009, primarily due to increased activities under Perseid's collaboration agreements with Astellas. Our revenues may fluctuate substantially from year to year based on the completion of new licensing agreements, the receipt of any development related milestones, royalties and other payments under such agreements, or the completion of any strategic transactions. However, we cannot predict with any certainty whether we will enter into any new licensing agreements, receive any milestone, royalty or other payments under any existing or future licensing, collaboration or other agreements, whether any particular research effort will ultimately result in a commercial product or whether we will consummate any strategic transaction.

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 $36.6 million in 2009, $46.3 million in 2008 and $59.9 million in 2007. We expect our research and development expenses to increase somewhat in the future based on Perseid's preclinical development of the MAXY-4 product candidates and other preclinical product candidates.

We continue to maintain a strong cash position, with cash, cash equivalents and marketable securities totaling $159.5 million as of December 31, 2009. Of this amount, $20.3 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 ApS (Denmark), Maxygen Holdings Ltd. (Cayman Islands) and Maxygen Holdings (U.S.), Inc., as well as our majority-owned subsidiary, Perseid.

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.

Consolidation

The consolidated financial statements include the amounts of Maxygen, Inc. and its wholly-owned subsidiaries, Maxygen ApS (Denmark), Maxygen Holdings Ltd. (Cayman Islands) and Maxygen Holdings, Inc. (U.S.), Inc., as well as Perseid, our majority-owned subsidiary, for which we are the primary beneficiary as determined under applicable accounting standards. Amounts pertaining to the noncontrolling ownership interests held by Astellas in the operating results and financial position of Perseid are reported as noncontrolling interest. At each reporting date, we will reassess whether we are still the primary beneficiary of Perseid. If we determine that we are to no longer the primary beneficiary, we will deconsolidate Perseid and record our interests at the fair market value on the date which we deconsolidate. We would then account for our interest on 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 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 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 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.

We have been awarded grants from various government agencies. The terms of these grant agreements range from one to five years with various termination dates, the last of which is July 2010 for existing agreements. Revenue related to these grant agreements is recognized as the related research and development expenses are incurred. As noted above, we have entered into an arrangement with AltraVax for the sale of our vaccines assets, including the transfer of the related government grants. As a result, these grants are not expected to be a source of revenue for us going forward.

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.

Restructuring Charges

Beginning in the third quarter of 2009, we implemented a restructuring plan in connection with our joint venture transaction with Astellas that resulted in the termination of several employees, including members of our senior management team. Under change of control agreements we entered into with each terminated executive officer, each executive is entitled to receive 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 any shares underlying restricted stock units are not to be delivered to the executive until such later time as is specified in the change of control agreements. Under these agreements, subject to certain limitations, we are 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. In addition, as part of the restructuring plan, Mr. Yonehiro, another member of our senior management team, terminated his position with Maxygen upon his appointment as the president and chief executive officer of Perseid. Under a retention agreement we entered into with Mr. Yonehiro, the vesting schedule of his outstanding equity awards was accelerated in full as of the date of his employment with Perseid and the post-termination exercise period of his outstanding stock options and other awards was automatically

extended to their full original term. Under this agreement, he also received a transaction bonus of $600,000, which was recognized as general and administrative expense. We expect to complete the activities related to this restructuring plan, primarily related to the payment of severance benefits to the terminated executives, in the first half of 2010.

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

In November 2007, we implemented a plan to consolidate our organization to reduce costs and increase overall operational efficiency across our research, preclinical, clinical and regulatory activities. The consolidation resulted in the cessation of research and development operations at Maxygen ApS in Denmark, and the elimination of all employment positions at that site. The restructuring charges are related to severance and other benefits for the affected Danish employees. We completed the activities related to this restructuring plan in May 2008.

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. We estimate the fair value of stock options and ESPP shares using the Black-Scholes-Merton valuation model. This model requires 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 the expected term of each award. We estimate expected volatility and future stock price trends based on historical volatilities. 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. 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 awards to employees and members of our board of directors, beginning in 2009, the expected life of the stock options was calculated using the shortcut method permitted under applicable SEC accounting guidance. For non-employee awards, the stock options were fully vested on date of grant. When establishing the expected life assumption in prior periods, we considered the vesting period for the award, our historical experience of employee stock option exercises (including forfeitures), the expected volatility, and a comparison to relevant peer group data. Due to the change in our structure and operations and the small number of individuals receiving option awards in 2009, 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. 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 year ended December 31, 2009, 2008 and 2007 was as follows (in thousands):

	Year Ended December 31,		
	2007	2008	2009
Employee stock options	$5,804	$4,731	$3,486
Restricted stock units	—	3,213	3,854
Restricted stock awards	—	—	434
Consultant options	666	44	3
ESPP	80	194	138
Total stock-based compensation expense after income taxes	$6,550	$8,182	$7,915

For the years ended December 31, 2009, 2008 and 2007, stock-based compensation expense related to the grant of stock options to consultants was allocated as follows (in thousands):

	Year Ended December 31,		
	2007	2008	2009
Research and development	$236	$ 44	$ 3
General and administrative	430	—	—
Total stock-based compensation expense after income taxes	$666	$ 44	$ 3

In 2009 and 2007, we recorded stock compensation expense of $11.4 million and $287,000, respectively, as part of the restructuring charge. In 2009, the $11.4 million of stock compensation expense resulted from the accelerated vesting and the extension of the exercise period of certain stock options pursuant to our retention agreement with Mr. Yonehiro and the change in control agreements with our former executives. In 2007, the $287,000 of stock compensation expense resulted from the extension of the exercise period of certain stock options held by affected employees of Maxygen ApS, as required under Danish law in connection with the termination of such employees.

Restricted Stock Units

During 2008, we granted restricted stock unit awards under our 2006 Equity Incentive Plan (the "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 6 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 our executive officers and former executive officers, who have different equity acceleration provisions in their employment related agreements. See Note 15 of the Notes to Consolidated Financial Statements.

For the years ended December 31, 2009 and 2008, stock-based compensation expense related to the grant of restricted stock units was allocated as follows (in thousands):

	Year Ended December 31,	
	2008	2009
Research and development	$2,115	$1,958
General and administrative	1,098	1,896
Total stock-based compensation expense after income taxes	$3,213	$3,854

Restricted Stock

In September 2009, we granted restricted stock awards to certain employees and members of our board of directors under the 2006 Plan representing an aggregate of 933,250 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 estimated fair value of our common stock on the date of grant and recognized as compensation expense on a straight-line basis over the requisite service period. We do not consider forfeitures in our computation of stock compensation expense for restricted stock awards.

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

	Year Ended December 31, 2009
Research and development	$ 21
General and administrative	413
Total stock-based compensation expense after income taxes	$434

Contingent Performance Units

In September 2009, we granted contingent performance units ("CPUs") under the 2006 Plan to all holders of options to purchase our common stock who are currently providing services to us or a subsidiary. CPUs will vest on the earliest to occur of (i) a change in control of us, (ii) a corporate dissolution or liquidation of us, or (iii) the fourth anniversary of the grant date (referred to as the settlement date), generally so long as the holder continues to provide services to 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 our common stock resulting from potential future dividends or distributions to our stockholders, which could negatively affect outstanding options held by our option holders since the options would not otherwise participate in any potential future dividends or distributions to our stockholders. Accordingly, the CPUs will only have value should we make such a dividend payment or distribution. The earned value of any CPU will generally be settled in shares of our common stock. All unvested CPUs remaining following the settlement date will expire immediately. Because the value of the CPU awards cannot be reasonably estimated unless and until we make a qualifying dividend or distribution to our stockholders, we did not recognize any expense in 2009 related to these awards. Also see Note 9 of Notes to Consolidated Financial Statements.

Profits Interest Units

Perseid's 2009 Equity Incentive Plan provides for the grant by Perseid of profits interest units ("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 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. As of December 31, 2009, Perseid had granted approximately 12.5 million PIUs. Because the value of the PIU awards cannot be reasonably estimated until the time of a liquidity event of Perseid, we did not recognize any expense in 2009 related to these awards. Also see Note 9 of the Notes to Consolidated Financial Statements.

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 $36.4 million in 2009, $100.7 million in 2008, and $23.2 million in 2007. 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 the license of our MolecularBreeding™ technology platform. Excluding the Bayer transaction, revenue increased $26.3 million from 2008 to 2009, primarily as a result of an increase in revenues received under Perseid's collaboration agreements with Astellas. Excluding the Bayer transaction, the $13.1 million decrease in revenues from 2007 to 2008 was primarily due to the loss of collaborative research and development revenue under our co-development and commercialization agreement with Roche for our MAXY-VII product candidates, which was terminated in April 2007, and a $7.6 million decrease in revenue received from Codexis under our licensing agreement with Codexis.

Collaborative research and development revenue was zero in 2009 and 2008 and $8.7 million in 2007. As a result of the consummation of the joint venture arrangement with Astellas on September 18, 2009, $4.4 million of revenues previously reported as collaborative research and development revenue during 2008 has been reclassified to related party revenue. After this reclassification, there was no collaborative research and development revenue recognized in 2009 or 2008. The collaborative research and development revenue in 2007 reflects revenue recognized under the co-development and commercialization agreement with Roche for our MAXY-VII product candidates.

Technology and license revenue was $15,000 in 2009, $90.6 million in 2008 and $1.5 million in 2007. 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 of certain licenses to our MolecularBreeding™ technology platform. Technology and license revenue in 2007 consisted primarily of a $1.5 million non-refundable license fee received from sanofi Pasteur in connection with a license agreement relating to the development of a vaccine for the dengue virus.

Related party revenue was $31.8 million in 2009, $5.1 million in 2008 and $8.3 million in 2007. 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 new collaboration agreement between Perseid and Astellas with respect to 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 license agreement with Codexis. The decrease in related party revenue from 2007 to 2008 was primarily due to the recognition in 2007 of a one-time payment of $7.5 million from Codexis in connection with its sale of equity to Shell upon the commencement of the Codexis biofuels collaboration with Shell. This decrease was offset by the recognition of $1.7 million of the $10.0 million upfront fee we received from Astellas under the MAXY-4 co-development and commercialization agreement and $2.7 million earned as net reimbursement of our research and development activities performed under this agreement during 2008.

Revenues from government research grants were $4.5 million in 2009, $5.1 million in 2008 and $4.6 million in 2007. The decrease in grant revenue from 2008 to 2009 was due to decreased external efforts on four National Institute of Health, or NIH, grants, partially offset by increased activity on two U.S. Department of Defense, or DOD, grants. External costs are passed through to each grant and recognized as revenue on a cost reimbursable basis. The increase in grant revenue from 2007 to 2008 is due to increased activity on one existing and two new NIH grants and two new DOD grants. Revenues from government research grants in 2008 included $3.8 million

from one NIH grant for HIV vaccine development. In 2007, revenues from government research grants also included $2.2 million from a contract with the DOD for HIV vaccine discovery that expired in October 2007. In January 2010, we consummated a transaction with AltraVax for the sale of our vaccine assets, including the related government grants.

We expect our revenues for 2010 to increase compared to 2009, primarily due to expected increases in revenues to be received by Perseid under its collaboration agreements with Astellas. 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 $36.6 million in 2009, $46.3 million in 2008 and $59.9 million in 2007.

The decrease in our research and development expenses from 2008 to 2009 was primarily due to reduced salaries, benefits and other operating expenses resulting from a reduction in domestic headcount announced in October 2008 and completed in April 2009, 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.

The decrease in our research and development expenses from 2007 to 2008 was primarily related to reduced salaries, benefits and other operating expenses resulting from the cessation of operations in Denmark in the first quarter of 2008 and decreased external expenses associated with the development 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. These decreases were partially offset by increases in stock compensation expenses.

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.

Stock compensation expenses included in research and development expenses increased from $3.0 million in 2007 to $4.5 million in 2008, primarily as a result of our issuance of restricted stock units in May 2008. These increases were partially offset by our cessation of research and development operations at Maxygen ApS. There was no additional stock compensation related to the Danish employees during 2008.

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,		
	2007	2008	2009
Projects funded by third parties(1)	$ 2,713	$ 1,106	$ —
Projects funded by related parties(1)	—	$ 2,652	$15,559
Government grants	5,106	5,506	5,024
Internal projects	52,032	37,010	16,057
Total	$59,851	$46,274	$36,640

(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.

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 development of the MAXY-4 product candidates and other preclinical product candidates, the cost of which Perseid will share with Astellas under the collaboration agreement between the parties.

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 $17.5 million in 2009, $14.8 million in 2008 and $15.0 million in 2007. Included in general and administrative expenses were stock-based compensation expenses of $4.3 million in 2009, $3.6 million in 2008 and $3.5 million in 2007. General and administrative expenses in 2009 included the $600,000 transaction bonus paid to Mr. Yonehiro under his retention agreement in connection with consummation of our joint venture arrangement with Astellas.

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.

The decrease in general and administrative expenses in 2008 compared to 2007 was primarily due to decreases in salaries and employee related costs, including lower expenditures on salaries and benefits related to the cessation of our operations in Denmark, offset in part by an increase in external legal and accounting costs in 2008.

Our general and administrative expenses during 2010 should be less when compared to 2009, depending on, among other things, the levels of share-based payments granted in 2010, the use of external consultants and market analysis, 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 the second quarter of 2008 relating to the write-off of our goodwill. We completed our determination of the fair value of the affected goodwill during the third quarter of 2008 and concluded that no revision of the estimated charge was required.

Restructuring Charges

We recognized restructuring charges of $16.0 million in 2009, $2.0 million in 2008 and $5.2 million in 2007, primarily to reflect severance and other termination benefits for the affected employees. In 2009, approximately $11.4 million of these restructuring charges related to the modification of the existing option grants pursuant to our retention agreement with Mr. Yonehiro and the change of control agreements with our former executives. We expect to complete the activities related to our current restructuring plan, primarily related to the payment of severance benefits to the terminated executives, in the first half of 2010.

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 do not expect to incur any additional costs relating to that consolidation.

We recognized restructuring charges of $5.2 million in 2007 resulting from the cessation of operations at Maxygen ApS and the consolidation of our operations in the United States, which we implemented beginning in November 2007. These charges primarily reflect one-time termination benefits for the affected employees of Maxygen, Inc. and Maxygen ApS and other costs associated with the closure of the Maxygen ApS facility, the disposal of remaining fixed assets and termination of various leases. The restructuring charge in 2007 also includes stock compensation expense of approximately $287,000 resulting from the extension of the exercise period of certain stock options held by affected employees of Maxygen ApS, as required under Danish law in connection with the termination of such employees. We completed the activities related to the consolidation of our Danish operations in May 2008 and do not expect to incur any additional costs relating to that consolidation. See Note 15 of the Notes to Condensed Consolidated Financial Statements for further discussion of these matters.

Interest Income and Other Income (Expense), Net

Interest income and other income (expense), net, 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 income and other income (expense), net is as follows (in thousands):

	Year Ended December 31,		
	2007	2008	2009
Interest income	$ 8,600	$4,476	$987
Foreign exchange gains (losses)	(1,106)	432	(15)
Gains (losses) on disposal of equipment and interest (expense)	48	6	5
Total interest income and other income (expense), net	$ 7,542	$4,914	$977

The decrease in interest income and other income (expense), net, from 2009 to 2008 was due to lower interest income resulting from significantly lower interest rates. The decrease in interest income and other income (expense), net, from 2008 to 2007 reflects lower interest income resulting from lower interest rates, partially offset by the $1.5 million swing in foreign exchange from a $1.1 million loss in 2007 to a $432,000 gain in 2008.

Net Income 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 income for 2009 was $1.5 million. As of December 31, 2009, Astellas held a 16.7% ownership percentage and the $245,000 of net income attributable to non-controlling interest reflects Astellas' portion of Perseid's 2009 net income.

Provision for Income Taxes

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 will receive 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 are no taxes in this foreign jurisdiction. No income tax expense was recorded from continuing operations for the year ended December 31, 2007.

Deferred tax assets less deferred tax liabilities and the associated valuation allowances increased by $11.8 million in 2009, due primarily to increases in federal and state net operating loss carryforwards and deferred taxes related to deductible stock option compensation. During 2008, our total deferred tax assets decreased by $3.0 million due to decreases of future excess tax depreciation due to the disposal of assets relating to the cessation of our operations in Denmark, decreases in state and foreign net operating losses and use of federal net operating losses, offset in part by increases in deferred taxes related to deductible stock option compensation.

As of December 31, 2009, we had net operating loss carryforwards for federal income tax purposes of approximately $45.6 million, which expire in the years 2022 through 2029 and federal research and development tax credit carryforwards of approximately $4.2 million, which expire in the years 2012 through 2029. As of December 31, 2009, we had net operating loss carryforwards for state income tax purposes of approximately $63.5 million that expire in the years 2015 through 2029 and state research and development tax credits of approximately $4.4 million that have no expiration date. As a result of our decision to cease operations in Denmark, we have

written off our net operating loss carryforwards in Denmark and therefore, as of December 31, 2008, we had no net operating loss carryforwards for foreign income tax purposes.

Utilization of our net operating losses and credits may be subject to substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. Such an annual limitation could result in the expiration of the net operating losses and credits before utilization. See Note 11 of the Notes to Consolidated Financial Statements.

Recent Accounting Pronouncements

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, we will use our 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 standards.

In December 2007, the FASB issued new guidance on the accounting for and presentation of noncontrolling interests in consolidated financial statements. This guidance requires that noncontrolling interests in subsidiaries be reported as a component of stockholders' equity in the controlling interest's balance sheet. This guidance also requires that earnings or losses attributed to the noncontrolling interests be reported as part of consolidated earnings and not as a separate component of income or expense, and requires disclosure of the attribution of consolidated earnings to the controlling and noncontrolling interests on the face of the consolidated statement of operations. We adopted this guidance at the beginning of its fiscal year 2009. We accounted for the noncontrolling interest held by Astellas in Perseid in accordance with this new accounting 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 should continue to consolidate Perseid. Based on our analysis, we will continue to consolidate Perseid.

In the second quarter of 2009, we adopted new standards that establish general standards of accounting for, and disclosure of, events that occur after the balance sheet date but before financial statements are issued or are available to be issued. Specifically, these standards set forth the period after the balance sheet date during which management of a reporting entity should evaluate events or transactions that may occur for potential recognition or disclosure in the financial statements, the circumstances under which an entity should recognize events or transactions occurring after the balance sheet date in its financial statements, and the disclosures that an entity should make about events or transactions that occurred after the balance sheet date. The adoption of these new standards did not affect our financial statements, other than the disclosures required by these new standards, which can be found in the *Organization and Principles of Consolidation* portion of Note 1 of the Notes to Consolidated Financial Statements.

In the second quarter of 2009, we adopted new standards that provide guidance on how to determine the fair value of assets and liabilities when the volume and level of activity for the asset or liability has significantly decreased. These new standards also provide guidance on identifying circumstances that indicate a transaction is not orderly. In addition, we are required to disclose in interim and annual periods the inputs and valuation

techniques used to measure fair value and a discussion of changes in valuation techniques. The adoption of these new standards did not have a material impact on our consolidated financial statements.

In the second quarter of 2009, we adopted new standards that amend the other-than-temporary impairment guidance in U.S. GAAP for the debt securities to make the guidance more operational and to improve the presentation and disclosure of other-than-temporary impairments debt and equity securities. The adoption of these new standards did not have a material effect on our financial statements.

In the first quarter of 2009, we adopted new standards that clarify the accounting for certain transactions and impairment considerations involving equity method investments. The adoption of these new standards did not have a material effect on our financial statements.

In the first quarter of 2009, we adopted new standards that require entities to provide greater transparency about how and why an entity uses derivative instruments, how derivative instruments and related hedged items are accounted for and how derivative instruments and related hedged items affect an entity's financial position, results of operations and cash flows. The adoption of these new standards did not have a material effect on our financial statements.

In the first quarter of 2009, we adopted new standards that require certain income statement presentation of transactions with third parties and of payments between parties to a collaborative arrangement, along with disclosure about the nature and purpose of the arrangement. These new standards were effective for us beginning January 1, 2009. Our adoption of these new standards did not have a material effect on our financial statements.

In the first quarter of 2009, we adopted new standards that specified the way in which fair value measurements should be made for non-financial assets and non-financial liabilities that are not measured and recorded at fair value on a recurring basis, and specified additional disclosures related to these fair value measurements. The adoption of these new standards did not have a material impact on our consolidated financial statements.

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 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 $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. 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 our MolecularBreeding™ technology platform, which included an up-front cash payment of $90.0 million. In September 2008, we received an upfront fee of $10.0 million from Astellas under our co-development and commercialization agreement with Astellas for our MAXY-4 product candidates. 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 and, in March 2010, we repurchased an additional 1,433,361 shares of our common stock in a private transaction for an aggregate purchase price of approximately $8.0 million. As of December 31, 2009, we had $159.5 million in cash, cash equivalents and marketable securities on a consolidated basis. Of this amount, $20.3 million is held by Perseid and may only be used for Perseid's operations.

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 6 of the Notes to Condensed Consolidated Financial Statements for a further discussion of these arrangements.

Net cash used by operating activities was $20.0 million in 2009, net cash provided by operating activities was $59.4 million in 2008 and net cash used in operating activities was $41.4 million in 2007. 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. These amounts were offset in part by cash used to fund our operating expenses. For 2007, the uses of cash in operating activities were primarily to fund losses from continuing operations.

Net cash provided by investing activities was $17.3 million in 2009, $16.4 million in 2008, $66.5 million in 2007. The cash provided during 2009, 2008 and 2007 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 $26.3 million in 2009, compared with net cash provided by financing activities of $2.0 million in 2008 and $5.1 million in 2007. The cash used during 2009 was primarily due to $39.2 million used to repurchase company 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. The cash provided during 2008 and 2007 relate to proceeds from the sale of common stock in connection with our ESPP and the exercise of stock options by employees.

The functional currency for our Danish operations was its local currency through November 30, 2007. However, as the result of the consolidation of our research and development activities to our U.S. facilities in Redwood City, California and cessation of operations at Maxygen ApS, we determined that the functional currency of our Danish operations was the U.S. dollar after November 30, 2007. Consequently, Maxygen ApS no longer generates translation adjustments which would impact the balance of accumulated other comprehensive income (loss). Translation adjustments from prior periods will continue to remain in accumulated other comprehensive income (loss) on the Consolidated Balance Sheets. In 2009 and 2008, there was no effect of exchange rate changes on cash and cash equivalents. The effect of exchange rate changes on cash and cash equivalents was an increase of $382,000 in 2007.

The following are contractual commitments as of December 31, 2009, associated with lease obligations and purchase 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	$ 206	$ 206	$—	$—	$—
Purchase obligations	13,672	12,741	792	139	—
Total	$13,878	$12,947	$792	$139	$—

In February 2010, we amended the terms of the leases for our facilities to extend the terms of the leases to February 28, 2015. As amended, the leases include scheduled rent increases that will be recognized on a straight-line basis over the term of the leases. The following table reflects the incremental contractual commitments associated with these amended lease obligations (in thousands):

	Payments Due by Period				
Incremental Contractual Obligations	Total	Less than 1 Year	1-3 Years	4-5 Years	More than 5 Years
Operating lease obligations	$4,545	$733	$2,700	$1,112	$—

We are eligible to receive up to $53.0 million in potential milestone and event based payments, including 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, and up to $23.0 million from sanofi pasteur, the vaccines division of the sanofi-aventis Group, under our existing license agreement relating to the development of a vaccine for the dengue virus. Under our agreement with Cangene, to the extent Cangene exercises its option for an initial license, we are also eligible to receive a license fee of $12.5 million, as well as continuing licensing fees equal to a specified percentage of any net contract revenues recognized by Cangene under an applicable government contract. Under our joint venture arrangement with Astellas, Astellas has an option to acquire all of the our ownership interest in Perseid at specified exercise prices that increase each quarter from the current option price of $57.0 million (through March 18, 2010) 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, 2009, we had $159.5 million in cash, cash equivalents and marketable securities on a consolidated basis. Of this amount, $20.3 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, licensors and government grants, 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 one or more additional distributions to our stockholders of a portion of our cash resources in excess of our current and longer term operational requirements. 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 and foreign currency exchange. To mitigate some foreign currency exchange rate risk, we from time to time enter 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. All investments and all cash and cash equivalents are held in U.S. currency at December 31, 2009. As of December 31, 2009, 100% of our total portfolio was scheduled to mature in one year or less.

The following table represents the fair value balance of our cash, cash equivalents, short-term and long-term investments that are subject to interest rate risk by average interest rates as of December 31, 2009 (dollars in thousands):

	Expected Maturity	
	2010	2011
Cash and cash equivalents	$125,919	$—
Average interest rates	0.134%	—
Short-term investments	$ 33,611	$—
Average interest rates	0.560%	—

We did not hold derivative instruments intended to mitigate interest rate risk as of December 31, 2009, 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, 2009 levels, the fair value of our portfolio would decline by approximately $1.6 million. The modeling technique used measures the change in fair values arising from an immediate hypothetical shift in market interest rates and assumes ending fair values include principal plus accrued interest.

Due to the recent adverse developments in the credit markets, we may experience reduced liquidity with respect to some of our investments. These investments are generally held to maturity, which is less than one year or less. However, if the need arose to liquidate such securities before maturity, we may experience losses on liquidation. As of December 31, 2009, we held $33.6 million of commercial debt securities, with an average time to maturity of 93 days. To date we have not experienced any liquidity issues with respect to these securities, but should such issues arise, we may be required to hold some, or all, of these securities until maturity. We believe that, even allowing for potential liquidity issues with respect to these securities, our remaining cash and cash equivalents and the maturities of short-term investments will be sufficient to meet our anticipated cash needs for at least the next twelve months. We have the ability and intent to hold our debt securities to maturity when they will be redeemed at full par value.

Foreign Currency Exchange Risk

In 2009, excluding stock compensation and restructuring charges, approximately 22%, or $10.2 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.

We had no such foreign currency contracts outstanding at December 31, 2009 or 2008. During 2008, we recognized $386,000 in foreign exchange gains from hedge contracts. These gains and losses were included with interest income and other income (expense), net.

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, 2008 and 2009, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2009. 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, 2008 and 2009, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2009, 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, 2009, 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 11, 2010 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Palo Alto, California
March 11, 2010

MAXYGEN, INC.

CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)

	December 31, 2008	December 31, 2009
ASSETS		
Current assets:		
Cash and cash equivalents	$ 154,883	$ 125,919
Short-term investments	51,600	33,611
Related party receivable	2,703	13,608
Accounts receivable and other receivables	823	473
Prepaid expenses and other current assets	1,201	1,849
Total current assets	211,210	175,460
Property and equipment, net	2,347	1,777
Total assets	$ 213,557	$ 177,237
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,438	1,239
Accrued compensation	2,579	1,651
Accrued restructuring charges	1,114	4,384
Accrued project costs	3,435	4,794
Other accrued liabilities	1,235	1,302
Related party deferred revenue	5,246	6,991
Deferred revenue	929	865
Total current liabilities	15,976	21,226
Related party non-current deferred revenue	3,069	—
Non-current deferred revenue	—	500
Commitments and contingencies (Notes 9 and 12)		
Stockholders' equity:		
Preferred stock, $0.0001 par value, 5,000,000 shares authorized, no shares issued and outstanding at December 31, 2008 and 2009	—	—
Common stock, $0.0001 par value, 100,000,000 shares authorized, 37,510,502 shares and 31,448,056 shares issued and outstanding at December 31, 2008 and 2009, respectively	4	3
Additional paid-in capital	434,210	423,924
Accumulated other comprehensive loss	(8)	(227)
Accumulated deficit	(239,694)	(272,096)
Total Maxygen, Inc. stockholders' equity	194,512	151,604
Non-controlling interest	—	3,907
Total stockholders' equity	194,512	155,511
Total liabilities and stockholders' equity	$ 213,557	$ 177,237

See accompanying notes.

MAXYGEN, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

	Year Ended December 31,		
	2007	2008	2009
Collaborative research and development revenue	$ 8,718	$ —	$ —
Technology and license revenue	1,514	90,584	15
Related party revenue	8,286	5,051	31,816
Grant revenue	4,639	5,074	4,545
Total revenues	23,157	100,709	36,376
Operating expenses:			
Research and development	59,851	46,274	36,640
General and administrative	14,951	14,845	17,494
Goodwill impairment	—	12,192	—
Restructuring charge	5,212	1,987	15,964
Total operating expenses	80,014	75,298	70,098
Income (loss) from operations	(56,857)	25,411	(33,722)
Interest income and other income (expense), net	7,542	4,914	977
Net income (loss) before income taxes	(49,315)	30,325	(32,745)
Income tax benefit	—	—	588
Net income (loss)	(49,315)	30,325	(32,157)
Net income attributable to non-controlling interest	—	—	245
Net income (loss) attributable to Maxygen, Inc.	(49,315)	30,325	(32,402)
Basic net income (loss) per share	$ (1.34)	$ 0.82	$ (0.85)
Diluted net income (loss) per share	$ (1.34)	$ 0.81	$ (0.85)
Shares used in basic net income (loss) per share calculations	36,787	37,100	38,236
Shares used in diluted net income (loss) per share calculations	36,787	37,358	38,236

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 Interest	Total Stockholders' Equity
	Shares	Amount					
Balance at January 1, 2007	36,157,910	4	411,195	(696)	(220,704)	—	189,799
Issuance of common stock upon exercise of options for cash and for services rendered	670,018	—	4,755	—	—	—	4,755
Issuance of common stock under employee stock purchase plan	54,383	—	387	—	—	—	387
Issuance of common stock under 401(k) employer matching contribution	44,255	—	368	—	—	—	368
Stock compensation expense for consultant options	—	—	560	—	—	—	560
Stock based compensation expense under SFAS 123(R)	—	—	6,171	—	—	—	6,171
Modification of a term of an employee stock option	—	—	105	—	—	—	105
Components of comprehensive loss:						—	
Net loss	—	—	—	—	(49,315)	—	(49,315)
Currency translation adjustment	—	—	—	382	—	—	382
Change in unrealized gain (loss) on available-for-sale securities	—	—	—	282	—	—	282
Comprehensive loss	—	—	—	—	—	—	(48,651)
Balance at December 31, 2007	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 loss:						—	
Net income	—	—	—	—	30,325	—	30,325
Change in unrealized gain on available-for-sale securities	—	—	—	24	—	—	24
Comprehensive loss	—	—	—	—	—	—	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

See accompanying notes.

MAXYGEN, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Year Ended December 31,		
	2007	2008	2009
Operating activities			
Net income (loss)	$ (49,315)	$ 30,325	$ (32,157)
Adjustments to reconcile net income (loss) from continuing operations to net cash used in operating activities:			
Depreciation and amortization	1,671	1,447	1,048
Goodwill impairment	—	12,192	—
Non-cash stock compensation	6,644	8,598	8,251
Non-cash restructuring charges	—	—	11,426
Common stock issued and stock options granted to consultants for services rendered	560	44	3
Changes in operating assets and liabilities:			
Related party receivable	(7,493)	4,790	(10,905)
Accounts receivable and other receivables	2,716	560	350
Prepaid expenses and other current assets	450	1,482	(648)
Deposits and other assets	—	85	—
Accounts payable	436	(1,433)	(199)
Accrued compensation	2,172	(4,301)	(928)
Accrued restructuring charges	4,413	(3,299)	3,270
Accrued project costs	2,380	(352)	1,359
Other accrued liabilities	(301)	(29)	67
Taxes payable	(140)	—	—
Related party deferred revenue	—	—	(1,324)
Deferred revenue	(5,593)	9,244	436
Net cash provided by (used in) operating activities	(41,400)	59,353	(19,951)
Investing activities			
Purchases of available-for-sale securities	(179,619)	(81,948)	(55,230)
Maturities of available-for-sale securities	247,590	99,055	73,000
Acquisition of property and equipment	(1,469)	(734)	(478)
Net cash provided by investing activities	66,502	16,373	17,292
Financing activities			
Proceeds from issuance of common stock	5,142	2,027	2,866
Sale of subsidiary shares to non-controlling interest	—	—	10,000
Purchase of treasury stock	—	—	(39,171)
Net cash provided by financing activities	5,142	2,027	(26,305)
Effect of exchange rate changes on cash and cash equivalents	382	—	—
Net increase (decrease) in cash and cash equivalents	30,626	77,753	(28,964)
Cash and cash equivalents at beginning of period	46,504	77,130	154,883
Cash and cash equivalents at end of period	$ 77,130	$154,883	$125,919
Supplemental Cash Flow Information			
Cash paid during the period for income taxes	$ 140	$ —	$ —

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 ApS (Denmark) ("Maxygen ApS"), which was acquired by the Company in August 2000, Maxygen Holdings Ltd. (Cayman Islands) ("Maxygen Holdings") and Maxygen Holdings, Inc. (U.S.), Inc., as well as its majority-owned subsidiary, Perseid Therapeutics LLC ("Perseid"), for which the Company is the primary beneficiary as determined under applicable accounting standards. Amounts pertaining to the noncontrolling ownership interests held by Astellas Pharma, Inc. ("Astellas") in the operating results and financial position of Perseid are reported as noncontrolling interest. At each reporting date, the Company will reassess whether it is still the primary beneficiary of Perseid. If the Company determines that it is no longer the primary beneficiary, the Company will deconsolidate Perseid and record its interests 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.

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 Pharma, Inc. ("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 owns 83.3% and Astellas owns 16.7% of Perseid as of December 31, 2009, based upon the voting rights of the issued and outstanding units of Perseid common and preferred units. The Company has recorded a non-controlling interest in its Consolidated Financial Statements to reflect Astellas' ownership interest in Perseid's net assets. 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 6.

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 accounts for its investment in Codexis under the equity method of accounting. The Company's investment basis in Codexis as of December 31, 2009 and 2008 was zero. The Company is not obligated to fund the operations or other capital requirements of Codexis. As of December 31, 2009, the Company's equity interest in Codexis was approximately 21% of the issued and outstanding capital stock of Codexis.

Foreign Currency Translation

The functional currency of Maxygen ApS was the Danish kroner through November 30, 2007. Assets and liabilities of Maxygen ApS were translated at current exchange rates. Revenues and expenses were translated at average exchange rates in effect during the period. Gains and losses from currency translation were included in accumulated other comprehensive loss. However, as the result of the consolidation of the Company's research and development activities to its U.S. facilities in Redwood City, California and cessation of operations at Maxygen ApS, the Company reevaluated the functional currency for its Danish operations and determined that it was the U.S. dollar after November 30, 2007. After November 30, 2007, nonmonetary assets and liabilities which are denominated in currencies other than the U.S. dollar have been remeasured into U.S. dollars at historical exchange rates beginning with the November 30, 2007 exchange rates. Translation adjustments from prior periods will continue to remain in accumulated other comprehensive loss. Currency transaction gains or losses are included in interest income and other income (expense), net.

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.

Reclassifications

Certain previously reported amounts have been reclassified to conform to the current period presentation. Revenue of $4.4 million in 2008 has been reclassified from collaborative research and development revenue to related party revenue and revenue of $14,000 in 2007 has been reclassified from collaborative research and development revenue to technology and license revenue for the year ended December 31, 2009. The Company has reclassified deferred revenue of $5.2 million in 2008 to related party deferred revenue for the year ended December 31, 2009. These reclassifications did not have any effect on net loss, total assets or total liabilities and stockholders' equity or cash used or provided by operating activities, investing activities or financing activities.

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 are reported as accumulated other comprehensive 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 income and other income (expense), net. 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 income and expense. 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.

Derivatives and Financial Instruments

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 that expire within eighteen months 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 income and other income (expense), net, 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.

The purpose of the hedging activities has been to minimize the effect of foreign currency exchange rate movements on the cash flows related to the Company's funding of Maxygen ApS and payments to vendors in Europe. To date, foreign currency contracts have been denominated in Danish kroner and euros. At December 31, 2009 and 2008, the Company had no foreign currency contracts outstanding. At December 31, 2007, the Company had foreign currency contracts outstanding in the form of forward exchange contracts totaling $8.8 million. These contracts were entered into in December of 2007 to cover a substantial portion of the disbursements scheduled for the first quarter of 2008. Because of the short duration of less than 90 days, the Company made the decision to not designate these contracts as cash flow hedges and therefore recognized changes in their fair value as interest income and other income (expense), net in the period of change. During 2008, the Company recognized $386,000 of foreign exchange gains from the hedge contracts which were included with interest income and other income (expense), net. During 2007, the Company recognized $77,000 in foreign exchange losses from hedge contracts and these losses were included with interest income and other income (expense), net.

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 the financial issuers or collaborators to the extent of the amount recorded on the balance sheet. A portion of the

Company's accounts receivable balance at December 31, 2009 and 2008 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.

A substantial portion of the Company's properties and equipment were assigned to Perseid in connection with the consummation of the Joint Venture Agreement on September 18, 2009. See Note 6.

In November 2007, the Company implemented a plan, which it substantially completed by May 2008, to consolidate the research and development operations at Maxygen ApS. This resulted in the transfer of certain fixed assets to Maxygen, Inc. and shortened useful lives of the remaining fixed assets at Maxygen ApS. The remaining book value of these assets at Maxygen ApS were depreciated over the shorter estimated remaining useful lives and the depreciation expense is reflected in research and development expenses on the Consolidated Statements of Operations.

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 range from one to five years with various termination dates, the last of which is July 2010 for existing agreements. Revenue related to these grant agreements is recognized as the related research and development expenses are incurred. On January 5, 2010, the Company entered into agreements with AltraVax, Inc. ("AltraVax") for the sale of substantially all of the Company's vaccine assets, including the related government grants, and, as a result, these grants are not expected to be a source of revenue for the Company going forward. See Note 19.

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. See Note 5 for details regarding the Company's sponsored license and research agreements.

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,		
	2007	2008	2009
Projects funded by third parties(1)	$ 2,713	$ 1,106	$ —
Projects funded by related party(1)	—	2,652	15,559
Government grants	5,106	5,506	5,024
Internal projects	52,032	37,010	16,057
Total	$59,851	$46,274	$36,640

(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.

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 consummation of the transactions contemplated by the Joint Venture Agreement 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, 2009, 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 2000 International Stock Option Plan (the "International Plan"); and the 2000 Non-Officer Stock Option Plan. These stock plans generally provide for the grant of stock options to employees, directors and/or consultants. The 2006 Plan, which has 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. 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 Equity Incentive 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 Equity Incentive 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 awards to employees and members of the Company's board of directors, 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 reviewed 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, 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 year ended December 31, 2009, 2008 and 2007 was as follows (in thousands):

	Year Ended December 31,		
	2007	2008	2009
Employee stock options	$5,804	$4,731	$3,486
Restricted stock units	—	3,213	3,854
Restricted stock awards	—	—	434
Consultant options	666	44	3
ESPP	80	194	138
Stock-based compensation expense before income taxes	6,550	$8,182	$7,915
Total stock-based compensation expense after income taxes	$6,550	$8,182	$7,915

For the years ended December 31, 2009, 2008 and 2007, stock-based compensation expense related to the grant of stock options to consultants was allocated as follows (in thousands):

	Year Ended December 31,		
	2007	2008	2009
Research and development	$236	$ 44	$ 3
General and administrative	430	—	—
Stock-based compensation expense before income taxes	666	$ 44	$ 3
Total stock-based compensation expense after income taxes	$666	$ 44	$ 3

In 2009 and 2007, the Company recorded stock compensation expense of $11.4 million and $287,000 as part of the restructuring charge. In 2009, the $11.4 million of stock compensation 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 Mr. Yonehiro and the change in control agreements with its former executives. In 2007, the $287,000 of stock compensation expense resulted from the extension of the exercise period of certain stock options held by affected employees of Maxygen ApS, as required under Danish law in connection with the termination of such employees.

Stock Options

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.

The Company also examines its historical pattern of option exercises in an effort to determine if there are any discernable activity patterns based on certain employee populations. From this analysis, the Company

identified no discernable activity patterns other than the employee populations for its U.S. and former Danish operations. The Company uses the Black-Scholes-Merton option pricing model to value the options for each of the employee populations.

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

	2007		2008(1) 2009(1)	
	U.S. Employees	Danish Employees	U.S. Employees	U.S. Employees
Expected dividend yield	0%	0%	0%	0%
Risk-free interest rate range—Options	3.81% to 4.90%	4.76% to 4.97%	2.75% to 3.33%	2.77%
Risk-free interest rate range—ESPP	4.74% to 5.09%	—	1.62% to 4.98%	0.48% to 2.38%
Expected life—Options	5.70 years	2.4 years	5.72 years	6.26 years
Expected life—ESPP	0.50 years to 0.94 years	—	0.08 years to 1.0 years	0.08 years to 0.99 years
Expected volatility—Options	50.93% to 52.96%	44.88% to 45.99%	50.61% to 59.33%	58.91%
Expected volatility—ESPP	44.76% to 48.31%	—	43.36% to 106.98%	47.15% to 113%

(1) As the result of cessation of research and development operations at Maxygen ApS, no options were granted to Danish employees after 2007.

The computation of the expected volatility assumption used in the Black-Scholes-Merton calculations for new grants is based on historical volatilities. When establishing the expected life assumption, the Company reviews annual historical employee exercise behavior of option grants with similar vesting periods. For awards to employees and members of the Company's board of directors in 2009, the expected life of the stock options was calculated under the shortcut method as permitted under applicable SEC accounting guidance. When establishing the expected life assumption in prior periods, the Company reviewed annual historical employee exercise behavior of option grants with similar vesting periods.

A summary of the changes in stock options outstanding under the Company's equity-based compensation plans during the year ended December 31, 2009 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, 2009	10,264,529	$12.65	4.95	$10,235
Granted	894,250	$ 6.53		
Exercised	(726,332)	$ 5.51		
Canceled	(1,822,722)	$21.22		
Expired	(6,000)	$14.58		
Options outstanding at December 31, 2009	8,603,725	$10.80	5.17	$ 786
Options vested and expected to vest at December 31, 2009	8,454,466	$10.87	5.09	$ 774
Options exercisable at December 31, 2009	7,365,378	$11.50	4.49	$ 552

The intrinsic value of options exercised during the years ended December 31, 2009, 2008 and 2007 was $2.5 million, $870,000 and $1.9 million, respectively. The estimated fair value of shares vested during the years ended December 31, 2009, 2008 and 2007 was $7.0 million, $11.9 million and $12.9 million, respectively. The weighted average grant date fair value of options granted during the year ended December 31, 2009 was $6.53. At December 31, 2009, the Company had $5.5 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 3.2 years. Cash received from stock option exercises and purchases under the ESPP was $4.3 million during the year ended December 31, 2009.

The following table summarizes outstanding and exercisable options at December 31, 2009:

	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 Outstanding	Weighted-Average Exercise Price
$3.39 – $6.49	635,809	8.45	$ 4.97	485,237	$ 5.07
$6.53 – $6.53	893,250	9.73	$ 6.53	0	$ 0.00
$6.63 – $7.29	1,260,041	5.01	$ 7.08	1,203,578	$ 7.07
$7.40 – $7.89	1,405,707	5.19	$ 7.65	1,389,190	$ 7.65
$7.92 – $9.46	861,747	6.46	$ 8.41	781,451	$ 8.42
$9.54 – $10.64	1,107,746	4.56	$10.31	1,085,239	$10.31
$10.69 – $12.17	1,016,201	4.21	$11.48	997,459	$11.49
$12.29 – $16.10	867,556	1.62	$13.32	867,556	$13.32
$16.54 – $56.88	513,002	0.98	$38.56	513,002	$38.56
$59.81 – $59.81	42,666	0.61	$59.81	42,666	$59.81
	8,603,725	5.17	$10.80	7,365,378	$11.50

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 6), 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 have different equity acceleration provisions in their employment related agreements. See Note 15. Compensation cost for these awards is 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 expenses related to these restricted stock unit awards. At December 31, 2009, there was no unrecognized compensation cost related to these awards.

A summary of the changes in restricted stock units outstanding under the Company's equity-based compensation plans during the year ended December 31, 2009 is presented below:

	Shares	Weighted-Average Purchase Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Units outstanding at January 1, 2009	1,007,500	$ —	1.09	$8,987
Awarded	10,000	—		
Vested	(974,500)	—		
Forfeited	(43,000)	—		
Units outstanding at December 31, 2009	—	$ —	—	$ —
Units vested and expected to vest at December 31, 2009	—	$ —	—	$ —
Units exercisable at December 31, 2009	—	$ —	—	$ —

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. An exercise price and monetary payment were 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 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, the Company recognized approximately $434,000 in stock-based compensation expenses related to these restricted stock awards. At December 31, 2009, the unrecognized compensation cost related to these awards was approximately $5.7 million, which is expected to be recognized on a straight-line basis over the requisite service period which ends on September 22, 2013.

Employee Stock Purchase Plan

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 year ended December 31, 2008, 84,783 shares of common stock were purchased pursuant to the ESPP. The weighted average fair value of purchase rights granted during the year ended December 31, 2008 was $2.29. Compensation expense is calculated using the fair value of the employees' purchase rights under the Black-Scholes-Merton model. For the year ended December 31, 2008, ESPP compensation expense was $194,000. Effective from September 1, 2009, the Company suspended all future employee purchases of Company common stock under the ESPP.

Contingent Performance Units

In September 2009, the Company granted contingent performance units ("CPUs") under the 2006 Plan to all holders of options to purchase Company common stock who are currently providing services to the Company or a subsidiary of the Company. CPUs will 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 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 potential future dividends or distributions to the Company's stockholders. Accordingly, the CPUs will only have value should the Company make such a dividend payment or distribution. The earned value of any CPU will generally be settled in shares of common stock of the Company. All unvested CPUs remaining following the Settlement Date will expire immediately. Because the value of the CPU awards cannot be reasonably estimated unless and until the Company makes a qualifying dividend or distribution to its stockholders, the Company did not recognize any expense in 2009 related to these awards. Also see Note 9.

Profits Interest Units

During 2009, Perseid granted profits interest units ("PIUs") to all employees of the Company and Perseid who are currently providing services to Perseid totaling an aggregate of approximately 12.5 million PIUs. 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 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. Because the value of the PIU awards cannot be reasonably estimated until the time of a liquidity event of Perseid, the Company did not recognize any expense in 2009 related to these awards. Also see Note 9.

Valuation and Expense Information

For the years ended December 31, 2009, 2008 and 2007, stock-based compensation expense related to employee stock options, restricted stock units and employee stock purchases, and stock-based compensation expense related to consultant stock options was allocated as follows (in thousands):

	Year ended December 31, 2007	Year ended December 31, 2008	Year ended December 31, 2009
Research and development	$3,000	$4,539	$3,639
General and administrative	3,550	3,643	4,276
Restructuring charge	287	—	—
Stock-based compensation expense before income taxes	6,837	8,182	7,915
Total stock-based compensation expense after income taxes	$6,837	$8,182	$7,915

There was no capitalized stock-based employee compensation cost as of December 31, 2009. There were no recognized tax benefits during the year ended December 31, 2009.

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 dilutive 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,		
	2007	2008	2009
Numerator:			
Net income (loss)	$(49,315)	$30,325	$(32,402)
Denominator:			
Basic and diluted:			
Weighted-average shares used in computing basic net income (loss) per share	36,787	37,100	38,236
Effect of dilutive securities	—	258	—
Weighted-average shares used in computing diluted net income (loss) per share	36,787	37,358	38,236
Basic net income (loss) per share	$ (1.34)	$ 0.82	$ (0.85)
Diluted net income (loss) per share	$ (1.34)	$ 0.81	$ (0.85)

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 10,892,000 options at December 31, 2007, approximately 10,265,000 options and 1,008,000 restricted stock units at December 31, 2008 and 8,604,000 options and 933,000 restricted stock awards at December 31, 2009.

Comprehensive Income (Loss)

Comprehensive income (loss) is primarily comprised of net income (loss), net unrealized gains or losses on available-for-sale securities and foreign currency translation adjustments. The following table presents comprehensive income (loss) and its components (in thousands):

	Year Ended December 31,		
	2007	2008	2009
Net income (loss)	$(49,315)	$30,325	$(32,402)
Changes in unrealized gains (losses) on securities available-for-sale	282	24	(219)
Changes in foreign currency translation adjustments	382	—	—
Comprehensive income (loss)	(48,651)	30,349	(32,621)
Comprehensive income (loss) attributable to non-controlling interest	—	—	245
Comprehensive income (loss) attributable to Maxygen, Inc.	$(48,651)	$30,349	$(32,866)

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

	Year Ended December 31,	
	2008	2009
Unrealized gain on available-for-sale securities	$ 258	$ 26
Unrealized losses on available-for-sale securities	(14)	(1)
Foreign currency translation adjustments	(252)	(252)
Accumulated other comprehensive loss	$ (8)	$(227)

Recent Accounting Pronouncements

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 December 2007, the FASB issued new guidance on the accounting for and presentation of noncontrolling interests in consolidated financial statements. This guidance requires that noncontrolling interests in subsidiaries be reported as a component of stockholders' equity in the controlling interest's balance sheet. This guidance also requires that earnings or losses attributed to the noncontrolling interests be reported as part of consolidated earnings and not as a separate component of income or expense, and requires disclosure of the attribution of consolidated earnings to the controlling and noncontrolling interests on the face of the consolidated statement of operations. The Company adopted this guidance at the beginning of its fiscal year 2009. The Company accounted for the noncontrolling interest held by Astellas in Perseid in accordance with this new accounting 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. 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 should continue to consolidate Perseid. Based on the Company's analysis, it will continue to consolidate Perseid.

In the second quarter of 2009, the Company adopted new standards that establish general standards of accounting for, and disclosure of, events that occur after the balance sheet date but before financial statements are issued or are available to be issued. Specifically, these standards set forth the period after the balance sheet date during which management of a reporting entity should evaluate events or transactions that may occur for potential recognition or disclosure in the financial statements, the circumstances under which an entity should recognize events or transactions occurring after the balance sheet date in its financial statements, and the disclosures that an entity should make about events or transactions that occurred after the balance sheet date. The adoption of these new standards did not affect the Company's financial statements, other than the disclosures required by these new standards, which can be found in the *Organization and Principles of Consolidation* portion of this Note.

In the second quarter of 2009, the Company adopted new standards that provide guidance on how to determine the fair value of assets and liabilities when the volume and level of activity for the asset or liability has significantly decreased. These new standards also provide guidance on identifying circumstances that indicate a transaction is not orderly. In addition, the Company is required to disclose in interim and annual periods the inputs and valuation techniques used to measure fair value and a discussion of changes in valuation techniques. The adoption of these new standards did not have a material impact on the Company's consolidated financial statements.

In the second quarter of 2009, the Company adopted new standards that amend the other-than-temporary impairment guidance in U.S. GAAP for the debt securities to make the guidance more operational and to improve the presentation and disclosure of other-than-temporary impairments debt and equity securities. The adoption of these new standards did not have a material effect on the Company's financial statements.

In the first quarter of 2009, the Company adopted new standards that clarify the accounting for certain transactions and impairment considerations involving equity method investments. The adoption of these new standards did not have a material effect on the Company's financial statements.

In the first quarter of 2009, the Company adopted new standards that require entities to provide greater transparency about how and why an entity uses derivative instruments, how derivative instruments and related hedged items are accounted for and how derivative instruments and related hedged items affect an entity's financial position, results of operations and cash flows. The adoption of these new standards did not have a material effect on the Company's financial statements.

In the first quarter of 2009, the Company adopted new standards that require certain income statement presentation of transactions with third parties and of payments between parties to a collaborative arrangement, along with disclosure about the nature and purpose of the arrangement. These new standards were effective for the Company beginning January 1, 2009. The Company's adoption of these new standards did not have a material effect on its financial statements as the Company did not have any such agreements on January 1, 2009 and has not entered into any agreements after January 1, 2009 which meet the definition of a collaborative arrangement for purposes of these new standards.

In the first quarter of 2009, the Company adopted new standards that specified the way in which fair value measurements should be made for non-financial assets and non-financial liabilities that are not measured and recorded at fair value on a recurring basis, and specified additional disclosures related to these fair value measurements. The adoption of these new standards did not have a material impact on the Company's consolidated financial statements. See Note 17.

2. Cash Equivalents and Investments

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
Corporate bonds	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

The Company's cash equivalents and investments as of December 31, 2008 were as follows (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Money market funds	$ 154,883	$—	$—	$ 154,883
Commercial paper	19,176	72	—	19,248
Corporate bonds	1,504	—	(4)	1,500
U.S. government agency securities	30,676	186	(10)	30,852
Total	206,239	258	(14)	206,483
Less amounts classified as cash equivalents	(154,883)	—	—	(154,883)
Total investments	$ 51,356	$258	$(14)	$ 51,600

Realized gains or losses on the maturity of available-for-sale securities for 2009, 2008 and 2007 were insignificant. The change in unrealized holding 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 and $282,000 in 2008 and 2007, respectively. The Company intends to hold securities until maturity and therefore does not believe the current unrealized losses of $1,000 are other than temporary.

At December 31, 2009, the contractual maturities of investments were as follows (in thousands):

	Amortized Cost	Estimated Fair Value
Due within one year	$33,586	$33,611
Due after one year through two years	—	—
	$33,586	$33,611

The following table provides the gross unrealized losses and the fair market value of the Company's investments with unrealized losses that are not deemed to be other-than-temporarily impaired, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position as of December 31, 2009 (in thousands):

	In Loss Position for Less Than 12 Months		In Loss Position for 12 Months or Greater		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
U.S. government agency securities	$5,766	$1	$—	$—	$5,766	$1
Total	$5,766	$1	$—	$—	$5,766	$1

3. 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 Company's MolecularBreeding™ technology platform to Bayer HealthCare LLC ("Bayer") and recognized $90.6 million of revenue in 2008 in connection with the transaction, which included an up-front 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 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.

4. Collaborative Agreements

During 2009, 2008 and 2007, the Company recognized revenue primarily from three collaborative agreements. These agreements typically include, or included, upfront licensing fees, technology advancement fees and research funding, as well as the potential to earn milestone payments and royalties on future product sales or cost savings. The agreements generally require, or required, the Company to devote a specified number of full-time equivalent employees to the research efforts over defined research terms ranging from three to five years. Total revenue recognized under these collaboration agreements was $27.2 million in 2009, $4.4 million in 2008 and $8.7 million in 2007.

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. In 2009, the Company recognized $3.8 million of the $10.0 million upfront fee and $16.2 million earned as net reimbursement of its research and development activities under this agreement. This agreement was assigned to Perseid on September 18, 2009 in connection with the consummation of the Joint Venture Agreement.

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 will fund 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 2009, the Company recognized $2.3 million of related party revenue attributable to this agreement.

Roche (MAXY-VII)

In December 2005, the Company formed a strategic alliance with F. Hoffmann-La Roche Ltd. ("Roche") to collaborate on the global development and commercialization of the Company's portfolio of next-generation recombinant factor VII products. Factor VII is a natural protein with a pivotal role in blood coagulation and clotting. The collaboration focused on the development of lead candidates for the treatment of uncontrolled bleeding in trauma and intracerebral hemorrhage.

Under the terms of the collaboration, the Company and Roche had agreed to share certain costs of worldwide research and development activities in connection with the development of the factor VII product candidates. The Company had agreed to lead early stage clinical development of these product candidates and Roche had agreed to lead late stage clinical development. Roche had been granted exclusive worldwide rights to commercialize the factor VII products subject to the collaboration and the Company had retained rights for the development of factor VII products for hemophilia. The Company received an upfront fee of $8.0 million in 2005 and received $5.0 million in 2006 for the achievement of a preclinical milestone. Roche elected to terminate this agreement in April 2007.

5. Technology Licenses and Research Agreements

The Company has entered into several research agreements to fund research at universities and other collaborators. These agreements are generally cancelable by either party upon written notice and may be extended by mutual consent of both parties. Research and development expenses are recognized as the related services are performed, generally ratably over the period of the service. Expenses under these agreements were approximately $4.2 million in 2009, $3.7 million in 2008 and $4.1 million in 2007.

6. Perseid Therapeutics LLC

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 operation upon consummation of the transactions contemplated by the Joint Venture Agreement on September 18, 2009.

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 $57.0 million (through March 18, 2010) 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 Agreement, Astellas and Perseid entered into a new collaboration agreement pursuant to which 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). 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

Company's MolecularBreeding™ technology platform and ancillary protein expression technologies for the discovery, research and development of protein pharmaceuticals, subject to certain existing licenses and other limitations. However, the Company is not obligated to fund the operations or other capital requirements of 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 is 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 a non-controlling interest.

As a result of this transaction, substantially all of the Company's protein therapeutics business and research and development operations is now operated through Perseid. As of December 31, 2009, Perseid had total assets of $35.6 million including $20.3 million of cash and cash equivalents. Based on the structure of the Astellas transaction and the guidance on accounting for interests in variable interest entities, Perseid was deemed a variable-interest entity. Determining the primary beneficiary of a variable interest entity requires significant judgment. Based on the Company's analysis of the relevant facts and circumstances, it believes that the activities of Perseid are most closely associated with Maxygen and that the Company is the primary beneficiary. As a result, the Company included 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 a non-controlling interest.

7. 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 has 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.

Under the agreement, Cangene has paid the Company an up-front option fee of $500,000, which has been recorded as non-current deferred revenue. The option period for the initial license is one year, but may be extended under certain circumstances. If Cangene is awarded a specified government contract and exercises its option for an initial license, Cangene will pay the Company a license fee of $12.5 million. Under the initial license and any subsequent license, the Company would also be entitled to continuing license fees from Cangene equal to a specified percentage of any net contract revenues recognized by Cangene under an applicable government contract. Cangene's obligation to pay such license fees would continue until the later of the expiration of certain related patent claims licensed under the agreement or seven years from Cangene's exercise of its option for the initial license.

In addition, at any time prior to the second anniversary of Cangene's exercise of its option for the initial license, Cangene may elect to obtain a fully paid automatic grant of the initial license and subsequent license for

a one-time payment to the Company of $30.0 million. Upon such payment, Cangene would no longer be obligated to pay the Company any further license fees (other than any amounts due to the Company at the time of such election). If Cangene were to make this election within five days following the exercise of the option for the initial license, the $12.5 million option exercise fee for the initial license would be credited against the $30.0 million payment. However, there can be no assurances that Cangene will be awarded any government development contracts for the use of MAXY-G34 or that Cangene will be able to commence or continue the development of MAXY-G34 for ARS under any such government contracts.

The Company retains all rights to MAXY-G34 for commercial development of therapeutic areas outside of the ARS indication, including all rights for chemotherapy-induced neutropenia indications.

8. Properties and Equipment

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

	December 31,	
	2008	2009
Leasehold improvements	$ 3,427	$ 3,427
Machinery and laboratory equipment	11,662	11,924
Computer equipment and software	2,380	2,380
Furniture and fixtures	1,254	1,459
	18,723	19,190
Less accumulated depreciation and amortization	(16,376)	(17,413)
Property and equipment, net	$ 2,347	$ 1,777

9. 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 originally scheduled to expire in 2010, but were amended in February 2010 and now expire in 2015 and include scheduled rent increases that will recognized on a straight-line basis over the term of the leases (see below). The other operating leases expire on various dates through 2010. Prior to February 2009, the facility leases also included scheduled rent increases that were recognized on a straight-line basis over the term of the leases. The material contracts expire on various dates through 2013.

As of December 31, 2009, minimum annual rental commitments under operating leases are as follows (in thousands):

Year Ending December 31,	
2010	$12,947
2011	511
Thereafter	420
	$13,878

Total rent expense was $1.2 million in 2009, $1.5 million in 2008 and $2.2 million in 2007.

In February 2010, the Company and Perseid amended the terms of the operating leases for its facilities to extend the terms of the leases to February 28, 2015. As amended, the facilities leases include scheduled rent increases that will be recognized on a straight-line basis over the term of the leases.

The minimum incremental additional rental commitments under the amended facilities leases are as follows (in thousands):

Year Ending December 31,	
2010	$ 733
2011	877
Thereafter	2,935
	$4,545

Contingent Performance Units

In September 2009, the Company granted CPUs under the 2006 Plan to all holders of options to purchase Company common stock who are currently providing services to the Company or a subsidiary of the Company. CPUs will vest on the Settlement Date, which is 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, 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 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 potential future dividends or distributions to the Company's stockholders. Accordingly, the CPUs will only have value should the Company make such a dividend payment or distribution. The earned value of any CPU will generally be settled in shares of common stock of the Company. All unvested CPUs remaining following the Settlement Date will expire immediately. Under applicable accounting standards, the Company does not expect to record any amounts related to such awards unless and until the payout under such awards is probable and estimable.

Profits Interest Units

In September and October 2009, Perseid granted PIUs under the Perseid Equity Incentive Plan to all employees of the Company and Perseid who are currently providing services to Perseid totaling an aggregate of approximately 12.5 million PIUs. 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 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. Under the joint venture arrangement, if Astellas exercises its option to purchase the Company's interest in Perseid, Astellas has agreed to, concurrently with the closing of such purchase option, purchase for cash all vested PIUs held by Perseid's then-current and former employees, consultants, directors and other service providers. Under applicable accounting standards, the Company does not expect to record any amounts related to such awards unless and until the payout under such awards is probable and estimable.

10. 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 has not been 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 contribution was 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, $459,000 in 2008 and $368,000 in 2007. As of December 31, 2009, the Company has 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, 2009, 3,879,738 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. Options granted under the 1997 Plan vest and become exercisable pursuant to a vesting schedule determined by the administrator of the plan, generally over a four-year period at a rate of 25% at the end of each year for grants made prior to January 1, 2002 and for grants made after January 1, 2002, over a four-year period at a rate of 25% at the end of the first year and monthly for the three years thereafter. In addition, a number of grants made in 2003 vest over three years, 16.67% on July 1, 2003 and monthly for the two and a half years thereafter. 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, 2009.

1999 Nonemployee Directors Stock Option Plan

The Company's stockholders approved the 1999 Nonemployee Directors Stock Option Plan (the "Directors' Plan") on December 14, 1999. Under the Directors' Plan, prior to its expiration in September 2009, 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 is 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 vests as to 25% of the shares subject to the option at the end of each year. Each subsequent grant generally vests in full one year after the date of grant. The Directors' Plan expired on September 29, 2009. As a result, no shares remained available for future awards under the under the Directors' Plan at December 31, 2009.

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 has not been approved by the Company's stockholders, as no such approval is required. As a result of the cessation of research and development operations at Maxygen ApS, the Company has 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, 2009.

2000 Non-Officer Employee Stock Option Plan

The Company's board of directors adopted the 2000 Non-Officer Stock Option Plan (the "Non-Officer Plan") on December 6, 2000. The Non-Officer Plan has not been approved by the Company's stockholders, as no such approval is required. Under the Non-Officer Plan, the board of directors may 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. No options may be granted under the Non-Officer Plan after December 6, 2010. Under the Non-Officer Plan, nonstatutory options may be granted at prices not lower than 85% of fair value at the date of grant (except in the case of replacement options in the context of acquisitions), as determined by the board of directors. The maximum term of the options granted under the Non-Officer Plan is ten years. Options granted under the Non-Officer Plan vest and become exercisable pursuant to a vesting schedule determined by the administrator of the plan, generally over a four-year period at a rate of 25% at the end of each year for grants made prior to January 1, 2002, or for grants made after January 1, 2002, over a four-year period at a rate of 25% at the end of the first year and monthly for the three years thereafter. In addition, a number of grants made in 2003 vest over three years, 16.67% on July 1, 2003 and monthly for the two and a half years thereafter. The Non-Officer Plan provides 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. The Board has decided not to increase the number of shares available for issuance under the Non-Officer Plan for 2010. At December 31, 2009, 1,915,386 shares remained available for future option grants under the Non-Officer Plan.

Activity under the 2006 Plan, the 1997 Plan, the Directors' Plan, the International Plan and the Non-Officer Plan was as follows:

		Options and Awards Outstanding	
	Shares Available	Number of Shares	Weighted-Average Exercise Price Per Share
Balance at January 1, 2007	8,402,837	10,686,460	$13.13
Shares authorized	469,752	—	—
Options granted	(1,960,730)	1,960,730	$10.00
Options exercised	—	(670,018)	$ 7.10
Options canceled	1,035,651	(1,035,651)	$10.59
Options expired	49,751	(49,751)	$ 8.11
Balance at December 31, 2007	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 canceled	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 canceled	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

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

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. The initial offering period commenced on December 16, 1999 and the first purchase under the ESPP occurred on September 29, 2000 when 67,540 shares of common stock were purchased. In 2009, 2008 and 2007, 62,842 shares, 84,783 shares and 54,383 shares of common stock were purchased pursuant to the ESPP, respectively. The weighted average fair value of purchase rights granted during

the year was $2.22 in 2009, $2.29 in 2008 and $0.48 in 2007. At December 31, 2009, 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 Board has decided not to increase the number of shares available for issuance under the ESPP for 2010.

Perseid Equity Incentive Plan

On September 18, 2009, Perseid adopted the Perseid Equity Incentive 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 Equity Incentive Plan provides for the grant of Perseid common units as profits interest units (PIUs). A total of 15.0 million common units are reserved for issuance as PIUs under the Perseid Equity Incentive Plan, subject to adjustment in the event of certain changes in the capitalization of Perseid affecting common units. The Perseid Equity Incentive 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 Equity Incentive Plan. Perseid has also adopted a form of PIU award agreement for use under the Equity Incentive 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, 2009, 2,443,812 Common Units remained available for issuance under the Perseid Equity Incentive Plan.

Fair value disclosures

Options granted to consultants are periodically re-valued as they vest using a Black-Scholes-Merton model and the following weighted-average assumptions for 2009: estimated volatility of 0.70, risk-free interest rates of 1.64%, no dividend yield, and an expected life of 3.0 years; for 2008: estimated volatility of 0.54, risk-free interest rates of 2.91%, no dividend yield, and an expected life of 3.0 years; and for 2007: estimated volatility of 0.51 to 0.53, risk-free interest rates of 4.54% to 4.92%, no dividend yield, and an expected life of 5.70 years. The Company recorded total compensation expense of $3,000 in 2009, $44,000 in 2008 and $666,000 in 2007 related to the Black-Scholes-Merton revaluation of options grants to consultants. There was no stock compensation expense relating to the acceleration of stock options for 2009, 2008 and 2007.

Common Stock

At December 31, 2009, the Company had reserved shares of common stock for future issuance as follows:

2006 Equity Incentive Plan	5,164,714
2000 Non-Officer Employee Stock Option Plan	4,092,234
2000 International Stock Option Plan	3,037,718
1999 Employee Stock Purchase Plan	1,446,179
1999 Nonemployee Directors Stock Option Plan	295,000
1997 Stock Option Plan	4,961,572
	18,997,417

11. Income Taxes

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

	Year Ended December 31,		
	2007	2008	2009
United States	$(15,155)	$ (4,504)	$(31,309)
Foreign	(34,160)	34,829	(1,436)
Income (loss) from continuing operations	$(49,315)	$30,325	$(32,745)

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 will receive 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. No income tax expense was recorded from continuing operations for the year ended December 31, 2007.

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. During 2008, the Company's total deferred tax assets decreased by $3.0 million due to decreases of future excess tax depreciation due to the disposal of assets relating to the Company's cessation of operations in Denmark, decreases in state and foreign net operating losses and use of federal net operating losses, offset in part by increases in 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,	
	2008	2009
Net operating loss carryforwards	$ 13,566	$ 19,291
Research credits	5,791	5,608
Capitalized research	2,366	1,614
Investment in subsidiary	4,387	5,744
Stock based compensation	10,556	13,084
Other	3,022	6,105
Total deferred tax assets	39,688	51,446
Total deferred tax liabilities	(324)	(162)
Valuation allowance	(39,364)	(51,284)
Net deferred tax assets and liabilities	$ —	$ —

The valuation allowances increased by $11.9 million in 2009 and decreased by $3.0 million in 2008. 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, 2009 and 2008.

As of December 31, 2009, the Company had net operating loss carryforwards for federal income tax purposes of approximately $45.6 million, which expire in the years 2022 through 2029 and federal research and development tax credit carryforwards of approximately $4.2 million, which expire in the years 2012 through 2029. As of December 31, 2009, the Company had net operating loss carryforwards for state income tax purposes of approximately $63.5 million that expire in the years 2015 through 2029 and state research and development tax credits of approximately $4.4 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 in Denmark and therefore, as of December 31, 2008, the Company had no net operating loss carryforwards for foreign income tax purposes.

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,		
	2007	2008	2009
U.S. federal taxes (benefit)			
At statutory rate	$(17,260)	$ 10,614	$(11,461)
State taxes (net of federal)	(1,850)	(37)	(1,863)
Alternative minimum tax benefit	—	—	(588)
Stock related deductions	(33)	48	2,193
Unbenefited foreign losses	14,314	244	503
Lower tax rates in other jurisdictions	—	(13,043)	—
Flow through entity	—	—	(659)
Other	(242)	786	(1,221)
Foreign deferred tax adjustments	—	4,799	—
Unbenefited losses	5,071	(3,411)	12,508
Total	$ —	$ —	$ (588)

At December 31, 2009, the Company had a liability for unrecognized tax benefits of approximately $1.8 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, 2008	$ 5,590
Increases (decrease) related to prior year tax positions	(3,678)
Increases related to current year tax positions	—
Settlements	—
Reductions due to lapse of applicable statute of limitations	—
Balance at December 31, 2008	$ 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

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, 2009, 2008 and 2007.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The Company is subject to U.S. federal and state income tax examination for calendar tax years ending 1998 through 2009. Additionally, the Company is subject to various international tax examinations for the calendar tax years ending 2003 through 2009. Danish tax authorities are currently auditing the Company's Danish tax filings for the years 2003 through 2006. The Company does not believe that there will be any material tax exposure as a result of this audit.

12. 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 a tentative 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, albeit over a number of objections. Subsequently, various parties filed either notices of appeal or other motions intended to permit an appellate challenge to the Court's settlement-approval order. Appellate proceedings are in their very early stages, and the Company cannot predict how long appellate proceedings concerning the settlement could take, or their outcome. Accordingly, there can be no assurance that the settlement will ultimately become effective. If the settlement does not become effective, the action may 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. Plaintiff filed notice of appeals with respect to these dismissals (including the dismissal of the action involving the Company). Briefing of the appeals has concluded, but the Court of Appeals has not scheduled argument. As the Simmonds action seeks no relief against the Company, the Company does not believe that these claims, if successfully appealed, will 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.

13. 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 and intangible assets.

	Year Ended December 31,		
	2007	2008	2009
		(in thousands)	
Revenues			
United States	$22,904	$ 96,321	$ 9,190
Japan	—	4,388	27,186
Other foreign countries	253	—	—
Total revenue	$23,157	$100,709	$36,376

	December 31,	
	2008	2009
	(in thousands)	
Long-Lived Assets		
United States	$2,347	$1,777
Total long-lived assets	$2,347	$1,777

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

	2007	2008	2009
Customer A	37.0%	—	—
Customer B	36.0%	0.7%	13.0%
Customer C	—	90.0%	—
Customer D	—	—	75.0%

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 2009, 2008 and 2007 are summarized in Note 4.

14. 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, 2009.

In addition, the Company customarily agrees in the ordinary course of its business to indemnification provisions in its collaboration agreements, 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 agreements are similar, but in addition provide some limited indemnification for its collaborator in the event of third party claims alleging infringement of certain intellectual property 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 is generally unlimited. 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, 2009.

15. Restructuring Charges

2009 U.S. Restructuring

Beginning in the third quarter of 2009, the Company implemented a restructuring plan in connection with the consummation of the transactions contemplated by the Joint Venture Agreement that has 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 is entitled to receive 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 any shares underlying restricted stock units are not to be delivered to the executive until such later time as is 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. Expenses related to the acceleration of these executive's equity awards were recognized as general and administrative expense in the third quarter of 2009. The majority of the severance and one-time termination benefits will be paid out during the first half of 2010. The Company expects to complete the activities related to this restructuring plan in first half of 2010, but does not expect to record any additional restructuring charges.

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 are 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 plan to consolidate its organization to reduce costs and increase overall operational efficiency across its research, preclinical, clinical and regulatory activities. The consolidation has 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 restructuring charges, which include approximately $287,000 of non-cash stock compensation, are related to severance and other benefits for the Company's Danish employees.

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

The activity in the restructuring accrual related to the actions described above for the year ended December 31, 2008 was as follows (in thousands):

	Balance at December 31, 2007	Charges during fiscal year 2008	Cash payments during 2008	Balance at December 31, 2008	As at December 31, 2008	
					Total Costs to Date	Total Expected Costs
2008 U.S. Restructuring						
Employee severance and other benefits charges	$ —	$1,188	$ (92)	$1,096	$1,188	$1,188
2007 Denmark Restructuring						
Employee severance and other benefits charges	4,413	74	(4,487)	—	5,286	5,286
Contract termination and other associated costs	—	725	(707)	18	725	725
	$4,413	$1,987	$(5,286)	$1,114	$7,199	$7,199

16. Related Party Transactions

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 6.

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. Under the consulting agreement, Mr. Stein was also granted an option on April 1, 2006 to purchase 250,000 shares of the Company's common stock at an exercise price of $8.28 per share. The option vested and became fully exercisable in May 2007. For the year ended December 31, 2007, the Company recognized stock-based compensation expense related to stock options of $6.8 million of which approximately $430,000 is attributable to the option granted to Mr. Stein. The Company recognized no stock-based compensation expense for the year ended December 31, 2008 or 2009 attributed to such option. For the years ended December 31, 2009, 2008 and 2007, total expense under this arrangement, including cash payments, was approximately $374,000, $290,000 and $720,000, respectively.

In December 2006, the Company expanded the scope of exclusive licenses previously granted to Codexis to its MolecularBreeding™ directed evolution platform for certain applications relating to energy, including biofuels. Under the license agreement, as amended, the Company is entitled to receive 20% of all consideration received by Codexis from a third party licensee, including license fees, milestone payments, royalties and the purchase of equity securities (subject to certain limitations) and research funding (in excess of a specified base rate), that relates to the use of the licensed rights for the development or commercialization of certain products or processes in the energy field. In November 2006, Codexis entered into a collaboration agreement with Shell Oil Products US to explore enhanced methods of converting biomass to biofuels and, in November 2007, Codexis entered into an expanded collaboration agreement with Royal Dutch Shell plc. During the years ended December 31, 2009, 2008 and 2007, the Company recognized revenues under the license agreement of approximately $4.6 million, $664,000 and $8.3 million, respectively, as a result of payments received by Codexis under its collaboration agreements with Shell. The payments from Codexis are included in related party revenue in the Condensed Consolidated Statements of Operations.

17. 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 Condensed Consolidated Financial Statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels, defined by SFAS 157 and 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.

In accordance with SFAS 157, the following table represents 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, 2009 (in thousands):

	Estimated Fair Value	Level 1	Level 2	Level 3
Money market funds	$125,919	$125,919	$ —	$—
Corporate bonds	33,611	—	33,611	—
Total	$159,530	$125,919	$33,611	$—

As of December 31, 2009, the Company did not have any financial liabilities that were required to be measured at fair value on a recurring basis, nor any financial assets or liabilities that were required to be measured at fair value on a non-recurring basis.

18. 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 by SFAS No. 142, 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 the second quarter of 2008 relating to the write-off of its goodwill. The Company completed its determination of the fair value of the affected goodwill during the third quarter of 2008 and has concluded that no revision of the estimated charge will be required. No goodwill impairment charges were recorded in 2007.

19. Subsequent Events

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 up-front payment of $500,000 and AltraVax is obligated to pay the Company an additional $1.0 million of over the next two years. The Company is 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 $1.5 million purchase price. As part of the transaction, the Company also granted AltraVax certain exclusive licenses in the vaccines field and certain non-exclusive licenses in the adjuvants field to the Company's MolecularBreeding™ directed evolution platform and certain ancillary technologies, in each case, subject to existing third party rights to such licensed assets and technology.

Repurchase of Common Stock

On March 10, 2010, the Company repurchased 1,433,361 shares of its common stock held by entities affiliated with GlaxoSmithKline plc at a per share price of $5.55, for an aggregate purchase price of approximately $8.0 million. The repurchase was a private transaction and was funded with the Company's existing cash resources. The shares repurchased have been retired and constitute authorized but unissued shares of common stock of the Company.

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, 2009. 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, 2009, 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, 2009 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

On March 10, 2010, we repurchased 1,433,361 shares of our common stock held by entities affiliated with GlaxoSmithKline plc at a per share price of $5.55, for an aggregate purchase price of approximately $8.0 million. The repurchase was a private transaction and was funded with our existing cash resources. The shares repurchased have been retired and constitute authorized but unissued shares of our common stock.

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, 2009, 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, 2009, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the 2009 consolidated financial statements and our report dated March 11, 2010 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Palo Alto, California
March 11, 2010

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 2010 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 2010 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 section captioned "Security Ownership of Certain Beneficial Owners and Management" contained in the 2010 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 2010 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 2010 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 11, 2010

By: /s/ JAMES R. SULAT
James R. Sulat
Chief Executive Officer & Chief Financial 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 11, 2010
/s/ ISAAC STEIN **Isaac Stein**	Executive Chairman of the Board	March 11, 2010
/s/ LOUIS G. LANGE **Louis G. Lange**	Director	March 11, 2010
/s/ KENNETH B. LEE, JR. **Kenneth B. Lee, Jr.**	Director	March 11, 2010
/s/ ERNEST MARIO **Ernest Mario**	Director	March 11, 2010
/s/ GORDON RINGOLD **Gordon Ringold**	Director	March 11, 2010

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	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	
2.2.3	Limited Liability Company Agreement of Perseid Therapeutics LLC, dated as of September 18, 2009	8-K	000-28401	2.1.3	9/21/2009	
2.2.4	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	
2.2.5	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	
2.2.6	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	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
2.2.7	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	
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 Maxygen, Inc.	10-Q	000-28401	10.1	11/07/2008	
10.3+	License Agreement, dated as of March 28, 2002, between Maxygen, Inc. and Codexis, Inc.	10-K/A	000-28401	10.19	10/24/2008	
10.3.1+	Amendment No. 1 to License Agreement, dated as of September 13, 2002, between Maxygen, Inc. and Codexis, Inc.	10-K/A	000-28401	10.19.1	10/24/2008	
10.3.2	Amendment No. 2 to License Agreement, dated as of October 1, 2002, between Maxygen, Inc. and Codexis, Inc.	10-K	000-28401	10.19.2	3/07/2008	
10.3.3+	Amendment No. 3 to License Agreement, dated as of August 22, 2006, between Maxygen, Inc. and Codexis, Inc.	10-K/A	000-28401	10.19.3	10/24/2008	
10.3.4+	Side Letter, dated February 18, 2005, regarding License Agreement, dated as of March 28, 2002, between Maxygen, Inc. and Codexis, Inc.	10-Q	000-28401	10.3	5/06/2008	
10.3.5+	Side Letter, dated September 11, 2007, regarding License Agreement, dated as of March 28, 2002, between Maxygen, Inc. and Codexis, Inc.	10-Q	000-28401	10.4	5/06/2008	
10.3.6+	Side Letter, dated September 24, 2007, regarding License Agreement, dated as of March 28, 2002, between Maxygen, Inc. and Codexis, Inc.	10-Q	000-28401	10.5	5/06/2008	
10.4+	Cross License Agreement, dated as of July 16, 2003, between Maxygen, Inc. and Amgen Mountain View Inc. (as successor to Avidia, Inc.)	10-K	000-28401	10.27	3/14/2007	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
10.5	Lease, dated as of October 21, 1998, between Metropolitan Life Insurance Company and Maxygen, Inc.	S-1	333-89413	10.4	10/20/1999	
10.5.1	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	
10.5.2	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	
10.5.3	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	
10.5.4	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	
10.5.5	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	
10.5.6	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	
10.5.7	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	
10.6	Lease, dated December 15, 2004, between Metropolitan Life Insurance Company and Maxygen, Inc.	10-K	000-28401	10.14	3/14/2005	
10.6.1	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	
10.6.2	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	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
10.6.3	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	
*10.7	Form of Executive Officer and Director Indemnification Agreement	S-1	333-89413	10.7	10/20/1999	
*10.8	Offer Letter to James Sulat dated September 22, 2009	8-K	000-28401	10.1	9/28/2009	
*10.9	Form of Change of Control Agreement (James Sulat)	8-K	000-28401	10.2	9/28/2009	
*10.10	Retention Agreement, dated June 30, 2009, between Maxygen, Inc. and Grant Yonehiro	8-K	000-28401	10.2	7/1/2009	
*10.11	Amended and Restated Change of Control Agreement, dated June 30, 2009, between Maxygen, Inc. and Grant Yonehiro	8-K	000-28401	10.3	7/1/2009	
*10.12	Contingent Offer Letter to Grant Yonehiro from Maxygen, Inc. dated June 26, 2009	8-K	000-28401	10.4	7/1/2009	
*10.13	Description of Non-Employee Director Compensation					X
*10.14	Form of Amended and Restated Executive Officer Change of Control Agreement with Former Officers	8-K	000-28401	2.1	7/1/2009	
*10.15	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	
*10.16	Letter Agreement (re tax equalization payments), dated November 20, 2006, between Elliot Goldstein and Maxygen, Inc.	10-K	000-28401	10.25	3/14/2007	
*10.17	Consulting Agreement, between Maxygen, Inc. and Waverley Associates, Inc., dated as of April 1, 2006	8-K	000-28401	10.1	4/04/2006	
*10.17.1	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	
*10.17.2	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	

Exhibit No.	Description of Exhibit	Incorporation by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
*10.17.3	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	
*10.18	1997 Stock Option Plan, as amended, with applicable option agreement	10-Q	000-28401	10.1	8/14/2002	
*10.19	Form of Amendment to Stock Option Agreements	8-K	000-28401	10.2	6/30/2006	
*10.20	1999 Nonemployee Directors Stock Option Plan, as amended, with applicable option agreement	10-Q	000-28401	10.3	8/14/2001	
*10.21	1999 Employee Stock Purchase Plan, as amended	10-K	000-28401	10.11	3/21/2001	
*10.22	2000 International Stock Option Plan, as amended, with applicable option agreement	10-K	000-28401	10.6	3/25/2002	
10.23	2000 Non-Officer Stock Option Plan, as amended, with applicable option agreement	S-8	333-57486	99.3	3/23/2001	
*10.24	2006 Equity Incentive Plan (including related form of stock option agreement)	8-K	000-28401	10.4	6/30/2006	
*10.24.1	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	
*10.24.2	Form of Contingent Performance Unit Award Agreement under 2006 Equity Incentive Plan	10-Q	000-28401	10.6	11/5/09	
*10.24.3	Perseid Therapeutics LLC 2009 Equity Incentive Plan (including related form of profits interest unit agreement)	8-K	000-28401	10.1	9/21/09	
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.

[THIS PAGE INTENTIONALLY LEFT BLANK]

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 11, 2010

/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, 2009 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 11, 2010

OFFICERS

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

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

BOARD OF DIRECTORS

Isaac Stein
President, Waverley Associates, Inc.

James R. Sulat
Chief Executive Officer and Chief Financial Officer

Louis G. Lange
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
Chairman and Chief Executive Officer, 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.