ANNUAL REPORT
2009

Dear Fellow Stockholders:

I am pleased to have this opportunity to share with you this brief review of Oncothyreon's achievements in 2009, and to look forward with you into 2010.

The highlight of 2009 was the progress of our product candidates, including our therapeutic vaccines Stimuvax and ONT-10 and our small molecules PX-478 and PX-866. Each made significant advances during the year.

For Stimuvax, the most exciting event of the year was the presentation of long-term data at the International Association for the Study of Lung Cancer's 13th World Conference on Lung Cancer in San Francisco on August 1, 2009. The data, presented by Dr. Glenwood Goss from the Ottawa Hospital Cancer Centre, Ottawa, Ontario, involved 16 patients who received treatment with Stimuvax for between 2 and 8.2 years as part of the Phase 2b trial in patients with stage IIIb/IV non-small cell lung cancer (NSCLC). The data showed that, as of the time of data analysis in April 2009, 10 of the 16 studied patients were alive without evidence of disease progression, eight of whom continued to receive therapy with Stimuvax after 6.3 to 8.2 years.

In order to fully appreciate these data, it is helpful to remember the design of the Stimuvax Phase 2b trial, which was conducted by Oncothyreon several years ago. In this trial, patients with Stage IIIb and IV non-small cell lung cancer were treated with chemotherapy or chemo-radiation. If they responded or were stable, they were then randomized to receive Stimuvax or not and followed for survival. As previously reported, in the pre-stratified subset of patients with Stage IIIb locoregional disease, the patients who received Stimuvax had a median survival of 30.6 months, while the randomized control group had a median survival of 13.3 months. This difference, a survival advantage of 17.3 months, is the reason that our partner for Stimuvax, Merck KGaA, is now pursuing Phase 3 trials in Stage III patients.

There were 35 patients with Stage IIIb locoregional disease who received Stimuvax in the Phase 2b trial. Nine of the 10 patients who are still progression free and alive more than six years later are from this group, representing about 26 percent. This is a striking figure, since the five-year overall survival in Stage III lung cancer is usually reported as less than 10 percent. Caution needs to be exercised in making this comparison to historical data, but the results remain intriguing.

Two new Phase 3 trials of Stimuvax were also initiated by Merck KGaA in 2009. In June the STRIDE trial in patients with hormone receptor-positive, locally advanced, recurrent or metastatic breast cancer opened for enrollment. In December the INSPIRE trial in Asian patients with Stage III NSCLC was initiated. We believe the initiation of these trials demonstrates and confirms the commitment of Merck KGaA to advancing a broad development program for Stimuvax.

The most advanced trial for Stimuvax is START, the randomized Phase 3 trial in patients with Stage III NSCLC which enrolled its first patient in early 2007. The trial had been progressing well. Unfortunately, in March 2010, START and the other actively recruiting trials of Stimuvax were placed on clinical hold as the result of a case of encephalitis, or brain inflammation, in a patient with multiple myeloma participating in an exploratory clinical trial with Stimuvax. As of the time of this letter, the cause of this adverse event and its relationship to Stimuvax treatment had not been determined.

We believe that Merck KGaA is working diligently to resolve this issue as quickly as possible and, if appropriate, to resume START. The Data Safety Monitoring Board for START met in February of 2010 and determined at that point that there were no safety reasons to halt START. We remain, and believe Merck KGaA remains, committed to Stimuvax development, but we must ask your patience until this issue can be resolved.

While on the subject of cancer vaccines, I would like to tell you about our latest candidate in this field, ONT-10. Like Stimuvax, ONT-10 is a therapeutic vaccine that targets MUC1. It differs from Stimuvax in that the antigen contained in the vaccine is larger and contains

carbohydrates. As a result, preclinical trials of ONT-10 have demonstrated its ability to stimulate not only a cell-mediated immune response, like Stimuvax, but also an antibody response. ONT-10 also contains a fully synthetic adjuvant, called PET Lipid A, which was created by Oncothyreon chemists and is proprietary to Oncothyreon.

Oncothyreon decided to complete the pre-clinical development of ONT-10 for several reasons. From a scientific perspective, we would like to determine whether having both a cell-mediated and antibody-mediated immune response is beneficial and might produce even better results than we have seen with Stimuvax, or might allow us to expand into additional indications. If such benefits are established, ONT-10 could become an important life-cycle management tool as a follow-on to Stimuvax. From a commercial perspective, ONT-10 is important to us because we retain the marketing rights. Merck KGaA has a right of first negotiation should we decide to seek a partner, but all rights currently remain with us. Finally, we expect ONT-10 to be the first vaccine using our proprietary adjuvant to enter the clinic. If the use of this adjuvant proves safe in this first trial, we believe there may be an opportunity to license it for use in other vaccines. During 2010, we plan to conduct extensive studies on ONT-10 to prepare for IND filing and the start of clinical trials. Our current expectation is that the first trial of ONT-10 in man will begin in 2011.

I would now like to turn to our small molecule pipeline, beginning with PX-866, our PI-3 kinase inhibitor, about which we have made the important decision to go forward into Phase 2 trials in 2010. This decision is based on what we have learned in the ongoing dose-escalation Phase 1 trial of PX-866 in patients with advanced metastatic cancer. To remind you, this trial has two arms. We began with an intermittent dosing arm, in which patients received drug on days 1-5 and 8-12 of a 28 day cycle. We have now identified the maximally tolerated dose in this arm and have started enrolling patients in the second arm, in which patients are treated daily.

Although the study is ongoing, we have already learned that we have a therapeutic ratio, meaning that we can affect the activity of the target of PX-866, PI-3 kinase, at doses well below the maximally tolerated dose. Some of these data were presented at ASCO in May 2009. We have also seen some patients with prolonged stable disease. Based on these findings, we believe we are justified in moving PX-866 into Phase 2 trials.

Many of you will have heard me speak about the importance of undertaking a broad Phase 2 program. It is in Phase 2 that one learns how to use a drug, and in which tumor types it may have efficacy, and you cannot do this in a single trial. The more you learn in Phase 2, the more likely you will succeed in a Phase 3 trial. Our plan for PX-866, therefore, will include trials in which we examine PX-866 both alone and in combination with other agents, both chemotherapy and targeted agents, and will target more than one tumor type. Our goal for 2010 is to initiate two or more such trials for PX-866. The details will be forthcoming when we start the trials, but we are very excited to be moving this compound forward.

We have also completed patient enrollment in our Phase 1 trial of PX-478, our inhibitor of HIF-1 alpha, a transcription factor important to angiogenesis and tumor metabolism. We expect to present the data from this trial during 2010. The reality for us, however, is that we can only afford to take one program into Phase 2 ourselves, if we are to honor our commitment to managing our cash resources prudently as we await data from the Phase 3 trials of Stimuvax.

At Oncothyreon we are proud to have a talented staff to help guide our programs. In 2009, we welcomed two new members to our senior management team. Scott Peterson, Ph.D. joined us as Vice President of Research and Development. Scott has an extensive background in the pre-clinical development of oncology products, including prior experience with the PI-3 kinase target family. Diana Hausman, M.D. also joined us as Vice President of Clinical Development. Diana's extensive background in designing and executing clinical trials in oncology will be of great help as we move our products into later stage clinical development.

As part of our focused efforts on the management of expenditures and efficient use of our resources, we were pleased in 2009 to complete the consolidation of all our activities into our Seattle headquarters. This has produced further operating efficiencies and allowed us to continue to develop our product candidates in as cost-effective a manner as possible.

We have been managing our cash prudently in 2009. As indicated in the attached financial statements, we substantially reduced our operating expenses and use of cash in 2009 compared with the prior year. This is a reflection of our transfer of responsibility for manufacturing Stimuvax to Merck KGaA in December 2008 and of the consolidation of our activities in Seattle. Our goal is to continue to exercise prudence in the management of our cash burn.

As always I am thankful for the support of you, our stockholders, as Oncothyreon continues to maintain its focus and its drive toward the advancement our oncology candidates to improve the lives and outcomes of cancer patients. I look forward to sharing with you our continued progress going forward.

Sincerely,

Robert L. Kirkman, M.D.
President and Chief Executive Officer

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

Form 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2009

OR

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

Commission file number: 001-33882

ONCOTHYREON INC.

(Exact name of registrant as specified in its charter)

Delaware	**26-0868560**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification Number)*

2601 Fourth Ave, Suite 500
Seattle, Washington 98121
(Address of principal executive office, including zip code)

(206) 801-2100
(Registrant's telephone number, including area code)

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

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

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 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 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 the 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. (Check one):

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

The aggregate market value of the voting and non-voting stock held by non-affiliates of the Registrant, based on the closing sale price of the Registrant's common stock on the last day of its most recently completed second fiscal quarter, as reported on the NASDAQ Global Market, was approximately $87 million. Shares of common stock held by each executive officer and director and by each person who owns 5% or more of the outstanding common stock, based on filings with the Securities and Exchange Commission, have been excluded from this computation since such persons may be deemed affiliates of the Registrant. The determination of affiliate status for this purpose is not necessarily a conclusive determination for other purposes.

There were 25,753,405 shares of the Registrant's common stock, $0.0001 par value, outstanding on April 22, 2010.

DOCUMENTS INCORPORATED BY REFERENCE

None.

ONCOTHYREON INC.
ANNUAL REPORT ON FORM 10 K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2009

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EXPLANATORY NOTE

On March 8, 2010, following consultation with and upon the recommendation of management, the audit committee of our board of directors determined that the financial statements as of and for the year ended December 31, 2008 contained in our 2008 Annual Report on Form 10-K, the condensed financial statements for the quarters ended March 31, June 30 and September 30, 2009 contained in our Quarterly Reports on Form 10-Q (collectively referred to as the affected financial statements) and the related report of our independent registered public accounting firm contained in the 2008 Annual Report on Form 10-K should no longer be relied upon.

In arriving at this determination, we determined that we had changed our revenue recognition policy for up-front license payments and contingent payments received from license agreements under which a license deliverable qualifies as a separate unit of accounting from recognition over the applicable amortization period (the "Proportional Performance Model") to recognition upon commencement of the license term (the "Specific Performance Model"), assuming all other revenue recognition criteria have been met. We failed to provide the required disclosures under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 250, *Accounting Changes and Error Corrections*, with respect to such change. Accordingly, the consolidated financial statements as of and for the year ended December 31, 2008 have been restated to reflect the disclosure of a change in accounting policy. The restatement as it relates to the failure to provide the required disclosures of the change in accounting policy did not change the Company's balance sheet, statements of operations, changes in stockholders' equity or cash flows as of and for the year ended December 31, 2008, or the condensed consolidated financial statements for the interim periods ended March 31, June 30 and September 30, 2009. Other related and unrelated error corrections were made by us in connection with the correction of the disclosure error discussed above. Information regarding the effect of the restatement is provided in "Note 2 — Restatement — 2008 Change in Accounting Policy Not Previously Reported and Other Error Corrections" of the audited consolidated financial statements appearing in Part II Item 8 Financial Statements and Supplementary Data included in this Annual Report on Form 10-K for the year ended December 31, 2009.

PART I

ITEM 1. *Business*

This annual report on Form 10-K, including the "Management's Discussion and Analysis of Financial Condition and Results of Operation" section in Item 7 of this report, and other materials accompanying this annual report on Form 10-K contain forward-looking statements or incorporate by reference forward-looking statements. You should read these statements carefully because they discuss future expectations, contain projections of future results of operations or financial condition, or state other "forward-looking" information. These statements relate to our, or in some cases our partners' future plans, objectives, expectations, intentions and financial performance and the assumptions that underlie these statements. These forward-looking statements include, but are not limited to, statements that we:

- *identify and capitalize on possible collaboration, strategic partnering, acquisition or divestiture opportunities;*
- *obtain suitable financing to support our operations, clinical trials and commercialization of our products;*
- *manage our growth and the commercialization of our products;*
- *achieve operating efficiencies as we progress from a mid-stage to a final-stage biotechnology company;*
- *successfully compete in our markets;*
- *effectively manage our expenses;*
- *realize the results we anticipate from our pre-clinical development activities and the clinical trials of our products;*
- *successfully resolve the issues surrounding Merck's suspension of the clinical development program for Stimuvax;*
- *succeed in finding and retaining joint venture and collaboration partners to assist us in the successful marketing, distribution and commercialization of our products;*
- *achieve regulatory approval for our products;*
- *believe that our product candidates could potentially be useful for many different oncology indications that address large markets;*
- *obtain on commercially reasonable terms adequate product liability insurance for our commercialized products;*
- *adequately protect our proprietary information and technology from competitors and avoid infringement of proprietary information and technology of our competitors;*
- *assure that our products, if successfully developed and commercialized following regulatory approval, are not rendered obsolete by products or technologies of competitors; and*
- *not encounter problems with third parties, including key personnel, upon whom we are dependent.*

All forward-looking statements are based on information available to us on the date of this annual report and we will not update any of the forward-looking statements after the date of this annual report, except as required by law. Our actual results could differ materially from those discussed in this annual report. The forward-looking statements contained in this annual report, and other written and oral forward-looking statements made by us from time to time, are subject to certain risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in the following discussion and within Part I. Item 1A "Risk Factors" of this annual report.

Overview

We are a clinical-stage biopharmaceutical company focused primarily on the development of therapeutic products for the treatment of cancer. Our goal is to develop and commercialize novel synthetic vaccines and targeted small molecules that have the potential to improve the lives and outcomes of cancer patients. Our cancer vaccines are designed to stimulate the immune system to attack cancer cells, while our small molecule compounds are designed to inhibit the activity of specific cancer-related proteins. We are advancing our product candidates through in-house development efforts and strategic collaborations.

We believe the quality and breadth of our product candidate pipeline, strategic collaborations and scientific team will enable us to become an integrated biopharmaceutical company with a diversified portfolio of novel, commercialized therapeutics for major diseases.

Until a recent suspension of clinical trials in March 2010, our lead product candidate, Stimuvax, was being evaluated in Phase 3 clinical trials for the treatment of non-small cell lung cancer, or NSCLC, and breast cancer. We have granted an exclusive, worldwide license to Merck KGaA of Darmstadt, Germany, or Merck KGaA, for the development, manufacture and commercialization of Stimuvax. Our pipeline of clinical stage proprietary small molecule product candidates was acquired by us in October 2006 from ProlX Pharmaceuticals Corporation, or ProlX. We are currently focusing our internal development efforts on PX-866, for which we currently plan to initiate one or more Phase 2 trials in 2010, and PX-478, for which we expect to complete a Phase 1 trial in advanced metastatic cancer in the first half of 2010. As of the date of this report, we have not licensed any rights to our small molecules to any third party and retain all development, commercialization and manufacturing rights. We are also conducting preclinical development of ONT-10 (formerly BGLP40), a cancer vaccine directed against a target similar to Stimuvax, and which is proprietary to us. In addition to our product candidates, we have developed novel vaccine technology we may further develop ourselves and/or license to others.

We were incorporated in 1985 in Canada under the name Biomira Inc., or Biomira. On December 10, 2007, Oncothyreon became the successor corporation to Biomira by way of a plan of arrangement effected pursuant to Canadian law. Pursuant to the plan of arrangement, shareholders of the former Biomira received one share of Oncothyreon common stock for each six common shares of Biomira that they held. All information contained in this annual report, including the information contained in Management's Discussion and Analysis, selected financial data, and our consolidated financial statements and related notes for the year ended December 31, 2007 gives effect to the 6 for 1 share exchange implemented in connection with the plan of arrangement. The consolidated financial statements have been prepared giving effect to the 6 for 1 share exchange and basic and diluted earnings (loss) per share for all the periods presented.

The plan of arrangement represents a transaction among entities under common control. The assets and liabilities of the predecessor Biomira have been reflected at their historical cost in the accounts of Oncothyreon.

Our executive office is located at 2601 Fourth Avenue, Suite 500, Seattle, Washington 98121 and our telephone number is (206) 801-2100. Our common stock trades on the NASDAQ Global Market under the symbol "ONTY".

Available Information

We make available free of charge through our investor relations website, *www.oncothyreon.com*, our annual reports, quarterly reports, current reports, proxy statements and all amendments to those reports as soon as reasonably practicable after such material is electronically filed or furnished with the SEC. These reports may also be obtained without charge by contacting Investor Relations, Oncothyreon Inc., 2601 Fourth Avenue, Suite 500, Seattle, Washington 98121, e-mail: *IR@oncothyreon.com*. Our Internet website and the information contained therein or incorporated therein are not intended to be incorporated into this Annual Report on Form 10-K. In addition, the public may read and copy any materials we file or furnish with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549 or may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Moreover, the SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding reports that we file or furnish electronically with them at *www.sec.gov*.

Our Strategy

Our pipeline of product candidates is comprised of cancer vaccines and small molecule candidates. Our cancer vaccines attack cancer cells by stimulating the immune system,

while our small molecule product candidates inhibit critical cancer-related pathways. The resulting product pipeline provides us with opportunities to diversify risk, develop new therapies and establish strategic partnerships. This pipeline is the foundation on which we intend to build a valuable oncology franchise and become a leading developer of vaccine and small molecule therapies for cancer. Key elements of our strategy are to:

Advance Our Product Pipeline. Our primary focus is advancing our pipeline of product candidates: Stimuvax, PX-866 and PX-478, which are in clinical trials, and ONT-10, which is in pre-clinical development, on our own or with partners. To that end, we are building internal expertise in our development, regulatory and clinical groups. We also have relationships with key scientific advisors, research organizations and contract manufacturers to supplement our internal efforts.

Establish and Maintain Strategic Collaborations to Advance our Product Pipeline. Our strategy is to enter into collaborations or license arrangements at appropriate stages in our research and development process to accelerate the commercialization of our product candidates. Collaborations can supplement our own internal expertise in areas such as clinical trials and manufacturing, as well as provide us with access to our collaborators' and/or licensees' marketing, sales and distribution capabilities. For example, in 2001 we initiated a collaboration with Merck KGaA to pursue joint global product research, clinical development and commercialization of Stimuvax. That collaboration evolved over time and in December 2008, the collaboration arrangement with Merck KGaA was replaced with a license agreement, pursuant to which Merck KGaA has sole responsibility for the clinical development, manufacture and commercialization of Stimuvax. We understand Merck KGaA plans to investigate the use of Stimuvax in multiple types of cancer, which we would not have been able to do alone. All development costs for Stimuvax have been borne exclusively by Merck KGaA since March 1, 2006, with the exception of manufacturing process development costs, which Merck KGaA also assumed beginning on December 18, 2008. We have no further performance obligations under our arrangement with Merck KGaA and will potentially receive cash payments upon the occurrence of certain events and royalties based on net sales.

Selectively License our Technologies. As a result of our experience in cancer vaccine development, we have acquired and developed unique technologies that are available for license. For example, we have developed a fully synthetic toll-like receptor 4 agonist called PET-lipid A, which we believe to be useful as a vaccine adjuvant.

Acquire or In-license Attractive Product Candidates and Technologies. In addition to our internal research and development initiatives, we have ongoing efforts to identify products and technologies to acquire or in-license from biotechnology and pharmaceutical companies and academic institutions. Our acquisition of ProlX in October 2006 is an example of such an acquisition. We plan to continue supplementing our internal development programs through strategic acquisition or in-licensing transactions.

Product Candidates Overview

Product Candidate	Technology	Most Advanced Indication	Development Stage
Stimuvax	Vaccine	Non-small cell lung cancer	Phase 3*
Stimuvax	Vaccine	Breast cancer	Phase 3*
PX-866	Small Molecule	To be determined	Phase 1**
PX-478	Small Molecule	Advanced solid tumors and lymphoma	Phase 1
ONT-10	Vaccine	To be determined	Preclinical

* Suspended in March 2010.

** Phase 2 trial expected to be initiated in mid-2010.

In the table above, under the heading "Development Stage," "Phase 3" indicates evaluation of clinical efficacy and safety within an expanded patient population, at geographically dispersed clinical trial sites; "Phase 2" indicates clinical safety testing, dosage testing and initial efficacy testing in a limited patient population; "Phase 1" indicates initial clinical safety testing in healthy volunteers or a limited patient population, or trials directed toward understanding the mechanisms or metabolism of the drug; and "Preclinical" indicates the program has not yet entered human clinical trials. For purposes of the table, "Development Stage" indicates the most advanced stage of development that has been completed or is ongoing.

Vaccine Products

General

The immunotherapeutic or cancer "vaccine" approach is based on the concept that tumors possess distinct antigens, like the Mucin 1, or MUC1, antigen incorporated in our Stimuvax vaccine, which should be recognized by the body's immune system. Immunotherapy is designed to stimulate an individual's immune system to recognize cancer cells and control the growth and spread of cancers in order to increase the survival of cancer patients.

Stimuvax

Our lead product candidate currently under clinical development is a vaccine we call Stimuvax. Stimuvax incorporates a 25 amino acid sequence of the cancer antigen MUC1, in a liposomal formulation. Stimuvax is designed to induce an immune response to destroy cancer cells that express MUC1, a protein antigen widely expressed on many common cancers, such as lung cancer, breast cancer and colorectal cancer. Stimuvax is thought to work by stimulating the body's immune system to identify and destroy cancer cells expressing MUC1. Until a recent suspension of clinical trials in March 2010, Stimuvax was being evaluated in Phase 3 clinical trials for the treatment of NSCLC and breast cancer.

Lung Cancer. Lung cancer is the leading cause of cancer death for both men and women. More people die of lung cancer than of colon, breast, and prostate cancers combined. According to a report of the World Health Organization, lung cancer (both non-small cell and small cell type) affects more than 1.2 million patients a year, with around 1.1 million deaths annually and around 500,000 in the United States, Europe and Japan. About 85% of all lung cancers are of the non-small cell type. Further, only about 15% of people diagnosed with NSCLC survive this disease after five years. For most patients with NSCLC, current treatments provide limited success.

According to a May 2007 Espicom report, the NSCLC market was estimated to be worth $3.7 billion in 2006 with a growth rate of 14% year per year. There are currently no therapeutic vaccines approved for the treatment of NSCLC. We believe therapeutic vaccines have the potential to substantially enlarge the NSCLC market, both because of their novel mechanism of action and their expected safety profile. Stimuvax is currently being developed as maintenance therapy following treatment of inoperable locoregional Stage III NSCLC with induction chemotherapy; there are currently no approved therapies with this indication.

Stage I-IIIa NSCLC patients are generally treated with surgery and radiation, while Stage IIIb-IV patients are inoperable and generally treated with chemotherapy, radiation and palliative care. The market is currently driven by the use of several drug classes, namely chemotherapeutic agents (taxanes and cytotoxics) and targeted therapies (Iressa, Nexavar, Sutent, Tarceva and Avastin). However, there are currently no approved maintenance therapies for inoperable Stage III NSCLC following induction chemotherapy, the population for which Stimuvax is currently being tested, and no approved cancer vaccines for any indication.

Clinical Results and Status. In the fourth quarter of 2002, we completed the enrollment of 171 patients in a Phase 2b multi-center trial of Stimuvax in patients with advanced (Stages IIIB and IV) NSCLC at 13 sites in Canada and four sites in the United Kingdom. All patients had received first line standard chemotherapy and had responded to chemotherapy treatment with either a complete response or stable disease. Patients were randomly chosen to receive either Stimuvax along with best supportive care, or best supportive care alone. Second line chemotherapy and/or palliative radiotherapy were allowed where indicated for treatment of progressive disease. The objectives of the trial were to measure safety and the possible survival benefit of Stimuvax in these patients. Secondary endpoints of the trial were quality of life and immune response.

We reported the preliminary results from our Phase 2b trial of Stimuvax in December 2004. The median survival of those patients receiving Stimuvax was 4.4 months longer than those on the control arm who did not receive the vaccine. The overall median survival was 17.4 months for patients who received the vaccine versus 13 months for the patients on the control arm who did not receive the vaccine. The two-year survival rate was 43.2% for the vaccine arm versus 28.9% for the control arm. The two-year survival rate for patients who had locoregional Stage IIIB non-small cell lung cancer was 60% for the vaccine arm versus 36.7% for the control arm.

In mid-2005, we began scheduling for the manufacture of new vaccine supplies incorporating manufacturing changes intended to secure the future commercial supply of the vaccine. We began a small clinical safety study of the new formulation of Stimuvax in the second quarter of 2005. The results of this study indicated that the new formulation is equivalent to the formulation used in the Phase 2b trial. In mid-2008 Merck KGaA reported that the two-year survival rate for patients in this trial was 64%.

In April 2006, we announced that the final survival analysis of our Phase 2b trial of Stimuvax in patients with Stages IIIB and IV non-small cell lung cancer showed that the median survival in the pre-stratified subset of locoregional Stage IIIB patients on the vaccine arm was 30.6 months compared to 13.3 months observed for the same stage patients who did not receive the vaccine, a difference of 17.3 months. These data were obtained through ongoing, regular follow-up of patients enrolled in the trial.

In December 2006, we reached an agreement with the U.S. Food and Drug Administration, or FDA, on a Special Protocol Assessment, or SPA, for the Phase 3 trial of Stimuvax for the treatment of non-small cell lung cancer. The SPA relates to the design of the Phase 3 trial and outlines definitive clinical objectives and data analyses considered necessary to support regulatory approval of Stimuvax.

The FDA has granted Fast Track status to the investigation of Stimuvax for its proposed use in the treatment of NSCLC. The FDA's Fast Track programs are designed to facilitate the development and expedite review of drugs that are intended to treat serious or life-threatening conditions and that demonstrate the potential to address unmet medical needs. With Fast Track designation, there may be more frequent interactions with the FDA during the development of a product and eventually a company may be eligible to file a U.S. Biologics License Application on a rolling basis as data become available.

In January 2007, a global Phase 3 trial assessing the efficacy and safety of Stimuvax as a potential treatment for patients with unresectable, or inoperable, Stage III NSCLC was opened for enrollment. The trial, known as START, is being conducted by Merck KGaA and is expected to include more than 1,300 patients in approximately 30 countries.

In June 2009, Merck KGaA initiated a global Phase 3 trial called STRIDE to assess the efficacy and safety of Stimuvax as a potential therapy for patients with hormone receptor-positive, locally advanced, recurrent or metastatic breast cancer. The trial is anticipated to enroll more than 900 patients at approximately 180 sites in over 30 countries; the primary endpoint is progression-free survival.

In December 2009, Merck KGaA initiated a Phase 3 trial of Stimuvax in Asian patients with advanced NSCLC. The trial, named INSPIRE, is anticipated to enroll approximately 420 patients in China, Hong Kong, South Korea, Singapore and Taiwan.

On March 23, 2010, we announced that Merck suspended the clinical development program for Stimuvax as the result of a suspected unexpected serious adverse event reaction in a patient with multiple myeloma participating in an exploratory clinical trial. This action is a precautionary measure while investigation of the cause of this adverse event is conducted. The suspension affects the Phase 3 clinical program for Stimuvax, including the trials in NSCLC and in breast cancer. During the suspension, further recruitment of patients into the trials and ongoing treatment with Stimuvax will be on hold.

The exploratory trial in multiple myeloma is designed to investigate the mechanism of action of Stimuvax and the effect of cyclophosphamide on regulatory T cells which may affect the response to the therapeutic vaccine. The adverse event occurred in a patient receiving a more intensive cyclophosphamide regimen than is utilized in the Phase 3 program. The patient developed an encephalitis, or inflammation of the brain, of unknown cause, and subsequently died of such condition. For additional information regarding the risks associated with Merck's suspension of the clinical development program, see "Risk Factors — The suspension of Merck's clinical development program for Stimuvax could severely harm our business" included elsewhere in this Annual Report on Form 10-K.

ONT-10 Liposome Vaccine Product Candidate

We have developed a completely synthetic MUC1-based liposomal glycolipopeptide cancer vaccine, ONT-10, for potential use in several cancer indications, including breast, thyroid, colon, stomach, pancreas and prostate, as well as certain types of lung cancer. The ONT-10 glycolipopeptide combines carbohydrate and peptide determinates in a multi-epitopic vaccine that evokes both cellular and humoral immune responses against major cancer-associated epitopes expressed on adenocarcinomas. ONT-10 is expected to be our first completely synthetic vaccine. ONT-10 includes our proprietary liposomal delivery technology. This product candidate is currently in pre-clinical development, with the goal of completing the studies which will enable us to file an Investigational New Drug application in late 2011.

We currently own all rights to ONT-10. As discussed in the section captioned, "— Our Strategic Collaboration with Merck KGaA," if we intend to license the development or marketing rights to ONT-10, Merck KGaA will have a right of first negotiation with respect to such rights.

Small Molecule Drugs

General

On October 30, 2006, we acquired ProlX Pharmaceuticals Corporation, or ProlX, of Tucson, Arizona, a privately held biopharmaceutical company focused on the development of novel targeted small molecules for the treatment of cancer. We are currently developing PX-866 and PX-478, which we obtained as a part of the ProlX acquisition. We continue to evaluate new opportunities to acquire or in-license additional small molecule compounds designed to inhibit the activity of specific cancer-related proteins. We believe this approach gives us multiple opportunities for successful clinical development while diversifying risk.

PX-866

PX-866 is an inhibitor of the phosphatidylinositol-3-kinase (PI-3-kinase)/PTEN/Akt pathway, an important survival signaling pathway that is activated in many types of human cancer. PI-3-kinase is over expressed in a number of human cancers, especially ovarian, colon, head and neck, urinary tract, and cervical cancers, where it leads to increased proliferation and inhibition of apoptosis, or programmed cell death. The PI-3-kinase

inhibitor PX-866 induces prolonged inhibition of tumor PI-3-kinase signaling following both oral and intravenous administration and has been shown to have good in vivo anti-tumor activity in human ovarian and lung cancer, as well as intracranial glioblastoma, tumor models. PX-866 may potentiate the anti-tumor activity of other cancer therapeutics and radiation.

We are currently completing a Phase 1 trial of PX-866 in patients with advanced metastatic cancer. The trial is evaluating both an intermittent and a continuous dosing schedule of PX-866. Based on the results we have seen in this open label trial, we have announced our intention to move PX-866 into one or more Phase 2 trials by the end of 2010.

PX-478

PX-478 is a small molecule inhibitor of hypoxia inducible factor-1a (HIF-1a), a component of a transcription factor which is an important regulator of the tumor response to hypoxia. Normally, under conditions of hypoxia, levels of HIF-1a increase, leading to an increase in the activity of the transcription factor HIF-1. The transcription of a wide variety of genes is increased by HIF-1, including genes that promote angiogenesis, or new blood vessel growth; genes for glycolytic metabolism, which allow cells to use glucose for energy in conditions of low oxygen; and genes which protect against apoptosis, or programmed cell death. Thus, the increased HIF-1 levels permit cancer cells to survive and grow. PX-478 blocks the increase in HIF-1a levels, thus inhibiting the transcription of these genes. For example, treatment with PX-478 in animals has been shown to decrease levels of vascular endothelial growth factor, VEGF, and the glucose transporter Glut-1. PX-478 is effective when delivered orally in animal models, and has shown marked tumor regressions and growth inhibition in such model systems across a range of cancers, including lung, ovarian, renal, prostate, colon, pancreatic, and breast cancer. PX-478 may potentiate other current cancer treatments including radiation.

We have completed enrollment in a Phase 1 trial of PX-478 in patients with advanced metastatic cancer. We are currently evaluating the results of this trial, and have not yet determined the next steps for this product candidate.

Market Opportunity for Targeted Small Molecules

The market for targeted cancer drugs, both small molecules and biologic agents, is expanding rapidly, with the approval of such agents as Gleevec, Herceptin, Tarceva, Nexavar, Sutent and Avastin. For example, Roche Group reported aggregate world-wide sales for Herceptin, Tarceva and Avastin of $11.8 billion in 2009. Our small molecule compounds are highly targeted agents directed at proteins found in many types of cancer cells. Therefore, we believe that these product candidates could potentially be useful for many different oncology indications that address large markets.

Research Programs/Vaccine Technology

In addition to our pipeline of product candidates, we have developed a proprietary synthetic lipid A analog, PET lipid-A, a toll like receptor 4 (TLR4) agonist. Pet lipid-A has been produced under current Good Manufacturing Practices, or cGMP, conditions as an adjuvant for vaccine formulations for clinical trials and is a component of our preclinical vaccine candidate, ONT-10. We also have a wide range of other effective lipid-A analogs available for our own use and for evaluation by our licensing partners. Our synthetic lipid analogs provide strong innate immune stimulation. These synthetic structures are easy to formulate and manufacture. We are also open to new collaborations to discover novel applications of these molecules as stand-alone therapeutics and as synergistic adjuvants for antibiotic and antiviral drugs.

Our Strategic Collaboration with Merck KGaA

In May 2001, we and Merck KGaA entered into a collaborative arrangement to pursue joint global product research, clinical development and commercialization for our then two most advanced product candidates, Stimuvax vaccine and Theratope vaccine. The collaboration covered the entire field of oncology for these two product candidates and was documented in collaboration and supply agreements, which we refer to as the 2001 agreements. In addition to granting the license with respect to certain rights to develop and commercialize the product candidates, the parties agreed to collaborate in substantially all aspects of clinical development and commercialization and we agreed to manufacture the clinical and commercial supply of the product candidates. In 2004, following the failure of Theratope in a Phase 3 clinical trial, Merck KGaA returned all rights to Theratope to us. Development of Theratope was subsequently discontinued and we do not currently plan further clinical development. Following the discontinuation of Theratope development efforts, we continued to collaborate with Merck KGaA with respect to the development of Stimuvax, pursuant to the terms of the 2001 agreements.

In January 2006, we and Merck KGaA entered into a binding letter of intent, pursuant to which the 2001 agreements were amended and we and Merck KGaA agreed to negotiate in good faith to amend and restate the 2001 agreements. Pursuant to the letter of intent, in addition to the rights granted to Merck KGaA under the 2001 agreements, we granted to Merck KGaA additional rights with respect to the clinical development and commercialization of Stimuvax in the United States and, subject to certain conditions, the right to act as a secondary manufacturer of Stimuvax.

In August 2007, we amended and restated the collaboration and supply agreements with Merck KGaA, which restructured the 2001 agreements and formalized the terms of the 2006 letter of intent. Pursuant to the 2007 agreements, Merck KGaA assumed world-wide responsibility for the clinical development and commercialization of Stimuvax, while we retained responsibility for manufacturing process development and manufacturing the clinical and commercial supply of Stimuvax.

In December 2008, we entered into a license agreement which replaced the 2007 agreements. Under the 2008 license agreement, (1) we licensed to Merck KGaA the exclusive right to manufacture Stimuvax (in addition to the previously licensed rights) and the right to sublicense to other persons all rights licensed to Merck KGaA by us, (2) we transferred certain manufacturing know-how, (3) we agreed not to develop any product, other than ONT-10, that is competitive with Stimuvax and (4) if we intend to license the development or commercialization rights to ONT-10, Merck KGaA will have a right of first negotiation with respect to such rights.

Upon the execution of the 2008 license agreement and asset purchase agreement described below, all of our future performance obligations related to the collaboration for the clinical development and development of the manufacturing process for Stimuvax were removed and continuing involvement by us in the development and manufacturing of Stimuvax ceased (although we continue to be entitled to certain information rights with respect to clinical testing, development and manufacture of Stimuvax).

In return for the license of manufacturing rights and transfer of manufacturing know-how under the 2008 license agreement, we received an up-front cash payment of approximately $10.5 million. In addition, under the 2008 license agreement we may receive additional future cash payments of up to $90 million (which figure excludes the final $2.0 million manufacturing process transfer payment received on December 31, 2009, pursuant to the terms of the 2008 license agreement and $19.8 million received prior to the execution of the 2008 license agreement pursuant to the terms of the predecessor agreements), for biologics license application, or BLA, submission for first and second cancer indications, for regulatory approval for first and second cancer indications, and for

sales milestones. We understand Merck KGaA plans to investigate the use of Stimuvax in multiple types of cancer. We will receive a royalty based on certain net sales thresholds, ranging from a percentage in the mid-teens to the high single digits, depending on the territory in which the net sales occur. The royalty rate is higher in North America than in the rest of the world in return for our relinquishing our prior co-promotion interest in U.S. and Canadian sales.

In connection with the entry into the 2008 license agreement, we also entered into an asset purchase agreement, pursuant to which we sold to Merck KGaA certain assets related to the manufacture of, and inventory of, Stimuvax, placebo and raw materials, and Merck KGaA agreed to assume certain liabilities related to the manufacture of Stimuvax and our obligations related to the lease of our Edmonton, Alberta, Canada facility. The aggregate purchase price paid by Merck KGaA pursuant to the terms of the asset purchase agreement consisted of approximately $2.5 million, for aggregate consideration payable to us in connection with the 2008 license agreement and the asset purchase agreement of approximately $13.0 million.

License Agreements

We have in-licensed targets and intellectual property from academic institutions for use in our pipeline programs, including the following:

Cancer Research Technology Limited. In 1991, we acquired from Cancer Research Technology Limited, or CRTL, of London, England an exclusive world-wide license of CRTL's rights to the Mucin 1 peptide antigen, or MUC1, found on human breast, ovarian, colon and pancreatic cancer and other types of solid tumor cells for uses in the treatment and diagnosis of cancer. MUC1 is incorporated in our Stimuvax vaccine. This license agreement was amended and restated in November 2000. Under the terms of the amended and restated agreement, we are required to pay royalties on net sales of products covered by issued patents licensed from CRTL. Based on these issued patents, we would be required to pay a royalty on U.S. sales of Stimuvax in the mid single digits until expiry of these patents in the United States, which is currently anticipated to be 2018. We are also required to pay certain royalties on sublicense revenue received by us ranging from a percentage in the mid to high single digits. These sublicense royalties will be credited against minimum sublicense royalty payments of $0.75 million made by us in 2001. To date, we have utilized approximately $0.3 million of these credits.

University of Alberta. In 2001, we entered into an exclusive license with the University of Alberta for certain patents relating to natural lipid-A, an adjuvant for vaccine formulations which we use in Stimuvax. Under the terms of this agreement, we have made payments of CDN $0.2 million, and are required to make progress-dependent milestone payments of up to CDN $0.3 million and to pay royalties at a fraction of a percent on net sales of products covered by issued patents licensed from the University of Alberta. Based on these issued patents, this royalty would be due on sales of Stimuvax in the U.S. until expiry of the patents in the United States, which is currently anticipated to be 2018.

University of Arizona. In connection with our acquisition of ProlX, we assumed ProlX's existing license agreements with the University of Arizona and Georgetown University. Pursuant to these agreements, certain intellectual property related to PX-478, PX-866 and certain other product candidates no longer under development by us were exclusively licensed to ProlX. We will owe certain progress-dependent milestone payments of up to $1.2 million if all products reach commercialization and royalties on net sales of products covered by the patents licensed from the universities in the low single digits. In addition, we will owe a percentage of certain sublicense payments received, if any, under the PX-478, PX-866 and PX-316 agreements ranging from a maximum of sub-teen double digits until research costs have been recouped to a maximum of twenty percent in the case of PX-478 and PX-316 and forty percent in the case of PX-866.

Patents and Proprietary Information

We seek appropriate patent protection for our proprietary technologies by filing patent applications in the United States and other countries. As of December 31, 2009, we owned approximately 9 U.S. and corresponding foreign patents and patent applications and held exclusive or partially exclusive licenses to over 15 U.S. and corresponding foreign patents and patent applications.

Our patents and patent applications are directed to our product candidates as well as to our liposomal formulation technology. Although we believe our patents and patent applications provide us with a competitive advantage, the patent positions of biotechnology and pharmaceutical companies can be uncertain and involve complex legal and factual questions. We and our corporate collaborators may not be able to develop patentable products or processes or obtain patents from pending patent applications. Even if patent claims are allowed, the claims may not issue, or in the event of issuance, may not be sufficient to protect the technology owned by or licensed to us or our corporate collaborators. For example, claims covering the composition of PX-478 were only filed in the United States and Canada, which will prevent us from being able to obtain claims covering the composition of PX-478 in other foreign jurisdictions, including Europe.

Our clinical product candidates are protected by composition and use patents and patent applications. Patent protection afforded by the patents and patent applications covering our product candidates will expire over the following time frames:

Product Candidate	Expiration of Patent Protection
Stimuvax	2018 (patent) – 2028 (patent application)
PX – 478	2014 (patent) – 2025 (patent)
PX – 866	2022 (patent) – 2030 (patent application)
ONT – 10	2022 (patent applications) – 2028 (patent applications)

We also rely on trade secrets and proprietary know-how, especially when we do not believe that patent protection is appropriate or can be obtained. Our policy is to require each of our employees, consultants and advisors to execute a confidentiality and inventions assignment agreement before beginning their employment, consulting or advisory relationship with us. These agreements provide that the individual must keep confidential and not disclose to other parties any confidential information developed or learned by the individual during the course of their relationship with us except in limited circumstances. These agreements also provide that we shall own all inventions conceived by the individual in the course of rendering services to us.

Manufacturing

We currently outsource the manufacturing of drug substances and drug products for all of our products in clinical development. This arrangement allows us to use contract manufacturers that already have extensive GMP manufacturing experience. We have a staff with experience in the management of contract manufacturing and the development of efficient commercial manufacturing processes for our products. We currently intend to outsource the supply of all our commercial products.

As discussed above under the caption, "— Our Strategic Relationship with Merck KGaA," in December 2008 we entered into a license agreement with Merck KGaA pursuant to which we licensed to Merck KGaA the exclusive right to manufacture Stimuvax. Prior to the entry into the 2008 license agreement, we were responsible for the manufacture of Stimuvax and Merck KGaA purchased Stimuvax and placebo from us for use in clinical trials in accordance with our arrangement with them. Concurrently with the entry into the 2008 license agreement, we also entered into an asset purchase agreement pursuant to which we sold to Merck KGaA our remaining inventory of both Stimuvax and placebo. The manufacture of

Stimuvax is outsourced pursuant to agreements with Baxter (for the manufacture of Stimuvax) and Corixa, a subsidiary of GlaxoSmithKline (for the manufacture of the adjuvant used in Stimuvax). These agreements were assigned to Merck KGaA in accordance with the terms of the asset purchase agreement. The Corixa agreement includes royalty payments payable to Corixa which Merck KGaA is responsible for paying. If Stimuvax is not approved by 2015, Corixa may terminate its obligation to supply the adjuvant. Although in such a case we would retain the necessary licenses from Corixa required to have the adjuvant manufactured, the transfer of the process to a third party would delay the development and commercialization of Stimuvax. In addition, prior to the entry into the 2008 license agreement and asset purchase agreement, we performed process development, assay development, quality control and scale-up activities for Stimuvax at our Edmonton facility; this facility and those activities were also transferred to Merck KGaA.

For our small molecule programs, we rely on third parties to manufacture both the active pharmaceutical ingredients, or API, and drug product. We believe there are several contract manufacturers capable of manufacturing both the API and drug product for these compounds; however, establishing a relationship with an alternative supplier would likely delay our ability to produce material.

We believe that our existing supplies of drug product and our contract manufacturing relationships with our existing and other potential contract manufacturers with whom we are in discussions, will be sufficient to accommodate our planned clinical trials. However, we may need to obtain additional manufacturing arrangements, if available on commercially reasonable terms, or increase our own manufacturing capability to meet our future needs, both of which would require significant capital investment. We may also enter into collaborations with pharmaceutical or larger biotechnology companies to enhance the manufacturing capabilities for our product candidates.

Competition

The pharmaceutical and biotechnology industries are intensely competitive, and any product candidate developed by us would compete with existing drugs and therapies. There are many pharmaceutical companies, biotechnology companies, public and private universities, government agencies and research organizations that compete with us in developing various approaches to cancer therapy. Many of these organizations have substantially greater financial, technical, manufacturing and marketing resources than we have. Several of them have developed or are developing therapies that could be used for treatment of the same diseases that we are targeting. In addition, many of these competitors have significantly greater commercial infrastructures than we have. Our ability to compete successfully will depend largely on our ability to:

- design and develop products that are superior to other products in the market and under development;
- attract and retain qualified scientific, product development and commercial personnel;
- obtain patent and/or other proprietary protection for our product candidates and technologies;
- obtain required regulatory approvals;
- successfully collaborate with pharmaceutical companies in the design, development and commercialization of new products;
- compete on, among other things, product efficacy and safety, time to market, price, extent of adverse side effects and the basis of and convenience of treatment procedures; and
- identify, secure the rights to and develop products and exploit these products commercially before others are able to develop competitive products.

In addition, our ability to compete may be affected if insurers and other third party payors seek to encourage the use of generic products, making branded products less attractive to buyers from a cost perspective.

Stimuvax. Currently, no product has been approved for maintenance therapy following induction chemotherapy for Stage III NSCLC. However, it is possible that existing or new agents will be approved for this indication. In addition, there are three vaccines in development for the treatment of NSCLC, including GSK's MAGE A3 vaccine in Phase 3, NovaRx Corporation's Lucanix in Phase 3 and Transgene's TG-4010 in Phase 2. TG-4010 also targets MUC1, although using technology different from Stimuvax. To our knowledge, these vaccines are not currently being developed in the same indications as Stimuvax. However, subsequent development of these vaccines, including Stimuvax, may result in direct competition.

Small Molecule Products. PX-478 is a HIF-1 alpha inhibitor and we believe that at least one other company, Enzon, has a HIF-1 alpha anti-sense compound that is currently in Phase 1. PX-866 is an inhibitor of PI-3-kinase and several other companies have product candidates directed at this target in clinical trials, including Novartis (Phase 1/2), Roche/Genentech (Phase 1), Semafore (Phase 1), Sanofi-Aventis (Phase 2), Pfizer and Calistoga (Phase 1). There are also several approved targeted therapies for cancer and in development against which our small molecule products might compete. For example, Avastin is a direct inhibitor of VEGF, while PX-478 is expected to lower levels of VEGF.

Government Regulation

Government authorities in the United States, at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, promotion, advertising, distribution, marketing and export and import of biopharmaceutical products such as those we are developing.

U.S. Government Regulation

In the United States, the information that must be submitted to the FDA in order to obtain approval to market a new drug varies depending on whether the drug is a new product whose safety and effectiveness has not previously been demonstrated in humans or a drug whose active ingredient(s) and certain other properties are the same as those of a previously approved drug. A new drug will follow the New Drug Application, or NDA, route for approval, a new biologic will follow the Biologics License Application, or BLA, route for approval, and a drug that claims to be the same as an already approved drug may be able to follow the Abbreviated New Drug application, or ANDA, route for approval.

NDA and BLA Approval Process

In the United States, the FDA regulates drugs and biologics under the Federal Food, Drug and Cosmetic Act, and, in the case of biologics, also under the Public Health Service Act, and implementing regulations. If we fail to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, we may become subject to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, license suspension or revocation, withdrawal of an approval, a clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties or criminal prosecution. Any agency or judicial enforcement action could have a material adverse effect on us.

The steps required before a drug or biologic may be marketed in the United States include:

- completion of pre-clinical laboratory tests, animal studies and formulation studies under the FDA's good laboratory practices regulations;

- submission to the FDA of an IND for human clinical testing, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled clinical trials to establish the safety and efficacy of the product for each indication;
- submission to the FDA of an NDA or BLA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP; and
- FDA review and approval of the NDA or BLA.

Preclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies. An IND sponsor must submit the results of the pre-clinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. The IND must become effective before human clinical trials may begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about issues such as the conduct of the trials as outlined in the IND. In that case, the IND sponsor and the FDA must resolve any outstanding FDA concerns or questions before clinical trials can proceed. Submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each clinical protocol must be submitted to the FDA as part of the IND.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap or be combined. Each trial must be reviewed and approved by an independent institutional review board at each site where the trial will be conducted before it can begin at that site. Phase 1 clinical trials usually involve the initial introduction of the investigational drug into humans to evaluate the product's safety, dosage tolerance, pharmacokinetics and pharmacodynamics and, if possible, to gain an early indication of its effectiveness. Phase 2 clinical trials usually involve controlled trials in a limited patient population to evaluate dosage tolerance and appropriate dosage, identify possible adverse effects and safety risks, and evaluate preliminarily the efficacy of the drug for specific indications. Phase 3 clinical trials usually further evaluate clinical efficacy and further test for safety in an expanded patient population. Phase 1, Phase 2 and Phase 3 testing may not be completed successfully within any specified period, if at all. The FDA or we may suspend or terminate clinical trials at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk.

Assuming successful completion of the required clinical testing, the results of the pre-clinical studies and of the clinical studies, together with other detailed information, including information on the chemistry, manufacture and control criteria of the product, are submitted to the FDA in the form of an NDA or BLA requesting approval to market the product for one or more indications. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use. The FDA reviews a BLA to determine, among other things, whether the product is safe, pure and potent and whether the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency. In connection with the submission of an NDA or BLA, an applicant may seek a special protocol assessment, or SPA, which is an agreement between an applicant and the FDA on the design and size of clinical trials that is intended to form the basis of an NDA or BLA. In December 2006, we entered into an SPA agreement with the FDA for the Phase 3 trial of Stimuvax for the treatment of NSCLC. The SPA agreement relates to the design of the

Phase 3 trial and outlines definitive clinical objectives and data analyses considered necessary to support regulatory approval of Stimuvax.

Before approving an application, the FDA will inspect the facility or the facilities at which the product is manufactured. The FDA will not approve the product unless cGMP compliance is satisfactory. If the FDA determines the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

The testing and approval process requires substantial time, effort and financial resources, and each may take several years to complete. The FDA may not grant approval on a timely basis, or at all. We may encounter difficulties or unanticipated costs in our efforts to secure necessary governmental approvals, which could delay or preclude us from marketing our product candidates. The FDA may limit the indications for use or place other conditions on any approvals that could restrict the commercial application of our product candidates. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval.

Fast Track Designation / Priority Review

We received Fast Track designation from the FDA for Stimuvax for the treatment of NSCLC. A Fast Track product is defined as a new drug or biologic intended for the treatment of a serious or life-threatening condition that demonstrates the potential to address unmet medical needs for this condition. Under the Fast Track program, the sponsor of a new drug or biologic may request that the FDA designate the drug or biologic as a Fast Track product at any time during the development of the product, prior to marketing.

The FDA can base approval of a marketing application for a Fast Track product on an effect on a surrogate endpoint, or on another endpoint that is reasonably likely to predict clinical benefit. The FDA may condition approval of an application for a Fast Track product on a commitment to do post-approval studies to validate the surrogate endpoint or confirm the effect on the clinical endpoint and require prior review of all promotional materials. In addition, the FDA may withdraw approval of a Fast Track product in an expedited manner on a number of grounds, including the sponsor's failure to conduct any required post-approval study in a timely manner.

The FDA also has established priority and standard review classifications for original NDAs and efficacy supplements. Priority review applies to the time frame for FDA review of completed marketing applications and is separate from and independent of the Fast Track and accelerated approval mechanisms. The classification system, which does not preclude the FDA from doing work on other projects, provides a way of prioritizing NDAs upon receipt and throughout the application review process.

Priority designation applies to new drugs that have the potential for providing significant improvement compared to marketed products in the treatment or prevention of a disease. Hence, even if an NDA is initially classified as a priority application, this status can change during the FDA review process, such as in the situation where another product is approved for the same disease for which previously there was no available therapy. In addition, priority review does not guarantee that a product candidate will receive regulatory approval. To date, none of our product candidates have obtained priority designation from the FDA.

Post-Approval Requirements

After regulatory approval of a product is obtained, we are required to comply with a number of post-approval requirements. Holders of an approved NDA or BLA are required to report certain adverse reactions and production problems to the FDA, to provide updated safety and efficacy information and to comply with requirements concerning advertising and promotional labeling for their products. Also, quality control and manufacturing procedures must continue to conform to cGMP after approval. The FDA periodically inspects manufacturing facilities to assess compliance with cGMP, which imposes certain procedural, substantive and recordkeeping requirements. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

We use, and in at least the near-term will continue to use, third party manufacturers to produce our product candidates in clinical and commercial quantities. Future FDA inspections may identify compliance issues at our facilities or at the facilities of our contract manufacturers that may disrupt production or distribution, or require substantial resources to correct. In addition, discovery of problems with a product or the failure to comply with applicable requirements may result in restrictions on a product, manufacturer or holder of an approved NDA or BLA, including withdrawal or recall of the product from the market or other voluntary, FDA-initiated or judicial action that could delay or prohibit further marketing. Also, new government requirements may be established that could delay or prevent regulatory approval of our product candidates under development.

In addition, as a condition of approval of an NDA or BLA, the FDA may require post-marketing testing and surveillance to monitor the product's safety or efficacy.

Canadian and Foreign Regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our product candidates. Whether or not we obtain FDA approval for a product candidate, we must obtain approval of a product candidate by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product candidate in those countries. The approval process varies from country to country, and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Under the Canadian regulatory system, Health Canada is the regulatory body that governs the sale of drugs for the purposes of use in clinical trials. Accordingly, any company that wishes to conduct a clinical trial in Canada must submit a clinical trial application to Health Canada. Health Canada reviews the application and notifies the company within 30 days if the application is found to be deficient. If the application is deemed acceptable, Health Canada will issue a letter to the company within the 30-day review period which means the company may proceed with its clinical trial(s).

Under European Union regulatory systems, we may submit marketing authorizations either under a centralized or decentralized procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union member states. The decentralized procedure provides for mutual recognition of national approval decisions. Under this procedure, the holder of a national marketing authorization from one member state may submit an application to the remaining member states. Within 90 days of receiving the application and assessment report, each member state must decide whether to recognize approval.

Reimbursement

Sales of biopharmaceutical products depend in significant part on the availability of third party reimbursement, including Medicare. Each third party payor may have its own policy regarding what products it will cover, the conditions under which it will cover such products, and how much it will pay for such products. It is time consuming and expensive for us to seek reimbursement from third party payors. Reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market.

We expect that there will continue to be a number of federal and state proposals to implement governmental pricing controls. It is difficult to determine whether such legislative or regulatory proposals will be adopted, and whether the adoption of such proposals, such as the recent adoption of health care reform in the United States, would have a material adverse effect on our business, financial condition and profitability.

Research and Development

We devote a substantial portion of our resources to developing new product candidates. During the years ended December 31, 2009, 2008 and 2007, we expended approximately $6.1 million, $8.8 million and $9.6 million, respectively, on research and development activities.

Employees

As of December 31, 2009, we (including our consolidated subsidiaries) had 16 employees, 10 of whom are engaged in development activities, six in finance and administration, and four of whom hold Ph.D. and/or M.D. degrees. A number of our management and professional employees have had prior experience with other pharmaceutical or medical products companies.

Our ability to develop marketable products and to establish and maintain our competitive position in light of technological developments will depend, in part, on our ability to attract and retain qualified personnel. Competition for such personnel is intense. We have also chosen to outsource activities where skills are in short supply or where it is economically prudent to do so.

None of our employees are covered by collective bargaining agreements and we believe that our relations with our employees are good.

ITEM 1A. *Risk Factors*

Factors That Could Affect Future Results

Set forth below and elsewhere in this report, and in other documents we file with the SEC are descriptions of risks and uncertainties that could cause actual results to differ materially from the results contemplated by the forward-looking statements contained in this report. Because of the following factors, as well as other variables affecting our operating results, past financial performance should not be considered a reliable indicator of future performance and investors should not use historical trends to anticipate results or trends in future periods. The risks and uncertainties described below are not the only ones facing us. Other events that we do not currently anticipate or that we currently deem immaterial also affect our results of operations and financial condition.

Risks Relating to our Business

The suspension of Merck's clinical development program for Stimuvax could severely harm our business.

In March 2010, we announced that Merck KGaA suspended the clinical development program for Stimuvax as the result of a suspected unexpected serious adverse event reaction in a patient with multiple myeloma participating in an exploratory clinical trial. The suspension is a precautionary measure while an investigation of the cause of the adverse event is conducted, but it affects the Phase 3 clinical trials in NSCLC and in breast cancer. During the suspension, further recruitment of patients into the trials and ongoing treatment with Stimuvax will be on hold. As of the date of this Annual Report on Form 10-K, we can offer no assurances that this serious adverse event was not caused by Stimuvax or that there are not or will not be more such serious adverse events in the future. The occurrence of this serious adverse event, or other such serious adverse events, could result in a prolonged delay, including the need to enroll more patients or collect more data, or the termination of the clinical development program for Stimuvax. Further, the FDA or other regulatory agencies may not allow the resumption of one or more of the clinical trials for Stimuvax in a timely fashion, if at all. Even if regulatory agencies permit resumption of the clinical trials, Merck KGaA may decide not to perform any further studies. For example, the Phase 3 trial of Stimuvax in breast cancer was not preceded by earlier stage trials in this indication. The regulatory authorities may require, or Merck KGaA may decide, that such earlier stage trials are now required before any Phase 3 trial may continue. Any of these foregoing risks could materially and adversely affect our business, results of operations and the trading price of our common stock.

Our ability to continue with our planned operations is dependent on our success at raising additional capital sufficient to meet our obligations on a timely basis. If we fail to obtain additional financing when needed, we may be unable to complete the development, regulatory approval and commercialization of our product candidates.

We have expended and continue to expend substantial funds in connection with our product development activities and clinical trials and regulatory approvals. Funds generated from our operations will be insufficient to enable us to bring all of our products currently under development to commercialization. Accordingly, we need to raise additional funds from the sale of our securities, partnering arrangements or other financing transactions in order to finance the commercialization of our product candidates. The current financing environment in the United States, particularly for biotechnology companies like us, remains challenging and we can provide no assurances as to when such environment will improve. For these reasons, among others, we cannot be certain that additional financing will be available when and as needed or, if available, that it will be available on acceptable terms. If financing is available, it may be on terms that adversely affect the interests of our existing stockholders. If adequate financing is not available, we may need to continue to reduce or eliminate our expenditures for research and

development, testing, production and marketing for some of our product candidates. Our actual capital requirements will depend on numerous factors, including:

- activities and arrangements related to the commercialization of our product candidates;
- the progress of our research and development programs;
- the progress of pre-clinical and clinical testing of our product candidates;
- the time and cost involved in obtaining regulatory approvals for our product candidates;
- the cost of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights with respect to our intellectual property;
- the effect of competing technological and market developments;
- the effect of changes and developments in our existing licensing and other relationships; and
- the terms of any new collaborative, licensing and other arrangements that we may establish.

We may not be able to secure sufficient financing on acceptable terms. If we cannot, we may need to delay, reduce or eliminate some or all of our research and development programs, any of which would be expected to have a material adverse effect on our business, operating results, and financial condition.

Further, since we failed to timely file this Annual Report on Form 10-K, we are ineligible to utilize a registration statement on Form S-3 to raise capital and will continue to be ineligible to use such registration statement for at least the next 12 months. Our inability to take advantage of the benefits afforded by Form S-3 will limit our financing alternatives and may significantly increase our cost of capital or the dilutive impact on the voting and economic interests of our existing stockholders. If financing is available, the terms of such financing may place restrictions on us and adversely affect the trading price of our common stock and the interests of our existing stockholders.

Our near-term success is highly dependent on the success of our lead product candidate, Stimuvax, and we cannot be certain that it will be successfully developed or receive regulatory approval or be successfully commercialized.

Until a recent suspension of clinical trials in March 2010, our lead product candidate, Stimuvax, was being evaluated in Phase 3 clinical trials for the treatment of non-small cell lung cancer, or NSCLC, and breast cancer. In March 2010, we announced that Merck KGaA had suspended the clinical development program for Stimuvax as the result of a suspected unexpected serious adverse event reaction in a patient with multiple myeloma participating in an exploratory clinical trial. The action is a precautionary measure while Merck KGaA investigates the cause of this adverse event; however, we cannot assure you when or whether such trials will be resumed. Even if, after investigation, it is determined that the adverse event is unrelated to Stimuvax and clinical trials resume, Stimuvax will require the successful completion of these trials and possibly other clinical trials before submission of a biologic license application, or BLA, or its foreign equivalent for approval. This process can take many years and require the expenditure of substantial resources. Pursuant to our agreement with Merck KGaA, Merck KGaA is responsible for the development and the regulatory approval process and any subsequent commercialization of Stimuvax. We cannot assure you that Merck KGaA will continue to advance the development and commercialization of Stimuvax as quickly as would be optimal for our stockholders. In addition, Merck KGaA has the right to terminate the 2008 license agreement upon 30 days' prior written notice if, in its reasonable judgment, it determines there are issues concerning the safety or efficacy of Stimuvax that would materially and adversely affect Stimuvax's medical, economic or competitive viability. Clinical trials involving the number of sites and patients required for Food and Drug Administration, or

FDA, approval of Stimuvax may not be successfully completed. If these clinical trials fail to demonstrate that Stimuvax is safe and effective, it will not receive regulatory approval. Even if Stimuvax receives regulatory approval, it may never be successfully commercialized. If Stimuvax does not receive regulatory approval or is not successfully commercialized, we may not be able to generate revenue, become profitable or continue our operations. Any failure of Stimuvax to receive regulatory approval or be successfully commercialized would have a material adverse effect on our business, operating results, and financial condition and could result in a substantial decline in the price of our common stock.

Stimuvax and our other vaccine product candidates are based on novel technologies, which may raise new regulatory issues that could delay or make FDA approval more difficult.

The process of obtaining required FDA and other regulatory approvals, including foreign approvals, is expensive, often takes many years and can vary substantially based upon the type, complexity and novelty of the products involved. Stimuvax and our other vaccine therapies are novel; therefore, regulatory agencies may lack experience with them, which may lengthen the regulatory review process, increase our development costs and delay or prevent commercialization of Stimuvax and our other active vaccine products under development.

To date, the FDA has not approved for commercial sale in the United States any active vaccine designed to stimulate an immune response against cancer. Consequently, there is no precedent for the successful development or commercialization of products based on our technologies in this area.

We have a history of net losses, we anticipate additional losses and we may never become profitable.

Other than the year ended December 31, 2008, we have incurred net losses in each fiscal year since we commenced our research activities in 1985. The net income we realized in 2008 was due entirely to our December 2008 transactions with Merck KGaA and we do not anticipate realizing net income again for the foreseeable future. In addition, as of December 31, 2009, our accumulated deficit was approximately $331.6 million. Our losses have resulted primarily from expenses incurred in research and development of our product candidates. We do not know when or if we will complete our product development efforts, receive regulatory approval for any of our product candidates, or successfully commercialize any approved products. As a result, it is difficult to predict the extent of any future losses or the time required to achieve profitability, if at all. Any failure of our products to complete successful clinical trials and obtain regulatory approval and any failure to become and remain profitable would adversely affect the price of our common stock and our ability to raise capital and continue operations.

There is no assurance that we will be granted regulatory approval for any of our product candidates.

Until a recent suspension of clinical trials in March 2010, Merck KGaA has been testing our lead product candidate, Stimuvax, in Phase 3 clinical trials for the treatment of NSCLC and breast cancer. In addition, we expect to complete Phase 1 clinical trial for PX-478 in the first half of 2010 and are also currently planning to initiate one or more Phase 2 trials in 2010 for PX-866. Our other product candidates remain in the pre-clinical testing stages. The results from pre-clinical testing and clinical trials that we have completed may not be predictive of results in future pre-clinical tests and clinical trials, and there can be no assurance that we will demonstrate sufficient safety and efficacy to obtain the requisite regulatory approvals. A number of companies in the biotechnology and pharmaceutical industries, including our company, have suffered significant setbacks in advanced clinical

trials, even after promising results in earlier trials. For example, the clinical trials for Stimuvax were suspended as a result of a suspected unexpected serious adverse event reaction in a patient. Further, Stimuvax has not previously been tested in any trial for the treatment of breast cancer. Regulatory approval may not be obtained for any of our product candidates. If our product candidates are not shown to be safe and effective in clinical trials, the resulting delays in developing other product candidates and conducting related pre-clinical testing and clinical trials, as well as the potential need for additional financing, would have a material adverse effect on our business, financial condition and results of operations.

We are dependent upon Merck KGaA to develop and commercialize our lead product candidate, Stimuvax.

Under our license agreement with Merck KGaA for our lead product candidate, Stimuvax, Merck KGaA is entirely responsible for the development, manufacture and worldwide commercialization of Stimuvax and the costs associated with such development, manufacture and commercialization. Any future payments, including royalties to us, will depend on the extent to which Merck KGaA advances Stimuvax through development and commercialization. Merck KGaA has the right to terminate the 2008 license agreement, upon 30 days' written notice, if, in Merck KGaA's reasonable judgment, Merck KGaA determines that there are issues concerning the safety or efficacy of Stimuvax which materially adversely affect Stimuvax's medical, economic or competitive viability; provided that if we do not agree with such determination we have the right to cause the matter to be submitted to binding arbitration. Our ability to receive any significant revenue from Stimuvax is dependent on the efforts of Merck KGaA. If Merck KGaA fails to fulfill its obligations under the 2008 license agreement, we would need to obtain the capital necessary to fund the development and commercialization of Stimuvax or enter into alternative arrangements with a third party. We could also become involved in disputes with Merck KGaA, which could lead to delays in or termination of our development and commercialization of Stimuvax and time-consuming and expensive litigation or arbitration. If Merck KGaA terminates or breaches its agreement with us, or otherwise fails to complete its obligations in a timely manner, the chances of successfully developing or commercializing Stimuvax would be materially and adversely affected.

We and Merck KGaA currently rely on third party manufacturers to supply our product candidates, which could delay or prevent the clinical development and commercialization of our product candidates.

We currently depend on third party manufacturers for the manufacture of our small molecule product candidates. Any disruption in production, inability of these third party manufacturers to produce adequate quantities to meet our needs or other impediments with respect to development or manufacturing could adversely affect our ability to continue our research and development activities or successfully complete pre-clinical studies and clinical trials, delay submissions of our regulatory applications or adversely affect our ability to commercialize our product candidates in a timely manner, or at all.

Merck KGaA currently depends on a single manufacturer, Baxter International Inc., or Baxter, for the supply of our lead product candidate, Stimuvax, and on Corixa Corp. (now a part of GlaxoSmithKline plc, or GSK) for the manufacture of the adjuvant in Stimuvax. If Stimuvax is not approved by 2015, Corixa/GSK may terminate its obligation to supply the adjuvant. In this case, we would retain the necessary licenses from Corixa/GSK required to have the adjuvant manufactured, but the transfer of the process to a third party would delay the development and commercialization of Stimuvax, which would materially harm our business.

Our product candidates have not yet been manufactured on a commercial scale. In order to commercialize a product candidate, the third party manufacturer may need to increase

its manufacturing capacity, which may require the manufacturer to fund capital improvements to support the scale up of manufacturing and related activities. With respect to our small molecule product candidates, we may be required to provide all or a portion of these funds. The third party manufacturer may not be able to successfully increase its manufacturing capacity for our product candidate for which we obtain marketing approval in a timely or economic manner, or at all. If any manufacturer is unable to provide commercial quantities of a product candidate, we (or Merck KGaA, in the case of Stimuvax) will need to successfully transfer manufacturing technology to a new manufacturer. Engaging a new manufacturer for a particular product candidate could require us (or Merck KGaA, in the case of Stimuvax) to conduct comparative studies or utilize other means to determine equivalence between product candidates manufactured by a new manufacturer and those previously manufactured by the existing manufacturer, which could delay or prevent commercialization of our product candidates. If any of these manufacturers is unable or unwilling to increase its manufacturing capacity or if alternative arrangements are not established on a timely basis or on acceptable terms, the development and commercialization of our product candidates may be delayed or there may be a shortage in supply.

Any manufacturer of our products must comply with current Good Manufacturing Practices, or cGMP, requirements enforced by the FDA through its facilities inspection program or by foreign regulatory agencies. These requirements include quality control, quality assurance and the maintenance of records and documentation. Manufacturers of our products may be unable to comply with these cGMP requirements and with other FDA, state and foreign regulatory requirements. We have little control over our manufacturers' compliance with these regulations and standards. A failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall, or withdrawal of product approval. If the safety of any quantities supplied is compromised due to our manufacturers' failure to adhere to applicable laws or for other reasons, we may not be able to obtain regulatory approval for or successfully commercialize our products.

Any failure or delay in commencing or completing clinical trials for our product candidates could severely harm our business.

Each of our product candidates must undergo extensive pre-clinical studies and clinical trials as a condition to regulatory approval. Pre-clinical studies and clinical trials are expensive and take many years to complete. The commencement and completion of clinical trials for our product candidates may be delayed by many factors, including:

- safety issues or side effects;
- delays in patient enrollment and variability in the number and types of patients available for clinical trials;
- poor effectiveness of product candidates during clinical trials;
- governmental or regulatory delays and changes in regulatory requirements, policy and guidelines;
- our or our collaborators' ability to obtain regulatory approval to commence a clinical trial;
- our or our collaborators' ability to manufacture or obtain from third parties materials sufficient for use in pre-clinical studies and clinical trials; and
- varying interpretation of data by the FDA and similar foreign regulatory agencies.

It is possible that none of our product candidates will complete clinical trials in any of the markets in which we and/or our collaborators intend to sell those product candidates. Accordingly, we and/or our collaborators may not receive the regulatory approvals

necessary to market our product candidates. Any failure or delay in commencing or completing clinical trials or obtaining regulatory approvals for product candidates would prevent or delay their commercialization and severely harm our business and financial condition. For example, the suspension of the clinical development program for Stimuvax in March 2010 may result in a prolonged delay or in the termination of the clinical development program for Stimuvax. A prolonged delay or termination of the clinical development program would have a material adverse impact on our business and financial condition.

The failure to enroll patients for clinical trials may cause delays in developing our product candidates.

We may encounter delays if we, any collaboration partners or Merck KGaA are unable to enroll enough patients to complete clinical trials. Patient enrollment depends on many factors, including, the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites and the eligibility criteria for the trial. Moreover, when one product candidate is evaluated in multiple clinical trials simultaneously, patient enrollment in ongoing trials can be adversely affected by negative results from completed trials. Our product candidates are focused in oncology, which can be a difficult patient population to recruit. In addition, the suspension of the Stimuvax trials may require Merck KGaA to enroll additional patients which could delay such trials.

We rely on third parties to conduct our clinical trials. If these third parties do not perform as contractually required or otherwise expected, we may not be able to obtain regulatory approval for or be able to commercialize our product candidates.

We rely on third parties, such as contract research organizations, medical institutions, clinical investigators and contract laboratories, to assist in conducting our clinical trials. We have, in the ordinary course of business, entered into agreements with these third parties. Nonetheless, we are responsible for confirming that each of our clinical trials is conducted in accordance with its general investigational plan and protocol. Moreover, the FDA and foreign regulatory agencies require us to comply with regulations and standards, commonly referred to as good clinical practices, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the trial participants are adequately protected. Our reliance on third parties does not relieve us of these responsibilities and requirements. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, if the third parties need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our pre-clinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for our product candidates.

Even if regulatory approval is received for our product candidates, the later discovery of previously unknown problems with a product, manufacturer or facility may result in restrictions, including withdrawal of the product from the market.

Approval of a product candidate may be conditioned upon certain limitations and restrictions as to the drug's use, or upon the conduct of further studies, and may be subject to continuous review. After approval of a product, if any, there will be significant ongoing regulatory compliance obligations, and if we or our collaborators fail to comply with these requirements, we, any of our collaborators or Merck KGaA could be subject to penalties, including:

- warning letters;
- fines;

- product recalls;
- withdrawal of regulatory approval;
- operating restrictions;
- disgorgement of profits;
- injunctions; and
- criminal prosecution.

Regulatory agencies may require us, any of our collaborators or Merck KGaA to delay, restrict or discontinue clinical trials on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. For example, in March 2010, Merck KGaA suspended the clinical development program for Stimuvax as the result of a suspected unexpected serious adverse event reaction in a patient with multiple myeloma participating in an exploratory clinical trial. The suspension will remain in effect until an investigation of the cause of the adverse event is completed to the satisfaction of the FDA and other regulatory agencies. In addition, we, any of our collaborators or Merck KGaA may be unable to submit applications to regulatory agencies within the time frame we currently expect. Once submitted, applications must be approved by various regulatory agencies before we, any of our collaborators or Merck KGaA can commercialize the product described in the application. All statutes and regulations governing the conduct of clinical trials are subject to change in the future, which could affect the cost of such clinical trials. Any unanticipated costs or delays in such clinical studies could delay our ability to generate revenues and harm our financial condition and results of operations.

Failure to obtain regulatory approval in foreign jurisdictions would prevent us from marketing our products internationally.

We intend to have our product candidates marketed outside the United States. In order to market our products in the European Union and many other non-U.S. jurisdictions, we must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. To date, we have not filed for marketing approval for any of our product candidates and may not receive the approvals necessary to commercialize our product candidates in any market. The approval procedure varies among countries and can involve additional testing and data review. The time required to obtain foreign regulatory approval may differ from that required to obtain FDA approval. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not obtain foreign regulatory approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory agencies in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory agencies in other foreign countries or by the FDA. However, a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in other jurisdictions, including approval by the FDA. The failure to obtain regulatory approval in foreign jurisdictions could harm our business.

Our product candidates may never achieve market acceptance even if we obtain regulatory approvals.

Even if we receive regulatory approvals for the commercial sale of our product candidates, the commercial success of these product candidates will depend on, among other things, their acceptance by physicians, patients, third party payors such as health insurance companies and other members of the medical community as a therapeutic and cost-effective alternative to competing products and treatments. If our product candidates fail to gain market acceptance, we may be unable to earn sufficient revenue to continue our

business. Market acceptance of, and demand for, any product that we may develop and commercialize will depend on many factors, including:

- our ability to provide acceptable evidence of safety and efficacy;
- the prevalence and severity of adverse side effects;
- availability, relative cost and relative efficacy of alternative and competing treatments;
- the effectiveness of our marketing and distribution strategy;
- publicity concerning our products or competing products and treatments; and
- our ability to obtain sufficient third party insurance coverage or reimbursement.

If our product candidates do not become widely accepted by physicians, patients, third party payors and other members of the medical community, our business, financial condition and results of operations would be materially and adversely affected.

If we are unable to obtain, maintain and enforce our proprietary rights, we may not be able to compete effectively or operate profitably.

Our success is dependent in part on obtaining, maintaining and enforcing our patents and other proprietary rights and will depend in large part on our ability to:

- obtain patent and other proprietary protection for our technology, processes and product candidates;
- defend patents once issued;
- preserve trade secrets; and
- operate without infringing the patents and proprietary rights of third parties.

As of December 31, 2009, we owned approximately nine U.S. and corresponding foreign patents and patent applications and held exclusive or partially exclusive licenses to over 15 U.S. and corresponding foreign patent and patent applications.

The degree of future protection for our proprietary rights is uncertain. For example:

- we might not have been the first to make the inventions covered by any of our patents, if issued, or our pending patent applications;
- we might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or products and/or duplicate any of our technologies and/or products;
- it is possible that none of our pending patent applications will result in issued patents or, if issued, these patents may not be sufficient to protect our technology or provide us with a basis for commercially-viable products and may not provide us with any competitive advantages;
- if our pending applications issue as patents, they may be challenged by third parties as infringed, invalid or unenforceable under U.S. or foreign laws;
- if issued, the patents under which we hold rights may not be valid or enforceable; or
- we may develop additional proprietary technologies that are not patentable and which may not be adequately protected through trade secrets, if for example a competitor were to independently develop duplicative, similar or alternative technologies.

The patent position of biotechnology and pharmaceutical firms is highly uncertain and involves many complex legal and technical issues. There is no clear policy involving the breadth of claims allowed in patents or the degree of protection afforded under patents. Although we believe our potential rights under patent applications provide a competitive advantage, it is possible that patent applications owned by or licensed to us will not result in patents being issued, or that, if issued, the patents will not give us an advantage over

competitors with similar products or technology, nor can we assure you that we can obtain, maintain and enforce all ownership and other proprietary rights necessary to develop and commercialize our product candidates. For example, claims covering the composition of PX-478 were only filed in the United States and Canada, which will prevent us from being able to obtain claims covering the composition of PX-478 in other foreign jurisdictions, including Europe.

Even if any or all of our patent applications issue as patents, others may challenge the validity, inventorship, ownership, enforceability or scope of our patents or other technology used in or otherwise necessary for the development and commercialization of our product candidates. We may not be successful in defending against any such challenges. Moreover, the cost of litigation to uphold the validity of patents to prevent infringement or to otherwise protect our proprietary rights can be substantial. If the outcome of litigation is adverse to us, third parties may be able to use the challenged technologies without payment to us. There is no assurance that our patents, if issued, will not be infringed or successfully avoided through design innovation. Intellectual property lawsuits are expensive and would consume time and other resources, even if the outcome were successful. In addition, there is a risk that a court would decide that our patents, if issued, are not valid and that we do not have the right to stop the other party from using the inventions. There is also the risk that, even if the validity of a patent were upheld, a court would refuse to stop the other party from using the inventions, including on the ground that its activities do not infringe that patent. If any of these events were to occur, our business, financial condition and results of operations would be materially and adversely effected.

In addition to the intellectual property and other rights described above, we also rely on unpatented technology, trade secrets, trademarks and confidential information, particularly when we do not believe that patent protection is appropriate or available. However, trade secrets are difficult to protect and it is possible that others will independently develop substantially equivalent information and techniques or otherwise gain access to or disclose our unpatented technology, trade secrets and confidential information. We require each of our employees, consultants and advisors to execute a confidentiality and invention assignment agreement at the commencement of an employment or consulting relationship with us. However, it is possible that these agreements will not provide effective protection of our confidential information or, in the event of unauthorized use of our intellectual property or the intellectual property of third parties, provide adequate or effective remedies or protection.

If our vaccine technology or our product candidates, including Stimuvax, conflict with the rights of others, we may not be able to manufacture or market our product candidates, which could have a material and adverse effect on us and on our collaboration with Merck KGaA.

Issued patents held by others may limit our ability to develop commercial products. All issued patents are entitled to a presumption of validity under the laws of the United States. If we need licenses to such patents to permit us to develop or market our product candidates, we may be required to pay significant fees or royalties, and we cannot be certain that we would be able to obtain such licenses on commercially reasonable terms, if at all. Competitors or third parties may obtain patents that may cover subject matter we use in developing the technology required to bring our products to market, that we use in producing our products, or that we use in treating patients with our products. We know that others have filed patent applications in various jurisdictions that relate to several areas in which we are developing products. Some of these patent applications have already resulted in the issuance of patents and some are still pending. We may be required to alter our processes or product candidates, pay licensing fees or cease activities. Certain parts of our vaccine technology, including the MUC1 antigen, originated from third party sources.

These third party sources include academic, government and other research laboratories, as well as the public domain. If use of technology incorporated into or used to produce our product candidates is challenged, or if our processes or product candidates conflict with patent rights of others, third parties could bring legal actions against us, in Europe, the United States and elsewhere, claiming damages and seeking to enjoin manufacturing and marketing of the affected products. Additionally, it is not possible to predict with certainty what patent claims may issue from pending applications. In the United States, for example, patent prosecution can proceed in secret prior to issuance of a patent. As a result, third parties may be able to obtain patents with claims relating to our product candidates which they could attempt to assert against us. Further, as we develop our products, third parties may assert that we infringe the patents currently held or licensed by them and it is difficult to provide the outcome of any such action

There has been significant litigation in the biotechnology industry over patents and other proprietary rights and if we become involved in any litigation, it could consume a substantial portion of our resources, regardless of the outcome of the litigation. If these legal actions are successful, in addition to any potential liability for damages, we could be required to obtain a license, grant cross-licenses and pay substantial royalties in order to continue to manufacture or market the affected products.

There is no assurance that we would prevail in any legal action or that any license required under a third party patent would be made available on acceptable terms or at all. Ultimately, we could be prevented from commercializing a product, or forced to cease some aspect of our business operations, as a result of claims of patent infringement or violation of other intellectual property rights, which could have a material and adverse effect on our business, financial condition and results of operations.

If any products we develop become subject to unfavorable pricing regulations, third party reimbursement practices or healthcare reform initiatives, our ability to successfully commercialize our products will be impaired.

Our future revenues, profitability and access to capital will be affected by the continuing efforts of governmental and private third party payors to contain or reduce the costs of health care through various means. We expect a number of federal, state and foreign proposals to control the cost of drugs through government regulation. We are unsure of the impact recent health care reform legislation may have on our business or what actions federal, state, foreign and private payors may take in response to the recent reforms. Therefore, it is difficult to provide the effect of any implemented reform on our business. Our ability to commercialize our products successfully will depend, in part, on the extent to which reimbursement for the cost of such products and related treatments will be available from government health administration authorities, such as Medicare and Medicaid in the United States, private health insurers and other organizations. Significant uncertainty exists as to the reimbursement status of newly approved health care products, particularly for indications for which there is no current effective treatment or for which medical care typically is not sought. Adequate third party coverage may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product research and development. If adequate coverage and reimbursement levels are not provided by government and third party payors for use of our products, our products may fail to achieve market acceptance and our results of operations will be harmed.

Governments often impose strict price controls, which may adversely affect our future profitability.

We intend to seek approval to market our future products in both the United States and foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions, we will be subject to rules and regulations in those jurisdictions relating to our product. In some

foreign countries, particularly in the European Union, prescription drug pricing is subject to government control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a drug candidate. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our future product to other available therapies. In addition, it is unclear what impact, if any, recent health care reform legislation will have on the price of drugs; however, prices may become subject to controls similar to those in other countries. If reimbursement of our future products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, we may be unable to achieve or sustain profitability.

We face potential product liability exposure, and if successful claims are brought against us, we may incur substantial liability for a product candidate and may have to limit its commercialization.

The use of our product candidates in clinical trials and the sale of any products for which we obtain marketing approval expose us to the risk of product liability claims. Product liability claims might be brought against us by consumers, health care providers, pharmaceutical companies or others selling our products. If we cannot successfully defend ourselves against these claims, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for our product candidates;
- impairment of our business reputation;
- withdrawal of clinical trial participants;
- costs of related litigation;
- substantial monetary awards to patients or other claimants;
- loss of revenues; and
- the inability to commercialize our product candidates.

Although we currently have product liability insurance coverage for our clinical trials for expenses or losses up to a $10 million aggregate annual limit, our insurance coverage may not reimburse us or may not be sufficient to reimburse us for any or all expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for our product candidates in development, but we may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing. On occasion, large judgments have been awarded in class action lawsuits based on products that had unanticipated side effects. A successful product liability claim or series of claims brought against us could cause our stock price to fall and, if judgments exceed our insurance coverage, could decrease our cash and adversely affect our business.

We face substantial competition, which may result in others discovering, developing or commercializing products before, or more successfully, than we do.

Our future success depends on our ability to demonstrate and maintain a competitive advantage with respect to the design, development and commercialization of our product candidates. We expect any product candidate that we commercialize with our collaborative partners or on our own will compete with existing, market-leading products and products in development.

Stimuvax. Currently, no product has been approved for maintenance therapy following induction chemotherapy for Stage III NSCLC, which is one of the indications for which

Stimuvax is being developed. However, it is possible that existing or new agents will be approved for this indication. In addition, there are three vaccines in development for the treatment of NSCLC, including GSK's MAGE A3 vaccine in Phase 3, NovaRx Corporation's Lucanix in Phase 3, and Transgene's TG-4010 in Phase 2.

Small Molecule Products. PX-866 is an inhibitor of phosphoinositide 3-kinase (PI3K). We are aware of several companies that have entered clinical trials with competing compounds targeting the same protein. Among those are compounds being developed by Novartis (Phase 1/2), Roche/Genentech (Phase 1), Semafore (Phase 1), Sanofi-Aventis (Phase 2), Pfizer and Calistoga (Phase 1). PX-478 is a HIF-1 alpha inhibitor and we believe that at least one other company, Enzon Pharmaceutical, Inc., has a HIF-1 alpha anti-sense compound that is currently in Phase 1. We believe that other HIF-1 alpha inhibitors are in preclinical development. There are also several approved targeted therapies for cancer and in development against which our small molecule products might compete. For example, Avastin is a direct inhibitor of vascular endothelial growth factor, or VEGF, and PX-478 is expected to lower levels of VEGF.

Many of our potential competitors have substantially greater financial, technical and personnel resources than we have. In addition, many of these competitors have significantly greater commercial infrastructures than we have. Our ability to compete successfully will depend largely on our ability to:

- design and develop products that are superior to other products in the market;
- attract qualified scientific, medical, sales and marketing and commercial personnel;
- obtain patent and/or other proprietary protection for our processes and product candidates;
- obtain required regulatory approvals; and
- successfully collaborate with others in the design, development and commercialization of new products.

Established competitors may invest heavily to quickly discover and develop novel compounds that could make our product candidates obsolete. In addition, any new product that competes with a generic market-leading product must demonstrate compelling advantages in efficacy, convenience, tolerability and safety in order to overcome severe price competition and to be commercially successful. If we are not able to compete effectively against our current and future competitors, our business will not grow and our financial condition and operations will suffer.

If we are unable to enter into agreements with partners to perform sales and marketing functions, or build these functions ourselves, we will not be able to commercialize our product candidates.

We currently do not have any internal sales, marketing or distribution capabilities. In order to commercialize any of our product candidates, we must either acquire or internally develop a sales, marketing and distribution infrastructure or enter into agreements with partners to perform these services for us. Under our agreements with Merck KGaA, Merck KGaA is responsible for developing and commercializing Stimuvax, and any problems with that relationship could delay the development and commercialization of Stimuvax. Additionally, we may not be able to enter into arrangements with respect to our product candidates not covered by the Merck KGaA agreements on commercially acceptable terms, if at all. Factors that may inhibit our efforts to commercialize our product candidates without entering into arrangements with third parties include:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or persuade adequate numbers of physicians to prescribe our products;

- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating a sales and marketing organization.

If we are not able to partner with a third party and are not successful in recruiting sales and marketing personnel or in building a sales and marketing and distribution infrastructure, we will have difficulty commercializing our product candidates, which would adversely affect our business and financial condition.

If we lose key personnel, or we are unable to attract and retain highly-qualified personnel on a cost-effective basis, it would be more difficult for us to manage our existing business operations and to identify and pursue new growth opportunities.

Our success depends in large part upon our ability to attract and retain highly qualified scientific, clinical, manufacturing, and management personnel. In addition, any difficulties retaining key personnel or managing this growth could disrupt our operations. Future growth will require us to continue to implement and improve our managerial, operational and financial systems, and continue to retain, recruit and train additional qualified personnel, which may impose a strain on our administrative and operational infrastructure. The competition for qualified personnel in the biopharmaceutical field is intense. We are highly dependent on our continued ability to attract, retain and motivate highly-qualified management, clinical and scientific personnel. Due to our limited resources, we may not be able to effectively recruit, train and retain additional qualified personnel. If we are unable to retain key personnel or manage our growth effectively, we may not be able to implement our business plan.

Furthermore, we have not entered into non-competition agreements with all of our key employees. In addition, we do not maintain "key person" life insurance on any of our officers, employees or consultants. The loss of the services of existing personnel, the failure to recruit additional key scientific, technical and managerial personnel in a timely manner, and the loss of our employees to our competitors would harm our research and development programs and our business.

Our business is subject to increasingly complex environmental legislation that has increased both our costs and the risk of noncompliance.

Our business may involve the use of hazardous material, which will require us to comply with environmental regulations. We face increasing complexity in our product development as we adjust to new and upcoming requirements relating to the materials composition of many of our product candidates. If we use biological and hazardous materials in a manner that causes contamination or injury or violates laws, we may be liable for damages. Environmental regulations could have a material adverse effect on the results of our operations and our financial position. We maintain insurance under our general liability policy for any liability associated with our hazardous materials activities, and it is possible in the future that our coverage would be insufficient if we incurred a material environmental liability.

We have identified material weaknesses in our internal control over financial reporting and have had to restate our historical financial statements.

In March 2010, we announced that we would restate our financial statements as of and for the year ended December 31, 2008 contained in our 2008 Annual Report on Form 10-K and our condensed financial statements for the interim periods ended March 31, June 30 and September 30, 2009 contained in our Quarterly Reports on Form 10-Q to correct our failure to make all of the appropriate disclosures required by the Financial Accounting

Standards Board's Accounting Standards Codification 250, *Accounting Changes and Error Corrections*, with respect to a change in our revenue recognition policy regarding the accounting for our arrangement with Merck KGaA, and to correct for certain other errors. For additional information, see "Note 2 — Restatement — 2008 Change in Accounting Policy Not Previously Reported and Other Error Corrections" of the audited financial statements appearing in Part II Item 8 Financial Statements and Supplementary Data included in this Annual Report on Form 10-K. In connection with the preparation of this Annual Report, we identified certain material weaknesses in our internal control over financial reporting. Specifically, the material weaknesses related to (i) a lack of adequately designed controls to ensure appropriate accounting for and disclosure of complex transactions under U.S. GAAP and (ii) a lack of adequately designed and implemented risk assessment processes to identify complex transactions requiring specialized knowledge in the application of U.S. GAAP.

We may become the subject of private or government actions regarding the restatement in the future. Litigation may be time-consuming, expensive and disruptive to normal business operations, and the outcome of litigation is difficult to predict. The defense of any litigation will result in significant expenditures and the diversion of our management's time and attention from the operation of our business, which could impede our business.

We cannot be certain that restatements will not occur in the future. Execution of restatements like the ones described above could create a significant strain on our internal resources and cause delays in our filing of quarterly or annual financial results, increase our costs and cause management distraction.

If we fail to establish and maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired, which would adversely affect our consolidated operating results, our ability to operate our business, and our stock price.

Ensuring that we have adequate internal financial and accounting controls and procedures in place to produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Failure on our part to have effective internal financial and accounting controls would cause our financial reporting to be unreliable, could have a material adverse effect on our business, operating results, and financial condition, and could cause the trading price of our common stock to fall dramatically. We and our independent registered public accounting firm have identified certain material weaknesses in our internal controls that are described in greater detail in "Controls and Procedures — Management's Report on Internal Control over Financial Reporting."

Remedying these material weaknesses and maintaining proper and effective internal controls will require substantial management time and attention and may result in our incurring substantial incremental expenses, including with respect to increasing the breadth and depth of our finance organization to ensure that we have personnel with the appropriate qualifications and training in certain key accounting roles and adherence to certain control disciplines within the accounting and reporting function.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Our management does not expect that our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance

that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the company will have been detected.

We intend to retain outside consultants to assist us (i) to design and implement an adequate risk assessment process to identify future complex transactions requiring specialized knowledge to ensure the appropriate accounting for and disclosure of such transactions, and (ii) to identify and retain personnel with the appropriate technical expertise to assist us in accounting for complex transactions in accordance with U.S. GAAP. We cannot be certain that the actions we are taking to improve our internal controls over financial reporting will be sufficient or that we will be able to implement our planned processes and procedures in a timely manner. In future periods, if the process required by Section 404 of the Sarbanes-Oxley Act reveals any other material weaknesses or significant deficiencies, the correction of any such material weaknesses or significant deficiencies could require additional remedial measures which could be costly and time-consuming. In addition, we may be unable to produce accurate financial statements on a timely basis. Any of the foregoing could cause investors to lose confidence in the reliability of our consolidated financial statements, which could cause the market price of our common stock to decline and make it more difficult for us to finance our operations and growth.

If we are required to redeem the shares of our Class UA preferred stock, our financial condition may be adversely affected.

Our certificate of incorporation provides for the mandatory redemption of shares of our Class UA preferred stock if we realize "net profits" in any year. See "Note 10 — Share Capital — Authorized Shares — Class UA preferred stock" of the audited financial statements included elsewhere in this Annual Report on Form 10-K. For this purpose, "net profits … means the after tax profits determined in accordance with generally accepted accounting principles, where relevant, consistently applied."

The certificate of incorporation does not specify the jurisdiction whose generally accepted accounting principles would apply for the redemption provision. At the time of the original issuance of the shares, we were a corporation organized under the federal laws of Canada, and our principal operations were located in Canada. In addition, the original purchaser and current holder of the Class UA preferred stock is a Canadian entity. In connection with our reincorporation in Delaware, we disclosed that the rights, preferences and privileges of the shares would remain unchanged except as required by Delaware law, and the mandatory redemption provisions were not changed. In addition, the formula for determining the price at which such shares would be redeemed is expressed in Canadian dollars. Although, if challenged, we believe that a Delaware court would determine that "net profits" be interpreted in accordance with Canadian GAAP, we cannot provide assurances that a Delaware court would agree with such interpretation.

As a result of the December 2008 Merck KGaA transaction, we recognized on a one-time basis all deferred revenue relating to Stimuvax, under both U.S. GAAP and Canadian GAAP. Under U.S. GAAP this resulted in net income. However, under Canadian GAAP we were required to recognize an impairment on intangible assets which resulted in a net loss for 2008 and therefore do not intend to redeem any shares of Class UA preferred stock in 2009. If in the future we recognize net income under Canadian GAAP, or any successor to such principles, or if the holder of Class UA preferred stock were to challenge, and prevail in a dispute involving, the interpretation of the mandatory redemption provision, we may be required to redeem such shares which would have an adverse effect on our cash position. The maximum aggregate amount that we would be required to pay to redeem such shares is CAN $1.25 million.

The holder of the Class UA preferred stock has declined to sign an acknowledgement that Canadian GAAP applies to the redemption provision and has indicated that it believes

U.S. GAAP should apply. As of the date of this report, the holder has not initiated a proceeding to challenge this interpretation; however, it may do so. If they do dispute this interpretation, although we believe a Delaware court would agree with the interpretation described above, we can provide no assurances that we would prevail in such a dispute. Further, any dispute regarding this matter, even if we were ultimately successful, could require significant resources which may adversely affect our results of operations.

We may expand our business through the acquisition of companies or businesses or in-licensing product candidates that could disrupt our business and harm our financial condition.

We may in the future seek to expand our products and capabilities by acquiring one or more companies or businesses or in-licensing one or more product candidates. Acquisitions and in-licenses involve numerous risks, including:

- substantial cash expenditures;
- potentially dilutive issuance of equity securities;
- incurrence of debt and contingent liabilities, some of which may be difficult or impossible to identify at the time of acquisition;
- difficulties in assimilating the operations of the acquired companies;
- diverting our management's attention away from other business concerns;
- entering markets in which we have limited or no direct experience; and
- potential loss of our key employees or key employees of the acquired companies or businesses.

In our recent history, we have not expanded our business through in-licensing and we have completed only one acquisition; therefore, our experience in making acquisitions and in-licensing is limited. We cannot assure you that any acquisition or in-license will result in short-term or long-term benefits to us. We may incorrectly judge the value or worth of an acquired company or business or in-licensed product candidate. In addition, our future success would depend in part on our ability to manage the rapid growth associated with some of these acquisitions and in-licenses. We cannot assure you that we would be able to make the combination of our business with that of acquired businesses or companies or in-licensed product candidates work or be successful. Furthermore, the development or expansion of our business or any acquired business or company or in-licensed product candidate may require a substantial capital investment by us. We may not have these necessary funds or they might not be available to us on acceptable terms or at all. We may also seek to raise funds by selling shares of our capital stock, which could dilute our current stockholders' ownership interest, or securities convertible into our capital stock, which could dilute current stockholders' ownership interest upon conversion.

Risks Related to the Ownership of Our Common Stock

Our common stock may become ineligible for listing on The NASDAQ Stock Market, which would materially adversely affect the liquidity and price of our common stock.

Our common stock is currently listed for trading in the United States on The NASDAQ Global Market. As a result of our failure to timely file this Annual Report on Form 10-K, we received a letter from The NASDAQ Stock Market informing us that we are not in compliance with continued listing requirements. Although we believe the filing of this Annual Report will allow us to regain full compliance with SEC reporting requirements and The NASDAQ Stock Market continued listing requirements, we have in the past and could in the future be unable to meet The NASDAQ Global Market continued listing requirements. For example, on August 20, 2008 we disclosed that we had received a letter from The NASDAQ Stock Market indicating that we did not comply with the requirements for

continued listing on The NASDAQ Global Market because we did not meet the maintenance standard in Marketplace Rule 4450(b)(1)(A) (recodified as Marketplace Rule 5450(b)) that specifies, among other things, that the market value of our common stock be at least $50 million or that or stockholders' equity was at least $10 million. Although we regained compliance with the stockholders' equity standard, we have a history of losses and would expect that, absent the completion of a financing or other event that would have a positive impact on our stockholders' equity, our stockholders' equity would decline over time. Further, in the past our stock price has traded near, and at times below, the $1.00 minimum bid price required for continued listing on NASDAQ. Although NASDAQ in the past has provided relief from the $1.00 minimum bid price requirement as a result of the recent weakness in the stock market, it may not do so in the future. If we fail to maintain compliance with NASDAQ's listing standards, and our common stock becomes ineligible for listing on The NASDAQ Stock Market the liquidity and price of our common stock would be adversely affected.

If our common stock was delisted, the price of our stock and the ability of our stockholders to trade in our stock would be adversely affected. In addition, we would be subject to a number of restrictions regarding the registration of our stock under U.S. federal securities laws, and we would not be able to allow our employees to exercise their outstanding options, which could adversely affect our business and results of operations. If we are delisted in the future from The NASDAQ Global Market, there may be other negative implications, including the potential loss of confidence by actual or potential collaboration partners, suppliers and employees and the loss of institutional investor interest in our company.

The trading price of our common stock may be volatile.

The market prices for and trading volumes of securities of biotechnology companies, including our securities, have been historically volatile. The market has from time to time experienced significant price and volume fluctuations unrelated to the operating performance of particular companies. The market price of our common shares may fluctuate significantly due to a variety of factors, including:

- public concern as to the safety of products developed by us or others;
- the results of pre-clinical testing and clinical trials by us, our collaborators, our competitors and/or companies that are developing products that are similar to ours (regardless of whether such products are potentially competitive with ours);
- technological innovations or new therapeutic products;
- governmental regulations;
- developments in patent or other proprietary rights;
- litigation;
- comments by securities analysts;
- the issuance of additional shares of common stock, or securities convertible into, or exercisable or exchangeable for, shares of our common stock in connection with financings, acquisitions or otherwise;
- the perception that shares of our common stock may be delisted from The NASDAQ Stock Market;
- the incurrence of debt;
- general market conditions in our industry or in the economy as a whole; and
- political instability, natural disasters, war and/or events of terrorism.

In addition, the stock market has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of individual companies. Broad market and industry factors may seriously affect the market price of companies' stock, including ours, regardless of actual operating performance. In addition, in the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

Because we do not expect to pay dividends on our common stock, stockholders will benefit from an investment in our common stock only if it appreciates in value.

We have never paid cash dividends on our common shares and have no present intention to pay any dividends in the future. We are not profitable and do not expect to earn any material revenues for at least several years, if at all. As a result, we intend to use all available cash and liquid assets in the development of our business. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions and on such other factors as our board of directors deems relevant. As a result, the success of an investment in our common stock will depend upon any future appreciation in its value. There is no guarantee that our common stock will appreciate in value or even maintain the price at which stockholders have purchased their shares.

We expect that we will seek to raise additional capital in the future; however, such capital may not be available to us on reasonable terms, if at all, when or as we require additional funding. If we issue additional shares of our common stock or other securities that may be convertible into, or exercisable or exchangeable for, our common stock, our existing stockholders would experience further dilution.

We expect that we will seek to raise additional capital from time to time in the future. For example, in connection with our May and August 2009 financings, we sold an aggregate of 6,159,495 shares of our common stock and warrants to purchase an additional 3,593,394 shares of our common stock. Future financings may involve the issuance of debt, equity and/or securities convertible into or exercisable or exchangeable for our equity securities. These financings may not be available to us on reasonable terms or at all when and as we require funding. If we are able to consummate such financings, the trading price of our common stock could be adversely affected and/or the terms of such financings may adversely affect the interests of our existing stockholders. Any failure to obtain additional working capital when required would have a material adverse effect on our business and financial condition and would be expected to result in a decline in our stock price. Any issuances of our common stock, preferred stock, or securities such as warrants or notes that are convertible into, exercisable or exchangeable for, our capital stock, would have a dilutive effect on the voting and economic interest of our existing stockholders.

Further, as a result of the delayed filing of this Annual Report on Form 10-K for the year ended December 31, 2009, we will be ineligible to register the offer and sale of our securities on Form S-3 by us or resale by others until one year from the date the last delinquent filing is made. We may use Form S-1 to raise capital or complete acquisitions, but doing so could increase transaction costs and adversely impact our ability to raise capital or complete acquisitions of other companies in a timely manner.

We can issue shares of preferred stock that may adversely affect the rights of a stockholder of our common stock.

Our certificate of incorporation authorizes us to issue up to 10,000,000 shares of preferred stock with designations, rights, and preferences determined from time-to-time by our board of directors. Accordingly, our board of directors is empowered, without stockholder

approval, to issue preferred stock with dividend, liquidation, conversion, voting or other rights superior to those of holders of our common stock. For example, an issuance of shares of preferred stock could:

- adversely affect the voting power of the holders of our common stock;
- make it more difficult for a third party to gain control of us;
- discourage bids for our common stock at a premium;
- limit or eliminate any payments that the holders of our common stock could expect to receive upon our liquidation; or
- otherwise adversely affect the market price or our common stock.

We have in the past, and we may at any time in the future, issue additional shares of authorized preferred stock.

We expect our quarterly operating results to fluctuate in future periods, which may cause our stock price to fluctuate or decline.

Our quarterly operating results have fluctuated in the past, and we believe they will continue to do so in the future. Some of these fluctuations may be more pronounced than they were in the past as a result of the issuance by us in May 2009 of warrants to purchase 2,909,244 shares of our common stock. These warrants are classified as a derivative liability pursuant to the Derivatives and Hedging Topic of the Accounting Standards Codification. Accordingly, the fair value of the warrants is recorded on our consolidated balance sheet as a liability, and such fair value is adjusted at each financial reporting date with the adjustment to fair value reflected in our consolidated statement of operations. The fair value of the warrants is determined using the Black-Scholes option valuation model. Fluctuations in the assumptions and factors used in the Black-Scholes model can result in adjustments to the fair value of the warrants reflected on our balance sheet and, therefore, our statement of operations. Due to the classification of such warrants and other factors, quarterly results of operations are difficult to forecast, and period-to-period comparisons of our operating results may not be predictive of future performance. In one or more future quarters, our results of operations may fall below the expectations of securities analysts and investors. In that event, the market price of our common stock could decline. In addition, the market price of our common stock may fluctuate or decline regardless of our operating performance.

ITEM 1B. *Unresolved Staff Comments*

None.

ITEM 2. *Properties*

Description of Property

In May 2008, we entered into a sublease for a facility in Seattle, Washington totaling approximately 17,000 square feet. As of December 31, 2009 our operations are consolidated in the Seattle facility, which includes laboratory space. We believe that our Seattle facility is in good condition, adequately maintained and suitable for the conduct of our business.

ITEM 3. *Legal Proceedings*

We are not a party to any material legal proceedings with respect to us, our subsidiaries, or any of our material properties.

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 for Common Stock

Our common stock has been quoted on the NASDAQ Global Market under the symbol "ONTY" and on the Toronto Stock Exchange under the symbol "ONY" since December 11, 2007. Prior to that time, Biomira's common shares were quoted on NASDAQ Global Market under the symbol "BIOM" and on the Toronto Stock Exchange under the symbol "BRA." On October 14, 2009 we announced that, the Toronto Stock Exchange had granted our voluntary application to delist our shares of common stock from the TSX effective at the close of trading on October 22, 2009.

The following table sets forth for the indicated periods the high and low sales prices of our common stock as reported by the NASDAQ Global Market.

	High	Low
Fiscal year ended December 31, 2009:		
First Quarter	$ 1.89	$0.76
Second Quarter	4.89	1.69
Third Quarter	7.77	2.99
Fourth Quarter	5.86	3.41
Fiscal year ended December 31, 2008:		
First Quarter	$4.70	$ 1.47
Second Quarter	4.25	2.38
Third Quarter	3.00	1.10
Fourth Quarter	1.21	0.62

Dividends

We have never declared nor paid cash dividends on our common stock. We currently expect to retain future earnings, if any, to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our Board of Directors.

Stockholders

As of April 22, 2010, there were 25,753,405 shares of our common stock outstanding held by approximately 706 stockholders of record and 20,100 stockholders in nominee name.

Securities Authorized for Issuance under Equity Compensation Plans

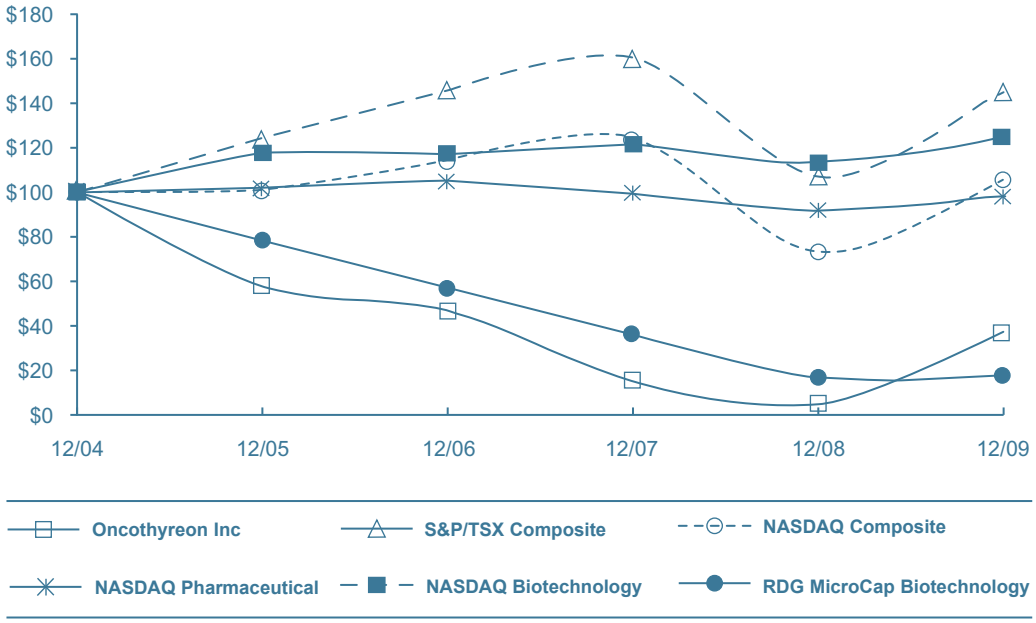
For information concerning our equity compensation plans see the section of this Annual Report on Form 10-K captioned "Part III — Item 12 — Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters."

Stock Performance Graph

Notwithstanding any statement to the contrary in any of our previous or future filings with the SEC, the following information relating to the price performance of our common stock shall not be deemed to be "filed" with the SEC or to be "soliciting material" under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and it shall not be deemed to be incorporated by reference into any of our filings under the Securities Act or the Exchange Act, except to the extent we specifically incorporate it by reference into such filing.

The graph below compares the cumulative total stockholder return of our common stock with that of the NASDAQ Pharmaceutical Index, NASDAQ Biotechnology Index, RDG MicroCap Biotechnology Index and a composite S&P/TSX index from December 31, 2003 through December 31, 2009. The comparisons in this graph below are based on historical data and are not intended to forecast or be indicative of future performance of our common stock. The graph assumes that $100 was invested and that all dividends were reinvested.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*



* $100 invested on 12/31/04 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

Unregistered Sale of Equity Securities

During the three months ended December 31, 2009, we did not issue or sell any shares of our common stock or other equity securities pursuant to unregistered transactions in reliance upon exemption from the registration requirements of the Securities Act of 1933, as amended.

Issuer Purchases of Equity Securities

We did not make any purchases of our outstanding common stock during the three months ended December 31, 2009.

ITEM 6. *Selected Financial Data*

The data set forth below is not necessarily indicative of the results of future operations and should be read in conjunction with the consolidated financial statements and notes thereto included elsewhere in this annual report on Form 10-K and also with "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Year Ended December 31,				
	2009	2008(1)(6)	2007(2)(3)(6)	2006(4)(5)(6)	2005(6)
	(Amounts in thousands, except share and per share data.)				
Consolidated Statements of Operations Data:					
Revenue					
Contract research and development	$ —	$ —	$ 631	$ 3,678	$ 3,171
Contract manufacturing(3)	—	15,582	2,536	—	—
Licensing revenue from collaborative and license agreements	2,051	24,713	440	98	92
Licensing, royalties and other revenue	27	—	103	119	271
	2,078	40,295	3,710	3,895	3,534
Expenses					
Research and development	6,081	8,783	9,584	12,200	13,567
Manufacturing(1)(3)	—	13,675	2,564	—	—
General and administrative	6,589	10,284	12,224	7,636	4,690
Marketing and business development	—	—	565	587	756
Depreciation	269	422	246	247	224
In-process research and development	—	—	—	24,920	—
Investment and other expense (income)	8	(298)	371	(916)	(656)
Interest expense		7	5	10	2
Change in fair value of warrant liability	6,150	—	(1,421)	(3,849)	(3,843)
	(19,097)	(32,873)	(24,138)	(40,835)	(14,740)
Income (loss) before income taxes	(17,019)	7,422	(20,428)	(36,940)	(11,206)
Income tax recovery current	200	—	—	462	287
Net income (loss)	$ (17,219)	$ 7,422	$ (20,428)	$ (36,478)	$ (10,919)
Earnings (loss) per share — basic(2)	$ (0.76)	$ 0.38	$ (1.05)	$ (2.38)	$ (0.83)
Earnings (loss) per share — diluted(2)	$ (0.76)	$ 0.38	$ (1.05)	$ (2.38)	$ (0.83)
Weighted average number of common shares outstanding(2)	22,739,138	19,490,621	19,485,889	15,316,697	13,109,917
Weighted average number of common shares outstanding(2)	22,739,138	19,570,170	19,485,889	15,316,697	13,109,917
Consolidated Balance Sheets Data:					
Cash and short term investments	$ 33,218	$ 19,166	$ 24,186	$ 28,395	$ 18,368
Total assets	$ 38,225	$ 24,971	$ 36,218	$ 33,456	$ 20,438
Total long-term liabilities	$ 10,732	$ 578	$ 12,823	$ 2,537	$ 1,507
Stockholders' equity	$ 25,418	$ 20,717	$ 11,722	$ 27,227	$ 16,312
Common shares outstanding(3)	25,753,405	19,492,432	19,485,889	19,485,889	13,136,094

(1) The effect of the asset purchase agreement and 2008 license agreement with Merck KGaA is reflected for the year ended December 31, 2008. See "Note 12 — Collaborative and License Agreements" of the audited financial statements included elsewhere in this Annual Report on Form 10-K.

(2) On December 11, 2007, our common stock began trading on the NASDAQ Global Market under the symbol ONTY and on the Toronto Stock Exchange under the symbol ONY. On October 14, 2009 we announced that, the Toronto Stock Exchange had granted our voluntary application to delist our shares of common stock from the TSX effective at the close of trading on October 22, 2009. Shareholders of the former Biomira received one share of our common stock for each six shares of Biomira that they held. For years presented prior to 2007, the summary consolidated financial and operating data has been prepared after giving effect to the 6 for 1 share exchange.

(3) In August 2007, we signed the amended and restated collaboration and supply agreements related to Stimuvax with Merck KGaA. Pursuant to the terms of the collaboration and supply agreements, from August 2007 to December 2008, with the entry into the 2008 license agreement, we retained the responsibility to manufacture Stimuvax and Merck KGaA agreed to purchase Stimuvax from us. During their term, the collaboration and supply agreements transformed what were previously reimbursements of a portion of the Stimuvax manufacturing costs to a long-term contract manufacturing arrangement. Our financial reporting during the term of the collaboration and supply agreements reflects the revenue and associated clinical trial material costs related to the supply of Stimuvax separately in the consolidated statements of operations as contract manufacturing revenue and manufacturing expense, respectively. Previously, these amounts were reported under contract research and development revenue and research and development expense, respectively.

(4) Effective January 1, 2006, we adopted the fair value recognition provisions of the Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718 using the modified prospective transition method, which requires us to apply the provisions of ASC Topic 718 only to awards granted, modified, repurchased, or cancelled after the adoption date. We recognize the value of the portion of the estimated fair value of the awards that is ultimately expected to vest as expense over the requisite vesting periods on a straight-line basis in our consolidated statements of operations. Prior to January 1, 2006, we accounted for stock-based employee compensation arrangements in accordance with Accounting Principles Board Opinion, or APB, 25. Under APB 25, we were required to record as compensation expense the excess, if any, of the fair market value of the stock on the date the stock option was granted over the applicable option exercise price. Prior to 2006, we recorded no compensation expense under APB 25 as all options granted had exercise prices equal to the fair market value of the common stock on the date of grant.

(5) On October 31, 2006, we announced the acquisition of ProlX and commencing with our quarter ended December 31, 2006 the results of ProlX have been included in our consolidated statements of operations.

(6) The effects of the correction of the errors reported in "Note 2 — Restatement — 2008 Change in Accounting Policy Not Previously Reported and Other Error Corrections" of the audited financial statements are reflected years 2005 through 2008.

ITEM 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" included elsewhere in this report. All dollar amounts included in this discussion and analysis of our financial condition and results of operations represent U.S. dollars unless otherwise specified. Throughout this discussion, unless the context specifies or implies otherwise, the terms "Company", "Oncothyreon", "Biomira", "we", "us" and "our" refer to Oncothyreon Inc., its predecessor, Biomira Inc., and its subsidiaries.

Overview

We are a clinical-stage biopharmaceutical company focused primarily on the development of therapeutic products for the treatment of cancer. Our goal is to develop and commercialize novel synthetic vaccines and targeted small molecules that have the potential to improve the lives and outcomes of cancer patients. Our cancer vaccines are designed to stimulate the immune system to attack cancer cells, while our small molecule compounds are designed to inhibit the activity of specific cancer-related proteins. We are advancing our product candidates through in-house development efforts and strategic collaborations.

We believe the quality and breadth of our product candidate pipeline, strategic collaborations and scientific team will enable us to become an integrated biopharmaceutical company with a diversified portfolio of novel, commercialized therapeutics for major diseases.

Until a recent suspension of clinical trials in March 2010, our lead product candidate, Stimuvax, was being evaluated in Phase 3 clinical trials for the treatment of non-small cell lung cancer, or NSCLC, and breast cancer. We have granted an exclusive, worldwide license to Merck KGaA of Darmstadt, Germany, or Merck KGaA, for the development, manufacture and commercialization of Stimuvax. Our pipeline of clinical stage proprietary small molecule product candidates was acquired by us in October 2006 from ProlX Pharmaceuticals Corporation, or ProlX. We are currently focusing our internal development efforts on PX-866, for which we currently plan to initiate one or more Phase 2 trials in 2010, and PX-478, for which we expect to complete a Phase 1 trial in advanced metastatic cancer in the first half of 2010. As of the date of this report, we have not licensed any rights to our small molecules to any third party and retain all development, commercialization and manufacturing rights. We are also conducting preclinical development of ONT-10, a cancer vaccine directed against a target similar to Stimuvax, and which is proprietary to us. In addition to our product candidates, we have developed novel vaccine technology that we may further develop ourselves and/or license to others.

In May 2001, we entered into a collaborative arrangement with Merck KGaA to pursue joint global product research, clinical development and commercialization of two of our product candidates, Stimuvax and Theratope (the development of which was discontinued in 2004). The collaboration covered the entire field of oncology for these two product candidates and was documented in collaboration and supply agreements, which we refer to as the 2001 agreements. Pursuant to the 2001 agreements, we licensed to Merck KGaA certain rights related to the clinical development and commercialization of Stimuvax and Theratope, agreed to collaborate in substantially all aspects of the clinical development and commercialization of Stimuvax and Theratope and agreed to manufacture the clinical and commercial supply of Stimuvax and Theratope for which Merck KGaA agreed to reimburse us for our manufacturing costs. In connection with the execution of the 2001 collaboration and supply agreements, we received up-front cash payments of $2.8 million and $4.0 million, respectively. We were also entitled to receive (1) a $5.0 million payment

contingent upon enrollment of the first patient in a Phase 3 clinical trial, (2) various additional contingent payments, up to a maximum of $90.0 million in the aggregate (excluding payments payable with respect to Theratope, the development of which was discontinued in 2004), tied to biologics license application, or BLA, submission for first and second cancer indications, for regulatory approval for first and second cancer indications, and for various sales milestones, and (3) royalties in the low twenties based on net sales outside of North America.

In January 2006, we and Merck KGaA entered into a binding letter of intent, pursuant to which the 2001 agreements were amended. Pursuant to the letter of intent, we granted to Merck KGaA rights with respect to the clinical development and commercialization of Stimuvax in the United States and, subject to certain conditions, the right to act as a secondary manufacturer of Stimuvax. We continued to be responsible for manufacturing of the clinical supply of Stimuvax for which Merck KGaA agreed to pay us our cost of goods. The $5.0 million contingent payment payable to us under the 2001 agreements was amended such that we were entitled to receive a $2.5 million contingent payment upon the execution of amended and restated collaboration and supply agreements and a $2.5 million contingent payment upon enrollment of the first patient in such Phase 3 clinical trial (which was received in March 2007). We were also entitled to receive (1) various additional contingent payments tied to the same events and up to the same maximum amounts as under the 2001 agreements, (2) royalties based on net sales outside of North America at the same rates as under the 2001 agreements, and (3) royalties based on net sales inside of North America ranging from a percentage in the high-twenties to the mid-twenties, depending on the territory in which the net sales occur.

In August 2007, we amended and restated our collaboration and supply agreements with Merck KGaA, which we refer to as the 2007 agreements, which restructured the 2001 agreements and formalized the terms set forth in the letter of intent. Pursuant to the 2007 agreements, we granted to Merck KGaA an exclusive license to develop and commercialize Stimuvax in Canada. As a result, Merck KGaA obtained an exclusive world-wide license with respect to the development and commercialization of Stimuvax. We continued to have responsibility for the development of the manufacturing process and plans for the scale-up for commercial manufacturing. We also continued to be responsible for manufacture of the clinical and commercial supply of Stimuvax for which Merck KGaA agreed to pay us our cost of goods and provisions for certain contingent payments to us related to manufacturing scale-up and process transfer were added.

The entry into the 2007 agreements triggered the $2.5 million payment to us contemplated by the 2006 letter of intent, which we received in September 2007. In addition, under the 2007 agreements, we were entitled to receive (1) a $5.0 million payment tied to the transfer of certain assays and methodology related to the manufacture of Stimuvax, which we received in December 2007, a $3.0 million payment tied to the transfer of certain Stimuvax manufacturing technology, which we received in May 2008, and a $2.0 million payment tied to the earlier of receipt of the first manufacturing run at commercial scale of Stimuvax and December 31, 2009, which we received in December 2009, (2) various additional contingent payments tied to the same events and up to the same maximum amounts as under the 2001 agreements, (3) royalties based on net sales outside of North America at the same rates as under the 2001 agreements and (4) royalties based on net sales inside of North America with percentages in the mid-twenties, depending on the territory in which the net sales occur. If the manufacturing process payments due by December 31, 2009 were paid in full, the royalty rates would be reduced in all territories by 1.25%, relative to the 2001 agreements and the letter of intent.

In December 2008, we entered into a license agreement with Merck KGaA which replaced the 2007 agreements. Pursuant to the 2008 license agreement, in addition to the rights

granted pursuant to the 2007 agreements, (1) we licensed to Merck KGaA the exclusive right to manufacture Stimuvax and the right to sublicense to other persons all such rights licensed, (2) we transferred certain manufacturing know-how to Merck KGaA, (3) we agreed not to develop any product, other than ONT-10, that is competitive with Stimuvax and (4) we granted to Merck a right of first negotiation in connection with any contemplated collaboration or license agreement with respect to the development or commercialization of ONT-10. Upon the execution of the 2008 license agreement, all of our future performance obligations related to the collaboration for the clinical development and development of the manufacture process of Stimuvax were removed and our continuing involvement in the development and manufacturing of Stimuvax ceased. In return for the license of manufacturing rights and transfer of manufacturing know-how, we received an up-front cash payment of approximately $10.5 million. The provisions with respect to contingent payments under the 2007 agreements remained unchanged and we may receive cash payments of up to $90 million, which figure excludes the $2.0 million received in December 2009 and $19.8 million received prior to the execution of the 2008 license agreement. We are also entitled to receive royalties based on net sales of Stimuvax ranging from a percentage in the mid-teens to high single digits, depending on the territory in which the net sales occur. Royalty rates were reduced relative to prior agreements by a specified amount which we believe is consistent with our estimated costs of goods, manufacturing scale-up costs and certain other expenses assumed by Merck KGaA.

In connection with the entry into the 2008 license agreement, we also entered into an asset purchase agreement, which, together with the 2008 license agreement we refer to as the 2008 agreements, pursuant to which we sold to Merck KGaA certain assets related to the manufacture of, and inventory of, Stimuvax, placebo and raw materials, and Merck KGaA agreed to assume certain liabilities related to the manufacture of Stimuvax and our obligations related to the lease of our Edmonton, Alberta, Canada facility. The plant and equipment in the Edmonton facility and inventory of raw materials, work-in-process and finished goods were sold for a purchase price of $0.6 million (including the assumption of lease obligation of $56,000) and $11.2 million, respectively. The purchase price of the inventory was first offset against advances made in prior periods resulting in net cash to the company of $2.0 million. In addition, 43 employees at our former Edmonton facility were transferred to an affiliate of Merck KGaA, significantly reducing our operating expenses for the year ended December 31, 2009 and we expect this will continue to impact our operating expenses in future periods.

Subsequent to the issuance of our 2008 financial statements, we determined that we had changed our revenue recognition policy for up-front license payments and contingent payments received from license agreements under which a license deliverable qualifies as a separate unit of accounting from recognition over the applicable amortization period to recognition upon commencement of the license term, assuming all other revenue recognition criteria have been met. When this change occurred, we failed to provide certain required disclosures and, accordingly, we have restated our consolidated financial statements as of and for the year ended December 31, 2008 to reflect the change in accounting policy. The restatement as it relates to the failure to provide the required disclosures of the change in accounting policy did not change our consolidated balance sheet, consolidated statements of operations, consolidated changes in stockholders' equity or consolidated cash flows as of and for the year ended December 31, 2008.

In addition to the error described above, we also identified an error in the period over which up-front cash payments received in 2001 for Stimuvax were recognized as revenue. In connection with the failure of Theratope and the return of Theratope rights and technology to us in June 2004, we failed to reevaluate the nature of our remaining deliverables under the 2001 Agreements, which consisted principally of the development

efforts related to Stimuvax. Such reevaluation by us should have resulted in the amortization of all remaining deferred revenue over a period to end in 2018 (the period estimated by us to represent the estimated useful life of the product and the estimated period of our ongoing obligations, which corresponded to the estimated life of the issued patents for Stimuvax). We also corrected for an error in classification of legal costs related to patents, which had incorrectly been included as research and development, net expense. Additionally, we corrected an error in the classification of long-term deferred rent from current liabilities to long-term liabilities in 2008. Finally, we corrected for an error in the disclosure of deferred tax assets.

For additional information regarding our relationship with Merck KGaA or our change in accounting policy and other error corrections, see "Note 12 — Collaborative and License Agreements" and "Note 2 — Restatement — 2008 Change in Accounting Policy Not Previously Reported and Other Error Corrections," respectively, of the audited financial statements included elsewhere in this Annual Report on Form 10-K.

We have not developed a therapeutic product to the commercial stage. As a result, with the exception of the unusual effects of the transaction with Merck KGaA in December 2008, our revenue has been limited to date, and we do not expect to recognize any material revenue for the foreseeable future. In particular, our ability to generate revenue in future periods will depend substantially on the progress of ongoing clinical trials for Stimuvax and our small molecule compounds, our ability to obtain development and commercialization partners for our small molecule compounds, Merck KGaA's success in obtaining regulatory approval for Stimuvax, our success in obtaining regulatory approval for our small molecule compounds, and Merck KGaA's and our respective abilities to establish commercial markets for these drugs.

Any adverse clinical results relating to Stimuvax or any decision by Merck KGaA to discontinue its efforts to develop and commercialize the product would have a material and adverse effect on our future revenues and results of operations and would be expected to have a material adverse effect on the trading price of our common stock. Our small molecule compounds are much earlier in the development stage than Stimuvax, and we do not expect to realize any revenues associated with the commercialization of our products candidates for the foreseeable future.

The continued research and development of our product candidates will require significant additional expenditures, including preclinical studies, clinical trials, manufacturing costs and the expenses of seeking regulatory approval. We rely on third parties to conduct a portion of our preclinical studies, all of our clinical trials and all of the manufacturing of cGMP material. We expect expenditures associated with these activities to increase in future years as we continue the development of our small molecule product candidates.

With the exception of the year ended 2008, we have incurred substantial losses since our inception. As of December 31, 2009, our accumulated deficit totaled $331.6 million. We incurred a net loss of $17.2 million for 2009 compared to a net income of $7.4 million for 2008. Our 2008 net income resulted from the December 2008 transaction with Merck KGaA when we recognized $13.2 million of deferred revenue, $11.2 million related to the bulk sale of inventory and $10.5 million from the sale of Stimuvax manufacturing rights and know-how. In future periods, we expect to continue to incur substantial net losses as we expand our research and development activities with respect to our small molecules product candidates. To date we have funded our operations principally through the sale of our equity securities, cash received through our strategic alliance with Merck KGaA, government grants, debt financings, and equipment financings. We completed financings in May 2009, in which we raised approximately $11.0 million in gross proceeds, and in August 2009, in which we raised approximately $15.0 million in gross proceeds, from the sale of our common stock and the issuance of warrants. Because we have limited revenues and

substantial research and development and operating expenses, we expect that we will in the future seek additional working capital funding from the sale of equity or debt securities or the licensing of rights to our product candidates.

On December 10, 2007, we became the successor corporation to Biomira by way of a plan of arrangement effected pursuant to Canadian law. Pursuant to the plan of arrangement, shareholders of the former Biomira received one share of our common stock for each six common shares of Biomira that they held. For years presented prior to 2007, this Management's Discussion and Analysis and our audited consolidated financial statements and related notes for the year ended December 31, 2008 have been prepared after giving effect to the 6 for 1 reverse share exchange implemented in connection with the plan of arrangement. The financial statements and Management's Discussion and Analysis have been prepared using U.S. dollars as the reporting currency.

Key Financial Metrics

Revenue

Historically, our revenue has been derived from our contract research and development activities, payments under our collaborative and license agreements, our contract manufacturing activities and miscellaneous licensing, royalty and other revenues from ancillary business and operating activities. Our arrangement with Merck KGaA regarding Stimuvax has contributed the substantial majority of our revenue.

Contract Research and Development. Revenue from contract research and development consists of non-refundable research and development payments received under the terms of collaborative agreements. For more information on revenue recognition for contract research and development revenue, see "— Critical Accounting Policies and Significant Judgments and Estimates — Revenue Recognition — Contract Research and Development" below.

Contract Manufacturing. Revenue from contract manufacturing consists of payments received under the terms of supply agreements for the manufacturing of clinical trial material. For more information on revenue recognition for contract manufacturing revenue, see "— Critical Accounting Policies and Significant Judgments and Estimates — Revenue Recognition — Contract Manufacturing" below.

Licensing Revenue from Collaborative and License Agreements. Revenue from collaborative and license agreements consists of (1) up-front cash payments for initial technology access or licensing fees and (2) contingent payments triggered by the occurrence of specified events or other contingencies derived from our collaborative and license agreements. Royalties from the commercial sale of products derived from our collaborative and license agreements are reported as licensing, royalties, and other revenue. For more information on revenue recognition for licensing revenue from collaborative and license agreements, see "— Critical Accounting Policies and Significant Judgments and Estimates — Revenue Recognition — Licensing Revenue from Collaborative and License Agreements" below.

Licensing, Royalties, and Other Revenue. Licensing, royalties, and other revenue consists of revenue from sales of compounds and processes from patented technologies to third parties and royalties received pursuant to collaborative agreements and license agreements. Royalties based on reported sales, if any, of licensed products are recognized based on the terms of the applicable agreement when and if reported sales are reliably measurable and collectibility is reasonably assured. For more information on revenue recognition for licensing, royalties, and other revenue, see "— Critical Accounting Policies and Significant Judgments and Estimates — Revenue Recognition — Licensing, Royalties, and Other Revenue" below.

Expenses

Research and Development/Manufacturing. Research and development/manufacturing expense consists of costs associated with research activities as well as costs associated with our product development efforts, conducting preclinical studies, and clinical trial and manufacturing costs. These expenses include external research and development expenses incurred pursuant to agreements with third party manufacturing organizations; technology access and licensing fees related to the use of proprietary third party technologies; employee and consultant-related expenses, including salaries, stock-based compensation expense, benefits, and related costs; and third party supplier expenses.

For the periods covered by this report, we have recognized research and development expenses, including those paid to third parties, as they have been incurred. We credit funding received from government research and development grants against research and development expense. These credits totaled $0.8 million, $1.3 million and $2.1 million for the years ended December 31, 2009, 2008 and 2007, respectively. These grants were Small Business Innovation Research, or SBIR, grants that we assumed in connection with our acquisition of ProlX on October 30, 2006.

Our research and development programs are at an early stage and may not result in any approved products. Product candidates that appear promising at early stages of development may not reach the market for a variety of reasons. For example, Merck KGaA cancelled our collaboration relating to Theratope only after receiving Phase 3 clinical trial results. We had made substantial investments over several years in the development of Theratope and terminated all development activities following the cancellation of our collaboration. Similarly, any of our continuing product candidates may be found to be ineffective or cause harmful side effects during clinical trials, may take longer to complete clinical trials than we have anticipated, may fail to receive necessary regulatory approvals, and may prove impracticable to manufacture in commercial quantities at reasonable cost and with acceptable quality. As part of our business strategy, we may enter into collaboration or license agreements with larger third party pharmaceutical companies to complete the development and commercialization of our small molecule or other product candidates, and it is unknown whether or on what terms we will be able to secure collaboration or license agreements for any candidate. In addition, it is difficult to provide the impact of collaboration or license agreements, if any, on the development of product candidates. Establishing product development relationships with large pharmaceutical companies may or may not accelerate the time to completion or reduce our costs with respect to the development and commercialization of any product candidate.

As a result of these uncertainties and the other risks inherent in the drug development process, we cannot determine the duration and completion costs of current or future clinical stages of any of our product candidates. Similarly, we cannot determine when, if, or to what extent we may generate revenue from the commercialization and sale of any product candidate. The timeframe for development of any product candidate, associated development costs, and the probability of regulatory and commercial success vary widely. As a result, we continually evaluate our product candidates and make determinations as to which programs to pursue and how much funding to direct to specific candidates. These determinations are typically made based on consideration of numerous factors, including our evaluation of scientific and clinical trial data and an ongoing assessment of the product candidate's commercial prospects. We anticipate that we will continue to develop our portfolio of product candidates, which will increase our research and development expense in future periods. We do not expect any of our current candidates to be commercially available before 2012, if at all.

Prior to August 2007, costs associated with manufacturing Stimuvax were aggregated with other research and development expenses and reported as one line item. From August

2007 to December 2008, when we entered into the 2008 agreements, we reported costs associated with manufacturing Stimuvax as manufacturing expense. As a result of the entry into the 2008 agreements with Merck KGaA in December 2008, we will not incur manufacturing expenses associated with our arrangement with them.

General and Administrative. General and administrative expense consists principally of salaries, benefits, stock-based compensation expense, and related costs for personnel in our executive, finance, accounting, information technology, and human resource functions. Other general and administrative expenses include an allocation of our facility costs and professional fees for legal, consulting, and accounting services.

Marketing and Business Development. Marketing and business development expense consists principally of salaries, benefits, stock-based compensation expense, and related costs for marketing and business development personnel, including travel costs, research subscriptions, and other marketing administrative costs.

Depreciation. Depreciation expense consists of depreciation of the cost of plant and equipment such as scientific, office, manufacturing, and computer equipment as well as depreciation of leasehold improvements.

Investment Income and Other, Net. Investment income and other net, consists of interest and other income on our cash and short-term investments and foreign exchange gains and losses. Our short term investments consist of certificates of deposits issued by U.S. banks and insured by the Federal Deposit Insurance Corporation. Historically, our short term investments and cash balances were denominated in either U.S. dollars or Canadian dollars, and the relative weighting between U.S. dollars and Canadian dollars varied based on market conditions and our operating requirements in the two countries. However, with the reincorporation to, and concentration of our operating activities in, the United States, from October, 2008, our cash balances have been maintained predominantly in U.S. dollar deposits. We have historically not engaged in hedging transactions with respect to our U.S. and Canadian dollars investment assets or cash balances.

Interest Expense. Interest expense consists of interest payments under capital lease agreements for computer equipment.

Change in Fair Value of Warrants. Warrants issued in connection with our securities offering in May of 2009 are classified as a liability due to their settlement and other terms and, as such, were recorded at their estimated fair value on the date of the closing of the transaction. The warrants are marked to market for each financial reporting period, with changes in fair value recorded as a gain or loss in our statement of operations. The fair value of the warrants is determined using the Black-Scholes option-pricing model, which requires the use of significant judgment and estimates for the inputs used in the model. For more information, see “Note 4 — Fair Value Measurements” and “Note 10 — Share Capital” of the audited financial statements included elsewhere in this Annual Report on Form 10-K.

Provision for Income Tax. Due to our history of significant losses, and the limited number of jurisdictions in which we operate, we do not recognize the benefit of net operating losses as we have a full valuation allowance since the realization of these benefits is not reasonably assured. Our income tax provision relates to alternative minimum tax liability on the sale of manufacturing rights and know how to Merck KGaA in December 2008 and the final process transfer payment received in 2009.

Critical Accounting Policies and Significant Judgments and Estimates

We have prepared this management’s discussion and analysis of financial condition and results of operations based on our audited consolidated financial statements, which have been included in this report beginning on page F-1 and which have been prepared in accordance with generally accepted accounting principles in the United States. These

accounting principles require us to make significant estimates and judgments that can affect the reported amounts of assets and liabilities as of the dates of our consolidated financial statements as well as the reported amounts of revenue and expense during the periods presented. We believe that the estimates and judgments upon which we rely are reasonable based upon historical experience and information available to us at the time that we make these estimates and judgments. To the extent there are material differences between these estimates and actual results, our consolidated financial statements will be affected.

The Securities and Exchange Commission considers an accounting policy to be critical if it is important to a company's financial condition and results of operations and if it requires the exercise of significant judgment and the use of estimates on the part of management in its application. We have discussed the selection and development of our critical accounting policies with the audit committee of our board of directors, and our audit committee has reviewed our related disclosures in this report. Although we believe that our judgments and estimates are appropriate, actual results may differ from these estimates.

We believe the following to be our critical accounting policies because they are important to the portrayal of our financial condition and results of operations and because they require critical management judgment and estimates about matters that are uncertain:

- revenue recognition;
- goodwill impairment;
- stock-based compensation; and
- warrants classified as liabilities.

Revenue Recognition

We recognize revenue when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable, and collection is reasonably assured. In accordance with ASC Topic 605-25, we evaluate revenue from arrangements with multiple deliverables to determine whether the deliverables represent one or more units of accounting. A delivered item is considered a separate unit of accounting if the following separation criteria are met: (1) the delivered item has stand-alone value to the customer; (2) there is objective and reliable evidence of the fair value of any undelivered items; and (3) if the arrangement includes a general right of return relative to the delivered item, the delivery of undelivered items is probable and substantially in our control. The relevant revenue recognition accounting policy is then applied to each unit of accounting.

We have historically generated revenue from the following activities:

Contract Research and Development. Revenue from contract research and development consists of non-refundable research and development payments received under the terms of collaborative agreements. Payments under these arrangements compensate us for clinical trial activities performed with respect to the collaborative development programs for certain of our product candidates. Revenue is recognized on a proportionate performance basis as clinical activities are performed under the terms of collaborative agreements based on the activities performed to date compared to the total estimated activities. Pursuant to the 2001 agreements, Merck KGaA reimbursed us for our manufacturing costs and associated clinical trial material, which reimbursements were reflected as contract research and development revenue. In March 2006, we granted to Merck KGaA, in addition to the rights granted pursuant to the 2001 agreements, an exclusive license with respect to the clinical development and commercialization of Stimuvax in the United States and, subject to certain conditions, to act as a secondary manufacturer of Stimuvax, as described in "Management's Discussion and Analysis of Financial Condition and Results of Operation — Overview" above, while we continued to be

responsible for the manufacturing of the clinical and commercial supply of Stimuvax. This amendment of our arrangement with Merck KGaA effectively transitioned responsibility for all Stimuvax clinical development (along with the related costs) to Merck KGaA. Because of the change in our responsibilities for Stimuvax clinical trials, beginning in August 2007, we ceased to recognize, and do not anticipate recognizing in the near-term, any contract research and development revenue.

Contract Manufacturing. Revenue from contract manufacturing consists of payments received under the terms of supply agreements for the manufacturing of clinical trial material. Such payments compensate us for the cost of manufacturing clinical trial material and are recognized after shipment of the clinical trial material and upon the earlier of the expiration of a specified return period, as returns cannot be reasonably estimated, and formal acceptance of the clinical trial material by the customer. Pursuant to the 2006 letter of intent, we continued to be responsible for the manufacturing of the clinical and commercial supply of Stimuvax for which Merck KGaA agreed to pay us our cost of manufacturing (which included amounts owed to third parties). Merck KGaA's payments to us for the clinical supply of Stimuvax were reported as contract manufacturing revenue. Upon entering into the asset purchase agreement with Merck KGaA in December 2008, we recognized proceeds from the sale of inventory of raw materials, work-in-process and finished goods as contract manufacturing revenue. In connection with the December 2008 agreements, we granted to Merck KGaA the exclusive right to manufacture Stimuvax and transferred our manufacturing know-how and capabilities to Merck KGaA. As a result, we do not anticipate receiving such contract manufacturing revenue in the foreseeable future.

Licensing Revenue from Collaborative and License Agreements. Revenue from collaborative and license agreements consists of (1) up-front cash payments for initial technology access or licensing fees and (2) contingent payments triggered by the occurrence of specified events or other contingencies derived from our collaborative and license agreements. Royalties from the commercial sale of products derived from our collaborative and license agreements are reported as licensing, royalties, and other revenue.

If we have continuing obligations under a collaborative agreement and the deliverables within the collaboration cannot be separated into their own respective units of accounting, we utilize a multiple attribution model for revenue recognition as the revenue related to each deliverable within the arrangement should be recognized upon the culmination of the separate earnings processes and in such a manner that the accounting matches the economic substance of the deliverables included in the unit of accounting. As such, (1) up-front cash payments are recorded as deferred revenue and recognized as revenue ratably over the period of performance under the applicable agreement and (2) contingent payments are recorded as deferred revenue when all the criteria for revenue recognition are met and recognized as revenue ratably over the estimated period of our ongoing obligations. Royalties based on reported sales of licensed products, if any, are recognized based on the terms of the applicable agreement when and if reported sales are reliably measurable and collectibility is reasonably assured.

With respect to our arrangement with Merck KGaA, we determined that the estimated useful life of the products and estimated period of our ongoing obligations corresponded to the estimated life of the issued patents for such product. Under the 2001 agreements, payments that we received were recorded as deferred revenue and recognized ratably over the period from the date of execution of the 2001 agreements to 2011. We chose that amortization period because, at the time, we believed it reflected an anticipated period of "market exclusivity" based upon our expectation of the life of the patent protection, after which the market entry of competitive products would likely occur. Payments received pursuant to the letter of intent and the 2007 agreements were recorded as deferred revenue and recognized ratably over the remaining estimated product life of Stimuvax,

which was until 2018. Upon entering into the 2008 agreements, all of our future performance obligations related to our collaboration with Merck KGaA regarding Stimuvax were removed and our continuing involvement in the development and manufacturing of Stimuvax ceased; therefore, we recognized the balance of all previously recorded deferred revenue relating to our arrangement with Merck KGaA. Similarly, our receipt of the final manufacturing process transfer milestone payment in December 2009 was recognized currently since we had no continuing obligations pursuant to such arrangement. Any future contingent payments we receive pursuant to the 2008 license agreement will be immediately recognized in revenue.

Licensing, Royalties, and Other Revenue. Licensing, royalties, and other revenue consists of revenue from sales of compounds and processes from patented technologies to third parties and royalties received pursuant to collaborative agreements and license agreements. Royalties based on reported sales, if any, of licensed products are recognized based on the terms of the applicable agreement when and if reported sales are reliably measurable and collectibility is reasonably assured. As of the date of this report, we have not received any royalties pursuant to our arrangement with Merck KGaA.

If we have no continuing obligations under a license agreement, or a license deliverable qualifies as a separate unit of accounting included in a collaborative arrangement, license payments that are allocated to the license deliverable are recognized as revenue upon commencement of the license term and contingent payments are recognized as revenue upon the occurrence of the events or contingencies provided for in such agreement, assuming collectibility is reasonably assured.

Goodwill Impairment

Goodwill is carried at cost and is not amortized, but is reviewed annually for impairment in the fourth quarter, or more frequently when events or changes in circumstances indicate that the asset may be impaired. If the carrying value of goodwill exceeds its fair value, an impairment loss would be recognized. As of December 31, 2009, we had one reporting unit and there was a substantial excess of fair value compared to the carrying value. There were no impairment charges recorded for any of the periods presented.

Stock-Based Compensation

We maintain a share option plan under which an aggregate of 1,836,657 shares of common stock underlay outstanding options as of December 31, 2009 and an aggregate of 738,684 shares of common stock were available for future issuance. We maintain a restricted share unit plan under which an aggregate of 186,266 shares of common stock underlay restricted stock units, or RSUs, as of December 31, 2009 and an aggregate of 260,771 shares of common stock were available for future issuance. We have generally granted options to our employees and directors under the share option plan, and we have granted RSUs to non-employee directors under the restricted share unit plan. Prior to the April 1, 2008 amendment to our share option plan, we granted options with an exercise price denominated in Canadian dollars equal to the closing price of our shares on the Toronto Stock Exchange on the trading day immediately prior to the date of grant. In cases where our board of directors approved grants during a closed trading window under our insider trading policy, however, our board of directors fixed the exercise price based on the closing price of our common shares on Toronto Stock Exchange trading on the first trading day after our trading window opened. On and after April 1, 2008, we granted options with an exercise price denominated in U.S. dollars equal to the close price of our shares on The NASDAQ Global Market on the date of grant. On and after June 12, 2009 the fair value of the restricted share units has been determined to be the equivalent of our common shares closing trading price on the date immediately prior to the grant as quoted on The NASDAQ Global Market. Prior to that date, the fair value was computed using the closing

trading price on the date immediately prior to the grant as quoted in Canadian dollars on the Toronto Stock Exchange.

We apply the provisions of Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718, *Share-Based Payments*. We use the Black-Scholes option pricing model for determining the estimated fair value for stock-based awards, which requires the use of highly subjective and complex assumptions to determine the fair value of stock-based awards, including the option's expected term and the price volatility of the underlying stock. We recognize the value of the portion of the awards that is ultimately expected to vest as expense over the requisite vesting periods on a straight-line basis for the entire award in our consolidated statements of operations. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The following table summarizes the weighted average assumptions used in determining the fair value of stock options granted:

	Year Ended December 31, 2009	Year Ended December 31, 2008
Risk-free interest rate	2.47%	3.09%
Expected life of options in years	6.0	6.0
Expected dividend rate	0%	0%
Expected volatility	92.46%	114.19%
Weighted average grant-date fair value per share option $CDN	$ —	$ 3.84
Weighted average grant-date fair value per share option $USD	$ 3.03	$ 2.93

Historically we have based the risk-free interest rate for the expected term of the option on the yield available on Government of Canada benchmark bonds with an equivalent expected term. Subsequent to April 1, 2008, we use the yield at the time of grant of a U.S. Treasury security. The expected life of options in years represents the period of time stock-based awards are expected to be outstanding, giving consideration to the contractual terms of the awards, vesting schedules and historical employee behavior. The expected volatility is based on the historical volatility of our common stock for a period equal to the stock option's expected life.

Warrant liability

In May 2009, we issued warrants to purchase 2,909,244 shares of our common stock in connection with a registered direct offering of our common stock and warrants. These warrants are classified as a liability pursuant to the ASC Topic 815, *Derivatives and Hedging*, because of their settlement terms. Accordingly, the fair value of the warrants is recorded on our consolidated balance sheet as a liability, and such fair value is adjusted at each financial reporting period with the adjustment to fair value reflected in our consolidated statement of operations. The fair value of the warrants is determined using the Black-Scholes option pricing model. Fluctuations in the assumptions and factors used in the Black-Scholes model can result in adjustments to the fair value of the warrants reflected on our balance sheet and, therefore, our statement of operations. If, for example, the market value of our common stock or its volatility at December 31, 2009 were 10% higher or lower than used in the valuation of such warrants, our valuation of the warrants would have increased or decreased by up to $1.3 million or $0.5 million, respectively, with such difference reflected in our statement of operations.

Results of Operations for the years ended December 31, 2009, 2008 and 2007

The following table sets forth selected consolidated statements of operations data for each of the periods indicated.

Overview

	Years Ended December 31,		
	2009	2008	2007
	(In millions, except per share amounts)		
Revenue	$ 2.1	$ 40.3	$ 3.7
Expenses	(12.9)	(32.9)	(25.6)
Change in fair value of warrant liability	(6.2)	—	1.4
Provision for income tax	(0.2)	—	—
Net income (loss)	$ (17.2)	$ 7.4	$(20.4)
Earnings (loss) per share — basic	$(0.76)	$ 0.38	$ (1.05)
Earnings (loss) per share — diluted	$(0.76)	$ 0.38	$ (1.05)

We incurred a net loss of $17.2 million in 2009 compared to net income of $7.4 million in 2008. This decline was primarily driven by the entry into the 2008 agreements with Merck KGaA which resulted in the recognition of $13.2 million in deferred revenue under the arrangement superseded by the 2008 license agreement and $10.5 million from the license of the manufacturing rights to Stimuvax and know-how. Pursuant to the 2008 asset purchase agreement, we recognized $11.4 million in revenue along with the associated cost of sales of $9.7 million. The $20 million decrease in expenses from 2008 is related to the transfer of our Canadian facility to Merck KGaA in December 2008. In 2009, our operating loss reflected an expense related to the change in fair value of warrants issued in connection with our May 2009 financing and a provision for income tax of $0.2 million relating to alternative minimum tax liabilities arising from our December 2008 transaction with Merck KGaA and the final process transfer payment received in 2009. Based on our development plans for our small molecule candidates we will continue to incur operating losses for the foreseeable future.

Revenue

	Years Ended December 31,		
	2009	2008	2007
	(In millions)		
Contract research and development	$ —	$ —	$0.7
Contract manufacturing	—	15.6	2.5
Licensing revenues from collaborative agreements	2.1	24.7	0.4
Licensing, royalties and other revenue	—	—	0.1
	$2.1	$40.3	$ 3.7

As we licensed our manufacturing rights and transferred our manufacturing know-how and capabilities to Merck KGaA in December 2008, we did not receive any revenues from contract manufacturing during 2009. License revenue declined by $22.6 million in 2009 to $2.1 million from $24.7 million in 2008. The 2008 license revenue primarily reflects the acceleration of the recognition of $13.2 million in revenue that had been previously deferred and $10.5 million from the sale of our manufacturing rights and know-how to Merck KGaA. License revenue in 2009 included a $2.0 million contractually obligated payment from Merck KGaA.

Of the $13.1 million increase in contract manufacturing revenue in 2008 compared to 2007, $11.4 million was related to the bulk sale of our entire raw material, work in process and finished goods inventory to Merck KGaA in December 2008 and the remaining $1.7 million was related to increased sales to Merck KGaA during the rest of 2008 relative to 2007. As a result of such bulk sale and the related license of our Stimuvax manufacturing rights to Merck KGaA, we do not expect any contract manufacturing revenue for the foreseeable future.

The $24.3 million increase in our licensing revenue from collaborative and license agreements for 2008 relative to 2007 was directly attributable to the previously discussed December 2008 transactions with Merck KGaA and the recognition of previously deferred revenue related to our arrangement with them.

Research and Development/Manufacturing Expense

	Years Ended December 31,		
	2009	2008	2007
		(In millions)	
Research and development	$6.1	$ 8.8	$ 9.6
Manufacturing	—	13.7	2.6
	$6.1	$22.5	$12.2

The $2.7 million, or 30.7%, decrease in research and development expenses for 2009 compared to 2008 was due principally to the transfer of our Edmonton facility to Merck KGaA in December 2008 which included the transfer of 43 employees resulting in declines in salaries and compensation related expenses of $3.0 million, facility overhead costs of $0.9 million, lab supplies and consumables costs of $0.3 million and consultant compensation of $0.1 million. These decreases were partially offset by increases in clinical research and contract manufacturing of $0.7 million and $0.4 million respectively, relating to our small molecule candidates PX-478 and PX-866. In addition, grant revenue declined in 2009 by $0.5 million to $0.8 million from $1.3 million in 2008. As we continue with our clinical research on PX-478 and PX-866 and rebuild our research and development organization we expect that our research and development costs will increase in 2010.

Since we licensed our manufacturing rights and transferred our manufacturing know-how and capabilities to Merck KGaA in December 2008, we did not incur any costs related to this activity in 2009.

The $10.3 million, or 84.4%, increase in our combined research and development/ manufacturing expense for 2008 compared to 2007 primarily relates to the bulk sale of our inventory in 2008 to Merck KGaA resulting in the significant increase in cost of sales. The $0.8 million decrease in research and development in 2008 compared to 2007 is attributable primarily to higher allocation of research and development costs to product inventory as manufacturing activity increased during 2008.

General and Administrative

	Years Ended December 31,		
	2009	2008	2007
		(In millions)	
General and administrative	$6.6	$10.3	$12.2

The $3.7 million decline in 2009 relative to 2008 was principally due to the consolidation of our operations in the United States. This decline is attributable to decreases in staffing costs of $1.9 million, which included $0.5 million in severance costs, professional fees of $1.5 million, and facility and overhead of $0.3 million. We expect general and administration expenses to increase during 2010 due to increased legal and consulting costs related to regulatory compliance.

The $1.9 million decrease in our general and administrative expense for 2008 compared to 2007 was primarily attributable to higher legal, accounting and tax advisory professional fees incurred in 2007 associated with our reincorporation in United States.

Marketing and Business Development.

	Years Ended December 31,		
	2009	2008	2007
		(In millions)	
Marketing and business development	$—	$—	$0.6

We eliminated our marketing and business development organization as we increased our focus on the ongoing development of our newly acquired portfolio of small molecule compounds in connection with our acquisition of ProlX in late 2006.

Depreciation

	Years Ended December 31,		
	2009	2008	2007
		(In millions)	
Depreciation	$0.3	$0.4	$0.2

The $0.1 million decrease in our depreciation expense for 2009 compared to 2008 was due to the transfer of our Edmonton facility to Merck KGaA in December 2008. The $0.2 million increase in our depreciation expense for 2008 compared to 2007 reflects the increased investment in equipment and leasehold improvements made in 2007 and 2008.

Investment and Other (Income) Loss, Net

	Years Ended December 31,		
	2009	2008	2007
		(In millions)	
Investment and other (income) loss, net	$—	$(0.3)	$0.4

Our investment and other, net was not material in 2009 as $0.1 million in investment income was offset by foreign exchange losses from our receivable of withheld taxes from the German tax authorities during the year.

Our investment and other loss (income) increased from a loss of $0.4 million for the year ended December 31, 2007 to income of $0.3 million for the year ended December 31, 2008. The change was primarily attributable to $0.1 million gain from the sale of our manufacturing related plant and equipment to Merck KGaA and the decline in foreign exchange loss in 2008 of $0.1 million on our Canadian dollar holdings arising from increases in the value of the U.S. dollar relative to the Canadian dollar during the year compared to 2007 when we suffered foreign exchange losses of $1.4 million on U.S. dollar holdings arising from increases in the value of the Canadian dollar relative to the U.S. dollar in the previous year. Of the $0.7 million decrease, $1.5 million was attributable to increased foreign exchange losses, which was partially offset by a decrease in income from cash and investments of $0.8 million resulting from lower invested cash balances in 2008.

Change in Fair Value of Warrant Liability

	Years Ended December 31,		
	2009	2008	2007
		(In millions)	
Change in fair value of warrant liability	$6.2	$—	$(1.4)

The $6.2 million increase in change in fair value of warrant liability for the year ended 2009, relative to the comparable prior year period, was attributable to the warrants issued in connection with the May 2009 financing.

The exercise price of warrants issued in the January and December 2006 financing is denominated in U.S. dollars. Share purchase warrants with an exercise price denominated in a currency other than our functional currency, which, prior to January 1, 2008, was the Canadian dollar, are recorded as liabilities.

We recognized a $1.4 million recovery for 2007 as a result of a reduction in the fair value of warrant liability. Since we changed our functional currency to the U.S. dollar from the Canadian dollar effective January 1, 2008 and as the outstanding warrants issued in the January and December 2006 financings were denominated in U.S. dollars there is no further requirement under accounting standards to adjust such warrants to fair value through earnings at each reporting date.

Income tax provision

	Years Ended December 31,		
	2009	2008	2007
		(In millions)	
Current	$0.2	$—	$—

The provision for income tax in 2009 relates to alternative minimum tax incurred in connection with the December 2008 transactions with Merck KGaA and the final process manufacturing transfer payment received during 2009. While we have incurred substantial losses in historical periods (except for 2008), no tax benefit has been recognized as there are no assurances that we will realize such benefits.

Liquidity and Capital Resources

Cash, Cash Equivalents, Short Term Investments and Working Capital

As of December 31, 2009, our principal sources of liquidity consisted of cash and cash equivalents of $19.0 million and short term investments of $14.2 million. Our cash equivalents are invested in money market funds insured by the U.S. government and certificates of deposits insured by the Federal Deposit Insurance Corporation. Our primary source of cash has historically been proceeds from the issuance of equity securities, debt and equipment financings, and payments to us under licensing and collaboration agreements. These proceeds have been used to fund our losses from operations.

Our cash and cash equivalents were $19.0 million as of December 31, 2009 compared to $19.2 million as of December 31, 2008, a decrease of $0.2 million, or 1.0%. The net decrease reflects net cash used in operations of $9.1 million, net purchases of short term investments of $14.2 million and purchases of capital assets of $1.4 million offset by $24.6 million in net cash received from two financings in 2009.

Our cash and cash equivalents were $19.2 million as of December 31, 2008 compared to $12.0 million as of December 31, 2007, an increase of $7.1 million, or 59.3%. The net increase principally reflects net cash used in operations of $4.9 million offset by redemptions of short-term investments of $11.1 million.

As of December 31, 2009, our working capital was $31.5 million compared to $17.8 million as of December 31, 2008, an increase of $13.7 million, or 77.0%. The increase in working capital was primarily attributable to a $14.1 million increase in cash and cash equivalents and short term investments, $1.6 million decrease in accounts payable and accrued expenses, offset by a decline in accounts receivable of $1.8 million and a decline of prepaid expenses of $0.2 million. We believe that our currently available cash and cash equivalents is sufficient to finance our operations for at least the next 12 months. Nevertheless, we expect that we will require additional capital from time to time in the future in order to continue the development of products in our pipeline and to expand our product portfolio. We would expect to seek additional financing from the sale and issuance of equity or debt securities, and we cannot predict that financing will be available when and as we need

financing or that, if available, the financing terms will be commercially reasonable. If we are unable to raise additional financing when and if we require, it would have a material adverse effect on our business and results of operations. To the extent we issue additional equity securities, our existing stockholders could experience substantial dilution.

Our certificate of incorporation provides for the mandatory redemption of shares of our Class UA preferred stock if we realize "net profits" in any year. See "Note 10 — Share Capital" of the audited financial statements included elsewhere in this Annual Report on Form 10-K. For this purpose, "net profits … means the after tax profits determined in accordance with generally accepted accounting principles, where relevant, consistently applied."

The certificate of incorporation does not specify the jurisdiction whose generally accepted accounting principles would apply for the redemption provision. At the time of the original issuance of the shares, we were a corporation organized under the federal laws of Canada, and our principal operations were located in Canada. In addition, the original purchaser and current holder of the Class UA preferred stock is a Canadian entity. In connection with our reincorporation in Delaware, we disclosed that the rights, preferences and privileges of the shares would remain unchanged except as required by Delaware law, and the mandatory redemption provisions were not changed. In addition, the formula for determining the price at which such shares would be redeemed is expressed in Canadian dollars. Therefore, if challenged, we believe that a Delaware court would determine that "net profits" be interpreted in accordance with Canadian GAAP.

As a result of the December 2008 Merck KGaA transaction, we recognized on a one-time basis all deferred revenue relating to Stimuvax, under both U.S. GAAP and Canadian GAAP. Under U.S. GAAP this resulted in net income. However, under Canadian GAAP we were required to recognize an impairment on intangible assets which resulted in a net loss for 2008 and therefore did not redeem any shares of Class UA preferred stock in 2009. If in the future we recognize net income under Canadian GAAP, or any successor to such principles, or if the holder of Class UA preferred stock were to challenge, and prevail in a dispute involving, the interpretation of the mandatory redemption provision, we may be required to redeem such shares which would have an adverse effect on our cash position. The maximum aggregate amount that we would be required to pay to redeem such shares is CAN $1.25 million.

Cash Flows from Operating Activities

Cash used in operating activities is primarily driven by our net income (loss). However, operating cash flows differ from net income (loss) as a result of non-cash charges or differences in the timing of cash flows and earnings recognition. Significant components of cash used in operating activities are as follows:

Changes in accounts payable and accrued liabilities used $0.9 million in cash in 2009 mainly due to pay downs in accrued manufacturing and professional fees. Accrued compensation and related costs used $0.8 million in cash during the year as we made payments on severance agreements related to the restructuring in 2008.

Accounts receivable decreased by $1.8 million in 2009 principally on the collection of withheld taxes on the 2008 payment from Merck KGaA for the sale of our manufacturing rights and know-how.

Cash Flows from Investing Activities

We had cash outflows of $15.6 million from investing activities during the year ended December 31, 2009, a decrease of $27.4 million from the $11.8 million inflow in the year ended December 31, 2008. This change was attributable principally to net purchases of

short term investments of $14.2 million in 2009 compared to net redemptions in the prior year of $11.9 million and higher expenditures on capital assets of $0.7 million.

We had cash inflows of $11.8 million from investing activities during the year ended December 31, 2008, an increase of $7.6 million from the $4.2 million in cash inflows from investing activities for the year ended December 31, 2007. The increase in cash from investing activities 2008 compared to 2007 was attributable principally to lower net redemptions of short-term investments required to fund operations of $6.8 million and proceeds from the sale of plant and equipment of $0.5 million.

Cash Flows from Financing Activities

We generated $24.6 million of net cash during the year ended December 31, 2009 from financings completed in May and August 2009, each of which involved the issuance of common stock and warrants.

We used $0.1 million of cash in financing activities during the year ended December 31, 2008, a decrease of $0.1 million over the $0.2 million cash used in the year ended December 31, 2007. The decrease in cash used in financing activities between fiscal 2007 and fiscal 2008 was attributable principally to the reduction of cost related to shares and warrant issuance.

Contractual Obligations and Contingencies

In our continuing operations, we have entered into long-term contractual arrangements from time to time for our facilities, debt financing, the provision of goods and services, and acquisition of technology access rights, among others. The following table presents contractual obligations arising from these arrangements as of December 31, 2009:

		Payments Due by Period			
	Total	Less than 1 Year	1 — 3 Years	4 — 5 Years	After 5 Years
		(In thousands)			
Operating leases — premises	$5,055	$436	$1,014	$1,173	$2,432

In May 2008, we entered into a sublease for an office and laboratory facility in Seattle, Washington totaling approximately 17,000 square feet where we have consolidated our operations. The sublease expires on December 17, 2011. The sublease provides for a base monthly rent of $33,324 increasing to $36,354. In May 2008 we also entered into a lease directly with the landlord of such facility which will have a six year term beginning at the expiration of the sublease. The lease provides for a base monthly rent of $47,715 increasing to $52,259 in 2018.

In connection with the acquisition of ProlX, we assumed two loan agreements under which approximately $199,000 was outstanding at December 31, 2009. One loan, in the aggregate principal amount of $99,000, requires repayment only if we commercialize the product or service developed with the funds provided under the loan agreement. For purposes of the loan, a product or service is considered to be commercialized as of the date we receive FDA approval for the product or service or upon receipt of consideration for the sale or license of the product or service. In addition, if we commercialize a product or service developed with funding under the agreement, we are required to conduct manufacturing in the Commonwealth of Pennsylvania or pay a transfer fee equal to three times the amount of the funding. A second loan, in the aggregate principal amount of $100,000, is repayable on similar terms as the first loan in the event we commercialize a product or service developed with funding received under the second loan. In addition, under the second loan, if we commercialize a product or service funded under the second loan, we are obligated to maintain a “significant presence,” defined as 80% of our personnel, in the Commonwealth of Pennsylvania for a period of ten years or to pay a transfer fee equal to three times the amount of the funding. Finally, if we become obligated

to repay the loans as a result of having commercialized a product or service, the aggregate amount repayable will equal the original funded amount multiplied by a factor ranging from one to two, subject to certain conditions. As the timing of any future payments under these loans cannot be determined with any certainty, the related repayments have not been reflected in the above schedule of contractual obligations.

In connection with the acquisition of ProlX, we may become obligated to issue additional shares of our common stock to the former stockholders of ProlX upon satisfaction of certain milestones. We may become obligated to issue shares of our common stock with a fair market value of $5.0 million (determined based on a weighted average trading price at the time of issuance) upon the initiation of the first Phase 3 clinical trial for a ProlX product. We may become obligated to issue shares of our common stock with a fair market value of $10.0 million (determined based on a weighted average trading price at the time of issuance) upon regulatory approval of a ProlX product in a major market.

Under certain licensing arrangements for technologies incorporated into our product candidates, we are contractually committed to payment of ongoing licensing fees and royalties, as well as contingent payments when certain milestones as defined in the agreements have been achieved.

Guarantees and Indemnification

In the ordinary course of our business, we have entered into agreements with our collaboration partners, vendors, and other persons and entities that include guarantees or indemnity provisions. For example, our agreements with Merck KGaA and the former stockholders of ProlX contain certain tax indemnification provisions, and we have entered into indemnification agreements with our officers and directors. Based on information known to us as of December 31, 2009, we believe that our exposure related to these guarantees and indemnification obligations is not material.

Off-Balance Sheet Arrangements

During the period presented, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or for another contractually narrow or limited purpose.

Recent Accounting Pronouncements

In October 2009, the FASB issued an accounting standards update, or ASU, entitled, *Multiple-Deliverable Revenue Arrangements, a consensus of the FASB Emerging Issues Task Force*. This standard prescribes the accounting treatment for arrangements that contain multiple-deliverable elements and enables vendors to account for products or services (deliverables) separately, rather than as a combined unit, in certain circumstances. Prior to this standard, only certain types of evidence were acceptable for determining the relative selling price of the deliverables under an arrangement. If that evidence was not available, the deliverables were treated as a single unit of accounting. This updated standard expands the nature of evidence which may be used to determine the relative selling price of separate deliverables to include estimation. This standard is applicable to arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010. Early adoption is permitted; however, if the standard is adopted early, and the period of adoption is not the beginning of a company's fiscal year, the company will be required to apply the amendments retrospectively from the beginning of the company's fiscal year. We have not yet adopted this standard or determined the impact of this standard on our results of operations, cash flows and financial position.

In September 2008, the FASB ratified the consensus reached on EITF Issue No. 07-5, *Determining Whether an Instrument (or an Embedded Feature) is Indexed to an Entity's*

Own Stock, codified as ASC 815-40-15-5. Topic 815-40-15-5 provides guidance for determining whether an equity-linked financial instrument (or embedded feature) is indexed to an entity's own stock and applies to any freestanding financial instrument or embedded feature that has all the characteristics of a derivative under ASC Topic 815-10-15-13 through 15-139), for purposes of determining whether that instrument or embedded feature qualifies for the scope exception under ASC 815-10-15-74. Topic 815-40-15-5 also applies to any freestanding financial instrument that is potentially settled in an entity's own stock, regardless of whether the instrument has all the characteristics of a derivative for purposes of determining whether the instrument is within the scope of ASC Topic 815-40). Topic 815-40-15-5 was effective beginning the first quarter of 2009 and was applied by us in our accounting for the warrants issued in May and August 2009. See "Note 4 — Fair Value Measurements" of the audited financial statements included elsewhere in this Annual Report on Form 10-K for more information.

ITEM 7A. *Quantitative and Qualitative Disclosure About Market Risk*

Foreign Currency Exchange Risk

As of December 31, 2009 and 2008, approximately $17,644 and $15,300 respectively, of our cash, cash equivalents, were denominated in Canadian dollars. As a result, the carrying value of our cash and cash equivalents may be impacted by exchange rate fluctuations. At December 31, 2009, a 10% strengthening of the Canadian dollar against the U.S. dollar would have no material effect for the year ended December 31, 2009.

Interest Rate Sensitivity

We had cash, cash equivalents, and short-term investments totaling $33.2 million and $19.2 million as of December 31, 2009 and 2008, respectively. We do not enter into investments for trading or speculative purposes. We believe that we do not have any material exposure to changes in the fair value of these assets as a result of changes in interest rates due to the short term nature of our cash, cash equivalents, and short-term investments. Declines in interest rates, however, would reduce future investment income. A 100 basis point decline in interest rates, occurring January 1, 2009 and sustained throughout the period ended December 31, 2009, would result in a decline in investment income of approximately $0.2 million for that same period.

ITEM 8. *Financial Statements and Supplementary Data*

See Financial Statements beginning on page F-1.

ITEM 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure*

None.

ITEM 9A. *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our chief executive officer and principal financial and accounting officer, we conducted an evaluation of the effectiveness, as of December 31, 2009, of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act. The purpose of this evaluation was to determine whether as of the evaluation date our disclosure controls and procedures were effective to provide reasonable assurance that the information we are required to disclose in our filings with the Securities and Exchange Commission, or SEC, under the Exchange Act (i) is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including our chief

executive officer and principal financial and accounting officer, as appropriate to allow timely decisions regarding required disclosure. Based on that evaluation, management has concluded that as of December 31, 2009, our disclosure controls and procedures were not effective at the reasonable assurance level due to the material weaknesses in our internal controls described below in Management's Report on Internal Control over Financial Reporting.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. We have designed our internal controls to provide reasonable assurance that our financial statements are prepared in accordance with generally accepted accounting principles in the United States, or U.S. GAAP, and include those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and disposition of our assets;
- 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 are being made only in accordance with authorization of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Our management conducted an evaluation of the effectiveness of our internal controls based on the criteria set forth in the *Internal Control — Integrated Framework* developed by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, as of December 31, 2009.

In performing the assessment, our management identified two deficiencies in our internal controls over financial reporting that constitute material weaknesses under standards established by the Public Company Accounting Oversight Board, or PCAOB, as of December 31, 2009. Specifically, we do not have adequately designed controls in place to ensure the appropriate accounting for and disclosure of complex transactions in accordance with U.S. GAAP, and we do not have an adequately designed and implemented risk assessment process to identify complex transactions requiring specialized knowledge in the application of U.S. GAAP. This lack of adequate controls and an adequate risk assessment process resulted in our failure to identify and disclose the change in accounting policy related to license revenues in December 2008. Due to this error, we concluded that material weaknesses in internal control over financial reporting existed as of December 31, 2009 because there is a reasonable possibility that a material misstatement related to a future complex transaction may occur again and/or not be detected on a timely basis. As a result of these material weaknesses, management concluded that we did not maintain effective internal control over financial reporting as of December 31, 2009, based on the criteria established in *Internal Control — Integrated Framework*, issued by the COSO and consequently we did not maintain effective internal control over reporting.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

On May 5, 2010, management presented a proposed remediation plan to our audit committee concerning our internal controls over financial reporting to our board of directors, and the audit committee adopted management's remediation plan. We are in the

process of implementing this plan. Remedying the material weaknesses described above will require management time and attention over the coming quarters and will result in additional incremental expenses, which includes increasing the size of our finance organization and retaining outside consultants. Any failure on our part to remedy our identified weaknesses or any additional errors or delays in our financial reporting would have a material adverse effect on our business and results of operations and could have a substantial adverse impact on the trading price of our common stock.

Subject to oversight by our board of directors, our chief executive officer will be responsible for implementing management's internal control remediation plan, adopted by our audit committee and approved by our board of directors.

The remediation plan consists of the following modifications and improvements in our internal controls. We intend to retain outside consultants to assist us (i) to design and implement an adequate risk assessment process to identify future complex transactions requiring specialized knowledge to ensure the appropriate accounting for and disclosure of such transactions, and (ii) to identify and retain personnel with the appropriate technical expertise to assist us in accounting for complex transactions in accordance with U.S. GAAP.

The effectiveness of our internal control over financial reporting as of December 31, 2009 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report thereto, appearing in Part II Item 8 in this Annual Report on Form 10-K.

Inherent Limitation on the Effectiveness of Internal Controls

The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute assurances. In addition, 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. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

Changes in Internal Control over Financial Reporting

Except as described in Management's Report on Internal Control over Financial Reporting there have been no significant changes in our internal control over financial reporting during the year ended December 31, 2009 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. *Other Information*

None.

PART III

ITEM 10. *Directors, Executive Officers and Corporate Governance*

Executive Officers and Key Employees

The names, ages as of April 22, 2010 and positions of each of our executive officers and key employees in 2009 are set forth below.

Name	Age	Office
Executive Officers		
ROBERT KIRKMAN, M.D.	61	President, Chief Executive Officer and Director
SHASHI KARAN	56	Principal Financial Officer, Principal Accounting Officer and Corporate Secretary
GARY CHRISTIANSON	55	Chief Operating Officer
Key Employees		
DIANA HAUSMAN, M.D.	47	Vice President, Clinical Development
SCOTT PETERSON, Ph.D.	48	Vice President, Research and Development

Robert Kirkman, M.D. See "Directors, Executive Officers and Corporate Governance — Our Directors" included elsewhere in this Annual Report on Form 10-K for Dr. Kirkman's biographical information.

Shashi Karan has been serving as our principal financial officer and principal accounting officer, since January 1, 2009. Mr. Karan has served as our controller since April 1, 2008. Prior to joining us, from 2006 to 2007, Mr. Karan acted as a consultant, providing financial and accounting advice to various clients, with a focus on publicly-traded companies. From 2001 to 2005, Mr. Karan was vice president of finance of MusicNet Inc., a private online media company. From 1992 to 2000, Mr. Karan was senior director and corporate controller of Pathogenesis Corporation, a publicly-traded biotechnology company. Mr. Karan has been certified as a CPA in the State of Washington and received a B.A. (with honors) in economics from Leeds University, United Kingdom, and an M.S. in accounting from Long Island University and an M.S. in tax from Golden Gate University.

Gary Christianson was appointed as our chief operating officer in July 2007. From 2005 to 2007, Mr. Christianson was site director for the Biologics Unit of GlaxoSmithKline plc, a global healthcare company. From 1999 to 2003, Mr. Christianson was vice president, technical operations at Corixa Corp., a biopharmaceutical and biotechnology company, and from 2003 to 2005, he was promoted to general manager of the Hamilton, Montana site in addition to his duties as vice president. From 1987 to 1999, Mr. Christianson held various positions at RIBI ImmunoChem Research, Inc., a biopharmaceuticals company. Mr. Christianson received a B.S. in mechanical engineering technology from Montana State University and is a licensed and board certified professional engineer.

Diana Hausman, M.D. was appointed Vice President, Clinical Development in August 2009. From 2005 to 2009, Dr. Hausman served in a variety of positions at Zymogenetics, Inc., a biopharmaceutical company, most recently as Senior Director, Clinical Research. From 2002 until 2009, Dr. Hausman served as Senior Associated Medical Director at Berlex Inc., a biopharmaceutical company. Dr. Hausman received her A.B. in Biology from Princeton University, and her M.D. from the University of Pennsylvania School of Medicine. She was trained in internal medicine and hematology/oncology at the University of Washington and is board certified in medical oncology.

Scott Peterson, Ph.D. was appointed Vice President, Research and Development in June 2009. From 2007 until 2009 Dr. Peterson served as Director and Department Head, Oncology Research at Zymogenetics, Inc., a biopharmaceutical company. From 1999 to 2007, Dr. Peterson held a variety of positions at ICOS Corporation, a biopharmaceutical

company. Dr. Peterson received his Ph.D. in chemistry (biochemistry) from the University of Colorado, Boulder and holds a B.S. in biology from Washington State University.

Our Directors

The name, age, position(s), term, board committee membership and biographical information for each member of our Board of Directors is set forth below as of April 22, 2010:

Directors Continuing in Office Until the 2010 Annual Meeting of Stockholders

Richard Jackson, Ph.D., age 70, has been a member of our board of directors since May 2003. Dr. Jackson is the chairman of our compensation committee and a member of our corporate governance and nominating committee. Dr. Jackson is president of Jackson Associates, LLC, a biotechnology and pharmaceutical consulting company. Since September 2006, Dr. Jackson has also been president and chief executive officer of Ausio Pharmaceuticals, LLC, a drug development company. From May 2002 to May 2003, Dr. Jackson was president, chief executive officer and chairman of the board of directors of EmerGen, Inc., a biotechnology company. From November 1998 to January 2002, Dr. Jackson served as senior vice president, research and development for Atrix Laboratories, Inc., a biotechnology company. From January 1993 to July 1998, Dr. Jackson served as senior vice president, discovery research, at Wyeth Ayerst Laboratories, the pharmaceuticals division of American Home Products Corporation. Our corporate governance and nominating committee believes that Dr. Jackson's qualifications for membership on the board of directors include over 20 years of experience in academic medicine and over 25 years of experience at several pharmaceutical and biotechnology companies, with positions in both research and development and senior management. This experience allows Dr. Jackson to provide our board of directors with significant insights into the clinical development of our product candidates. Dr. Jackson served as a director of Inflazyme Pharmaceuticals Ltd. until 2007. Dr. Jackson received his Ph.D. in microbiology and his B.S. in chemistry from the University of Illinois.

Robert Kirkman, M.D., age 61, has served as a member of our board of directors and as our president and chief executive officer since September 2006. From 2005 to 2006, Dr. Kirkman was acting president and chief executive officer of Xcyte Therapies, Inc., which concluded a merger with Cyclacel Pharmaceuticals, Inc., both development stage biopharmaceuticals companies, in March of 2006. From 2004 to 2005, Dr. Kirkman was chief business officer and vice president of Xcyte. From 1998 to 2003, Dr. Kirkman was vice president, business development and corporate communications of Protein Design Labs, Inc., a biopharmaceuticals company. Our corporate governance and nominating committee believes that Dr. Kirkman's qualifications to for membership on the board of directors include his previous experience at development stage biotechnology companies and his position as our president and chief executive officer. Dr. Kirkman's scientific understanding along with his corporate vision and operational knowledge provide strategic guidance to our management team and our board of directors. Dr. Kirkman holds an M.D. degree from Harvard Medical School and a B.A. in economics from Yale University.

Directors Continuing in Office Until the 2011 Annual Meeting of Stockholders

Daniel Spiegelman, M.B.A., age 51, has been a member of our board of directors since June 2008. Mr. Spiegelman is the chairman of our audit committee and a member of our corporate governance and nominating committee. From 1998 to 2009, Mr. Spiegelman was employed at CV Therapeutics, Inc., a biopharmaceutical company acquired in 2009 by Gilead, most recently as senior vice president and chief financial officer. From 1992 to 1998, Mr. Spiegelman was an employee at Genentech, Inc., a biotechnology company, and most recently as treasurer. Mr. Spiegelman also serves as a member of the board of directors of Affymax, Inc., a biopharmaceuticals company, Cyclacel Pharmaceuticals, Inc., a

development-stage biopharmaceuticals company and Omeros Corporation, a clinical-stage biopharmaceutical company. Our corporate governance and nominating committee believes that Mr. Spiegelman's qualifications for membership on the board of directors include his extensive background in the financial and commercial issues facing growing biotechnology companies. Additionally, as chief financial officer of CV Therapeutics prior to its sale to Gilead Sciences, Mr. Spiegelman was involved in transitioning the company from a research and development focus to a commercial entity with two approved products. This experience allows Mr. Spiegelman to provide our board of directors with significant insights into financial strategy and organizational development. Mr. Spiegelman received his B.A. and M.B.A. from Stanford University.

Douglas Williams, Ph.D., age 52, has been a member of our board of directors since October 2009. Dr. Williams serves as a member of our audit committee. Dr. Williams joined ZymoGenetics in 2004 and has served as a director and chief executive officer since January 2009. He has held senior level positions at a number of prominent biotechnology companies, including Seattle Genetics, Inc., Immunex Corporation, and Amgen, Inc. As executive vice president and chief technology officer at Immunex, Dr. Williams played a significant role in the discovery and early development of Enbrel, the first biologic approved for the treatment of rheumatoid arthritis. Our corporate governance and nominating committee believes that Dr. Williams' qualifications for membership on the board of directors include over 20 years of experience in the biotechnology industry. During his career, Dr. Williams has been involved in the approval of three new protein therapeutics and in several label expansions. Further, as chief executive officer of ZymoGenetics, Dr. Williams provides our board of directors with significant insights into the strategic and operational issues facing our company. Dr. Williams currently serves as a director of Array BioPharma Inc., a biopharmaceutical company, and Aerovance, Inc., a privately-held biopharmaceutical company, and was a director of Anadys Pharmaceuticals, Inc., a biopharmaceutical company, and Seattle Genetics, a clinical stage biotechnology company, until 2009 and 2005, respectively. Dr. Williams received a B.S. (magna cum laude) in Biological Sciences from the University of Massachusetts, Lowell and a Ph.D. in Physiology from the State University of New York at Buffalo, Roswell Park Cancer Institute Division.

Directors Continuing in Office Until the 2012 Annual Meeting of Stockholders

Christopher Henney, Ph.D., age 69, has served as the chairman of our board of directors since September 2006 and as a member of our board of directors since March 2005. Dr. Henney is a member of our compensation and corporate governance and nominating committees. From 1995 to 2003, Dr. Henney was chairman and chief executive officer of Dendreon Corporation, a publicly-traded biotechnology company that he co-founded. Dr. Henney was also a co-founder of Immunex Corporation and ICOS Corporation, both publicly-traded biotechnology companies. Our corporate governance and nominating committee believes that Dr. Henney's qualifications for membership on the board of directors include his roles as co-founder of Dendreon, Immunex and ICOS, as well as his membership on the boards of directors of several development-stage biotechnology companies. Through his experience in working with biotechnology companies from founding until commercialization of their product candidates, Dr. Henney provides our board of directors with significant insights into the strategic, operational and clinical development aspects of the company. Dr. Henney currently serves as vice-chairman of the board of directors of Cyclacel Pharmaceuticals, Inc., a development-stage biopharmaceuticals company, a member of the board of directors of AVI BioPharma, Inc., a biopharmaceuticals company, and chairman of the board of directors of Anthera Pharmaceuticals, Inc., a biopharmaceutical company. Dr. Henney was the chairman of SGX Pharmaceuticals, Inc., a biotechnology company acquired by Eli Lilley in 2008. Dr. Henney received a Ph.D. in experimental pathology from the University of Birmingham, England,

where he also obtained his D.Sc. for contributions in the field of immunology. Dr. Henney is a former professor of immunology and microbiology and has held faculty positions at Johns Hopkins University, the University of Washington and the Fred Hutchinson Cancer Research Center.

W. Vickery Stoughton, age 64, has been a member of our board of directors since June 1997. Mr. Stoughton is a member of our audit and compensation committees. From August 2006 until September 2007, Mr. Stoughton served as president and chief executive officer of MagneVu Corporation, a medical devices company, which filed for bankruptcy in September 2007. From 1996 to 2002, Mr. Stoughton was chairman and chief executive officer of Careside Inc., a research and development medical devices company, which filed for bankruptcy in October 2002. From October 1995 to July 1996, Mr. Stoughton was president of SmithKline Beecham Diagnostics Systems Co., a diagnostic services and product company, and prior to October 1995 he served as president of SmithKline Beecham Clinical Laboratories, Inc., a clinical laboratory company. From 1988 until May 2008, Mr. Stoughton was a member of the board of directors of Sun Life Financial Inc., a financial services company. Our corporate governance and nominating committee believes that Mr. Stoughton's qualifications for membership on the board of directors include his involvement in several medical device companies, his role as president of SmithKline Beecham Clinical Laboratories, and his broader business background. Through this experience, Mr. Stoughton provides our board of directors with significant insights into the operational aspects of the company. Mr. Stoughton received his B.S. in chemistry from St. Louis University and his M.B.A. from the University of Chicago.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our directors and executive officers, and persons who own more than ten percent of a registered class of our equity securities, to file reports of ownership of, and transactions in, our securities with the Securities and Exchange Commission and NASDAQ. Such directors, executive officers, and ten percent stockholders are also required to furnish us with copies of all Section 16(a) forms that they file.

Based solely on a review of the copies of such forms received by us, or written representations from certain reporting persons, we believe that during 2009, our directors, executive officers, and ten percent stockholders complied with all Section 16(a) filing requirements applicable to them.

Code of Conduct

Our board of directors adopted a Code of Business Conduct and Ethics (the "Code of Conduct") for all our officers, directors, and employees in December 2003, which was last amended on March 13, 2008, and a Code of Ethics for the President and Chief Executive Officer, the Chief Financial Officer and Corporate Controller on March 25, 2003, which was subsequently amended on March 13, 2008, (the "Code of Ethics"). The Code of Conduct details the responsibilities of all our officers, directors, and employees to conduct our affairs in an honest and ethical manner and to comply with all applicable laws, rules, and regulations. The Code of Conduct addresses issues such as general standards of conduct, avoiding conflicts of interest, communications, financial reporting, safeguarding our assets, responsibilities to our customers, suppliers, and competitors, and dealing with governments. The Code of Ethics imposes additional requirements on our senior executive, financial and accounting officers with respect to conflicts of interest, accuracy of accounting records and periodic reports and compliance with laws. Each of the Code of Conduct and Code of Ethics is available on our website at www.oncothyreon.com.

Stockholder Nominations and Recommendations for Director Candidates

We have not made any material changes to the procedures by which our stockholders may recommend nominees to our board of directors since we last disclosed the procedures by which stockholders may nominate director candidates under the caption "Corporate Governance and Board Matters — Committees of the Board of Directors — Nominating and Governance Committee" in our proxy statement for the 2009 annual meeting of Oncothyreon stockholders filed with the SEC on April 30, 2009.

Audit Committee

We have a standing audit committee, which reviews with our independent registered public accounting firm the scope, results, and costs of the annual audit and our accounting policies and financial reporting. Our audit committee has (i) direct responsibility for the appointment, compensation, retention, and oversight of our independent registered public accounting firm, (ii) establishes procedures for handling complaints regarding our accounting practices, (iii) authority to engage any independent advisors it deems necessary to carry out its duties, and (iv) appropriate funding to engage any necessary outside advisors. The current members of the audit committee are Daniel Spiegelman (Chairman), W. Vickery Stoughton and Douglas Williams. Christopher Henney was a member of the audit committee until December 2009, when he stepped down from the audit committee in connection with Dr. Williams' appointment. The board of directors has determined that Mr. Spiegelman, the chairman of the audit committee, is an "audit committee financial expert" as that term is defined in Item 407(d)(5) of Regulation S K promulgated by the SEC. The audit committee reviews and reassesses the adequacy of its charter on an annual basis.

ITEM 11. *Executive Compensation*

Compensation Discussion and Analysis

Compensation Philosophy and Objectives

Historically, the principal objectives of the compensation policies and programs of Oncothyreon and its predecessor corporation, Biomira Inc. (which we will refer to throughout this discussion as "us," "our," and "we") have been to attract and retain senior executive management, to motivate their performance toward clearly defined corporate goals, and to align their long term interests with those of our stockholders. In addition, our compensation committee believes that maintaining and improving the quality and skills of our management and appropriately incentivizing their performance are critical factors affecting our stockholders' realization of long-term value.

Our compensation programs have reflected, and for the foreseeable future should continue to reflect, the fact that we are a biopharmaceutical company whose principal compounds are still in early stage clinical trials and subject to regulatory approval. As a result, our revenues have been and will continue to be limited, and we expect to continue to incur net losses for at least the next several years. In an effort to preserve cash resources, our historical compensation programs have focused heavily on long-term equity incentives relative to cash compensation. With a relatively larger equity weighting, this approach seeks to place a substantial portion of executive compensation at risk by rewarding our executive officers, in a manner comparable to our stockholders, for achieving our business and financial objectives.

In addition to long-term equity incentives, we have also implemented a performance-based cash bonus program for our executive officers and employees. Payments under this performance-based cash bonus program have been based on achievement of pre-established corporate and individual performance goals, with the relative weighting among goals individualized to reflect each person's unique contributions. With respect to our

executive officers, 100% of their goals are tied to corporate objectives to reflect the fact that our executive officers make key strategic decisions influencing our company as a whole and thus, it is more appropriate to reward performance against corporate objectives.

We design and implement compensation programs that combine both long term equity elements and cash incentive elements based on annual performance objectives. Our compensation committee has not, however, adopted any formal or informal policies or guidelines for allocating compensation between cash and equity compensation or among different forms of non-cash compensation. The compensation committee's philosophy is that a substantial portion of an executive officer's compensation should be performance-based, whether in the form of equity or cash compensation. In that regard, we expect to continue to use options or other equity incentives as a significant component of compensation because we believe that they align individual compensation with the creation of stockholder value, and we expect any payments under cash incentive plans to be tied to annual performance targets.

Role of Our Compensation Committee

Our compensation committee is comprised of three non-employee members of our board of directors, Dr. Henney, Dr. Jackson and Mr. Stoughton, each of whom is an independent director under the rules of The NASDAQ Global Market, an "outside director" for purposes of Section 162(m) of the United States Internal Revenue Code of 1986, as amended, which we call Section 162(m), and a "non-employee director" for purposes of Rule 16b-3 under the Exchange Act.

Our compensation committee approves, administers, and interprets our executive compensation and benefit policies. Our compensation committee acts exclusively as the administrator of our equity incentive plans and approves all grants to employees, including our executive officers. Our compensation committee operates pursuant to a written charter under which our board of directors has delegated specific authority with respect to compensation determinations. Among the responsibilities of our compensation committee are the following:

- evaluating our compensation practices and assisting in developing and implementing our executive compensation program and philosophy;
- establishing a practice, in accordance with the rules of The NASDAQ Global Market, of determining the compensation earned, paid, or awarded to our chief executive officer independent of input from him; and
- establishing a policy, in accordance with the rules of The NASDAQ Global Market, of reviewing on an annual basis the performance of our other executive officers with assistance from our chief executive officer and determining what we believe to be appropriate compensation levels for such officers.

The compensation committee's charter allows the committee to form subcommittees for any purpose that the committee deems appropriate and may delegate to such subcommittees such power and authority as the committee deems appropriate. For example, the compensation committee has delegated certain powers and authority to the new employee option committee as set forth in "— Share Option Plan" included elsewhere in this Annual Report on Form 10-K.

Our chief executive officer actively supports the compensation committee's work by providing information relating to our financial plans, performance assessments of our executive officers, and other personnel related data. In particular, our chief executive officer, as the person to whom our other executive officers report, is responsible for evaluating individual officers' contributions to corporate objectives as well as their performance relative to divisional and individual objectives. Our chief executive officer, on an annual basis at or shortly after the end of each year, makes recommendations to the

compensation committee with respect to merit salary increases, cash bonuses, and stock option grants or other equity incentives for our other executive officers. Our compensation committee meets to evaluate, discuss, modify or approve these recommendations. Without the participation of the chief executive officer, the compensation committee as part of the annual review process conducts a similar evaluation of the chief executive officer's contribution and performance and makes determinations, at or shortly after the end of each year, with respect to merit salary increases, bonus payments, stock option grants, or other forms of compensation for our chief executive officer.

Our compensation committee has the authority under its charter to engage the services of outside advisors, experts, and others for assistance. The compensation committee did not rely on any outside advisors for purposes of structuring our 2009 compensation plan but did rely on the survey data described below.

Competitive Market Review for 2009

The market for experienced management is highly competitive in the life sciences and biopharmaceutical industries. We seek to attract and retain the most highly qualified executives to manage each of our business functions, and we face substantial competition in recruiting and retaining management from companies ranging from large and established pharmaceutical companies to entrepreneurial early stage companies. We expect competition for appropriate technical, commercial, and management skills to remain strong for the foreseeable future.

In making our executive compensation determinations for 2009, we benchmarked our compensation levels using U.S. professional salary surveys. These include:

- Radford Global Life Sciences Salary Survey 2009; and
- WorldatWork Salary Survey 2009.

In evaluating the survey data, our compensation committee compared our compensation practices and levels for each compensation component including base salary, annual performance-based bonuses, and equity compensation with the salary survey data. This information was used to determine appropriate levels of compensation based on market benchmarks for various functional titles. Based on this data, our compensation committee believes that our levels of total compensation for our executive officers generally fell at about the 50th percentile.

Peer Group Companies for 2009

In analyzing our executive compensation program for 2009, the compensation committee compared certain aspects of compensation, including base salary and equity incentives, to those provided by our peer group. This peer group included small biotechnology companies with which we compete for executive talent. For 2009, our peer group consisted of:

- Cell Therapeutics, Inc.;
- Omeros Corporation;
- Seattle Genetics, Inc.;
- Trubion Pharmaceuticals Inc.; and
- ZymoGenetics Inc.

Principal Elements of Executive Compensation

Our executive compensation program consists of five components:

- base salary;
- annual performance-based cash bonuses;

- equity-based incentives;
- benefits; and
- severance/termination protection.

We believe that each of these components, combining both short and long-term incentives, offers a useful element in achieving our compensation objectives and that collectively these components have been effective in achieving our corporate goals.

Annual Review Process

Our compensation committee reviews data and makes executive compensation decisions on an annual basis, typically during the last quarter of the year or the first quarter of the new year. In connection with that process, executive officers are responsible for establishing and submitting for review to our chief executive officer (and in the case of our chief executive officer, directly to the compensation committee) their departmental goals and financial objectives. Our chief executive officer then compiles the information submitted and provides it, along with information relating to his own personal goals and objectives, to our compensation committee for review. Our compensation committee, including our chief executive officer with respect to all officers other than himself and excluding our chief executive officer with respect to discussions of his own compensation, reviews, considers, and may amend the terms and conditions proposed by management.

As part of the annual review process, our compensation committee makes its determinations of changes in annual base compensation for executive officers based on numerous factors, including performance over the prior year, both individually and relative to corporate or divisional objectives, established corporate and divisional objectives for the next year, our operating budgets, and a review of survey data relating to base compensation for the position at companies we have identified within our peer group. During the annual review process, our compensation committee also considered each executive's equity incentive position, including the extent to which he or she was vested or unvested in his or her equity awards and the executive's aggregate equity incentive position.

From time to time, our compensation committee may make off-cycle adjustments in executive compensation as it determines appropriate. For example, in March 2009, our compensation committee considered and approved a special cash bonus for each of our chief executive officer and chief operating officer in connection with the successful completion of the 2008 transaction with Merck KGaA.

Weighting of Compensation Elements

Our compensation committee's determination of the appropriate use and weight of each element of executive compensation is subjective, based on its view of the relative importance of each element in meeting our overall objectives and factors relevant to the individual executive. Like many biopharmaceutical companies with clinical-stage products, we seek to place a significant amount of each executive's total potential compensation "at risk" based on performance.

Base Salary

Base salary for our chief executive officer and other officers reflects the scope of their respective responsibilities, their relative seniority and experience, and competitive market factors. Salary adjustments are typically based on competitive conditions, individual performance, changes in job duties, and our budget requirements.

In our offer letter with Dr. Kirkman, we agreed to pay him an initial base salary at $320,000. Our compensation committee set Dr. Kirkman's base salary based on his experience and our compensation committee's view of market compensation for chief

executive officers of public, early stage biopharmaceutical companies. For 2007, Dr. Kirkman's base salary remained at $320,000. On January 14, 2008, Dr. Kirkman's base salary was increased to $375,000 for 2008. Dr. Kirkman's base salary remained at $375,000 for 2009, but on December 3, 2009, the compensation committee increased Dr. Kirkman's salary to $386,250 for 2010.

For a discussion of the base salaries of our other executive officers, see "— Employment Agreements and Offer Letters" included elsewhere in this Annual Report on Form 10-K.

Variable Cash Compensation — Incentive Bonuses

We pay performance-based bonuses to our executive officers and other employees pursuant to our performance review policy, which we believe enhances each individual employee's incentive to contribute to corporate objectives and aligns their interests with our stockholders.

Under the performance review policy, our executive officers and employees are eligible to receive bonuses based on achievement of pre-established corporate and individual performance goals, but the weighting among the goals is individualized to each person to reflect his or her unique contributions to the company. Each goal is assigned a percentage for each person based on the importance to us that the goal be achieved with respect to that person. Generally, achievement of a particular goal will result in the payment of the expected level of incentive compensation associated with such goal. Partial achievement can result in the payment of less or no incentive compensation and likewise, superior achievement of any performance goal may result in the payment in excess of the target level of incentive compensation; however, there is not a fixed formula for determining the amount of incentive compensation for partial or above target achievement. Rather, in all cases, the compensation committee, with respect to executive officers, and our chief executive officer, with respect to other employees, retains discretion to increase or decrease variable cash incentive compensation as it or he determines appropriate, based on actual achievement against the goals, whether performance is at, above or below the target for the goal.

Typically, the maximum incentive compensation to which an executive officer or employee is entitled is based on a percentage of such individual's base salary. For example, if (i) an executive's base salary is $100,000, (ii) he is eligible to receive a bonus up to 50% of his base salary, or $50,000, (iii) the compensation committee has established four performance goals, each weighted at 25% and (iv) the compensation committee determines that the executive has achieved two of the four performance goals, then, the executive would be eligible to receive, subject to the discretion of the compensation committee, a bonus of $25,000.

Performance goals may be both qualitative and quantitative and are designed to be specific, measurable, relevant to our company, completed within a fixed period of time and defined by significant achievements that go beyond an individual's job responsibilities. Although performance goals are intended to be achievable with significant effort, we do not expect that every goal will be actually attained in any given year.

Performance goals are generally split between corporate and personalized individual performance objectives. With respect to our executive officers, 100% of their goals are tied to corporate objectives to reflect the fact that our executive officers make key strategic decisions influencing the company as a whole and thus, it is more appropriate to reward performance against corporate objectives. Reflective of the decreasing level of influence within our company as a whole, with respect to our director-level and senior director-level employees, at least 60% of the performance objectives must be linked to corporate objectives and with respect to non-executive management and senior nonexecutive management employees, at least 40% of the performance objectives must be linked to

corporate objectives. In each case the remaining performance objectives will be linked to personalized individual performance goals based on the nature of the individual's role within our company. We designed the performance review policy in this manner based on our belief that more senior personnel are in a greater position to influence the achievement of corporate objectives, and therefore, a greater number of their performance goals should be tied to corporate rather than personalized individual objectives.

Our compensation committee is responsible for setting performance goals, assessing whether such goals have been achieved and determining the amount of bonuses (if any) to be paid with respect to our executive officers, while the chief executive officer bears such responsibility for other employees. Performance goals for the upcoming year are typically established at or shortly after the end of the prior year. Assuming that a determination is made that a bonus has been earned, we will typically pay bonuses to employees shortly after the end of each year and to executive officers shortly after the first scheduled meeting of the compensation committee each year. An individual must remain actively employed by the company through the actual date of payment to receive a bonus.

The weighting of bonuses between the performance goals varies from executive officer to executive officer based on an analysis of each executive officer's role and position within the company. For example, because Mr. Karan holds a key leadership position as our corporate controller, we felt it appropriate to more heavily weight his bonus on achievement with respect to a cash position target. As both Dr. Hausman and Dr. Peterson were new employees hired in 2009 and not involved in the goal setting for 2009, neither is reflected in the table below. The allocation between the corporate performance goals for each executive officer for 2009 is set forth in the following table:

Named Executive Officer	Cash Position (1)	Market Capitalization (2)	Phase 2 Progression (3)	Pre-Clinical Assessment (4)	Strategic Planning (5)	Transfer of Corporate Activities to Seattle Headquarters (6)
Robert Kirkman	35%	10%	30%	15%	5%	5%
Gary Christianson	20	5	20	15	20	20
Shashi Karan	70	10	—	—	—	20

(1) As of December 31, 2009, we had sufficient cash and short term investments to fund our operations at least through December 31, 2010, as determined in the discretion of our board of directors.

(2) Attain a market capitalization of at least $38 million as of December 31, 2009.

(3) Continued progress through a Phase 2 trial of a product candidate or the license or acquisition of a product candidate in or beyond Phase 2.

(4) Timely completion of outside assessments of the preclinical package for PX-478 and PX-866.

(5) Timely establish and implement to the extent possible in 2009 strategic planning with respect to PX-478 and PX-866.

(6) Completion of the transfer of all corporate activities to the Seattle headquarters by December 31, 2009 within budget.

In addition to the corporate performance goals set forth above, Mr. Karan was given an additional set of individual performance goals. The 2009 individual performance goals for Mr. Karan related to the establishment of an internal management reporting system (25%), improvements in internal controls (25%), the liquidation of certain company subsidiaries (20%), support of financing activities (20%) and the establishment of an internal system to value goodwill and test for impairment (10%).

The target and actual bonus amounts for 2009 for our named executive officers were as follows, based on achievement against the corporate performance goals (as discussed above):

Named Executive Officer	Base Salary ($)	Annual Target as Percentage of Base Salary	Target Bonus ($)	Target Goals Achieved	2009 Incentive Bonus Actually Paid ($)
Robert Kirkman	$ 375,000	50%	$187,500	70%(1)	$131,250
Gary Christianson	250,000	35	87,500	80(2)	70,000
Diana Hausman	290,000	30	87,000	100(3)	29,000(3)
Scott Peterson	175,000	25	43,750	100(3)	18,229 (3)
Shashi Karan.	165,000	20	33,000	90(4)	29,700

(1) Dr. Kirkman earned 70% of his performance goals based on our achievement against all of the corporate performance goals (as discussed above) except for the achievement of the "Phase 2 Progression" goal, which was not met.

(2) Mr. Christianson earned 80% of his performance goals based on our achievement against all of the corporate performance goals (as discussed above) except for the achievement of the "Phase 2 Progression" goal, which was not met.

(3) As both Dr. Hausman and Dr. Peterson were new employees hired in 2009 and not involved in the goal setting for 2009, the compensation committee approved that their bonuses be paid at target for their high level of performance during 2009, pro-rated for their length of service during 2009. Specifically, when deciding to pay their bonuses at target, the compensation committee took note of the substantial contributions by Drs. Hausman and Peterson to the development of PX-866.

(4) Mr. Karan earned 90% of his performance goals based on our achievement of the corporate performance goals (as discussed above) and 90% achievement of his individual performance goals (as discussed above).

In December 2009, the compensation committee approved target percentages for 2010, which percentages remain unchanged from 2009. Dr. Kirkman, Mr. Christianson, Dr. Hausman, Dr. Peterson and Mr. Karan are eligible to receive in 2010 incentive bonuses under our performance review policy of up to 50%, 35%, 30%, 25% and 20%, respectively, of their base salary. The 2010 performance goals for our executive officers are expected to be related to various corporate objectives, including objectives related to our financial condition, development of our product candidates and certain business development activities (although the weighting for such performance goals will differ between such executive officers).

Equity-based Incentives

We grant equity-based incentives to employees, including our executive officers, in order to create a corporate culture that aligns employee interests with stockholder interests. We have not adopted any specific stock ownership guidelines, and our equity incentive plans have provided the principal method for our executive officers to acquire an equity position in our company.

Historically, we have granted options to our executive officers under our share option plan. Our share option plan permits the grant of stock options for shares of common stock. All equity incentive programs are administered by our compensation committee (other than grants of restricted share units to non-employee directors, which are overseen by the corporate governance and nominating committee and grants of stock options to certain new employees by the new employee option committee). To date, our equity incentive grants have consisted of options under the share option plan.

The size and terms of any initial option grants to new employees, including executive officers, at the time they join us is based largely on competitive conditions applicable to the specific position. For non-executive officer grants, our compensation committee has pre-approved a matrix showing appropriate levels of option grants for use in making offers to new employees.

In making its determination of the size of initial option grants for our current executive officers, our board of directors relied in part on survey data and peer group comparisons. On May 3, 2007, Dr. Kirkman, our chief executive officer, received an option to purchase 137,537 shares of our common stock at an exercise price per share of Cdn.$8.04, in connection with the terms of his offer letter, under which he was eligible to receive an additional option award to purchase a number of shares equal to 3% of any shares issued during his first year of employment with us. Such grant has vested or will vest, in four equal annual installments of 34,384 shares on May 3, 2008, 2009, 2010, and 2011. Consistent with the provisions of our share option plan as in effect at the time of grant, the option was priced at the closing price of our shares of common stock on the Toronto Stock Exchange on the day immediately prior to the date of board approval. The exercise prices of all outstanding options granted to Dr. Kirkman prior to April 2008 were based on the Toronto Stock Exchange trading price and were priced in Canadian dollars. Beginning in April 2008, the exercise price of option grants were based on The NASDAQ Global Market trading price and were priced in U.S. dollars. On June 4, 2008, Dr. Kirkman received an additional option to purchase 45,000 shares of our common stock at an exercise price per share of $3.43. This grant has vested or will vest, in four equal annual installments of 11,250 shares on June 4, 2009, 2010, 2011 and 2012. On March 11, 2009, Dr. Kirkman also received an additional option to purchase 100,000 shares of our common stock at an exercise price per share of $1.10. This grant has vested or will vest, in four equal annual installments of 25,000 shares on March 11, 2010, 2011, 2012 and 2013. Also, on December 3, 2009, Dr. Kirkman received an additional option to purchase 200,000 shares of our common stock at an exercise price per share of $4.71. This grant will vest in four equal annual installments of 50,000 shares on December 3, 2010, 2011, 2012 and 2013. Our compensation committee believes that the size and terms of Dr. Kirkman's stock option grants were reasonable given our early stage of product development and skill requirements for senior management, Dr. Kirkman's industry experience and background, and equity compensation arrangements for experienced chief executive officers at comparably situated companies.

In addition, our practice has been to grant refresher options to employees, including executive officers, when our board of directors or compensation committee believes additional unvested equity incentives are appropriate as a retention incentive. For example, in March 2009 and again in December 2009, we granted refresher options to some of our employees (including our executive officers) pursuant to the standard vesting and other terms of our share option plan. We expect to continue this practice in the future in connection with the compensation committee's annual performance review, generally conducted at the beginning of each year. In making its determination concerning additional option grants, our compensation committee will also consider, among other factors, prior individual performance in his or her role as an executive officer, or employee, of our company, and the size of the individual's equity grants in the then-current competitive environment. Where our compensation committee has approved option grants for executive officers or other employees during a regular quarterly closed trading window under our insider trading policy, we have priced the options based on the closing sales price of our common stock on the first trading day after the window opened.

To date, our equity incentives have been granted with time-based vesting. Most option grants approved by the compensation committee vest and become exercisable in four equal annual installments beginning on the first anniversary of the grant date. We expect

that additional option grants to continuing employees will typically vest over the same schedule. Although our practice in recent years has been to provide equity incentives principally in the form of stock option grants that vest over time, our compensation committee may consider alternative forms of equity in the future, such as performance shares, restricted share units or restricted stock awards with alternative vesting strategies based on the achievement of performance milestones or financial metrics.

As noted above, consistent with the terms of the share option plan and subject to the policy against pricing options during regularly scheduled closed quarterly trading windows, we have historically priced option grants based on the closing sales price of our shares of common stock trading on the Toronto Stock Exchange. On April 3, 2008 our board of directors amended our share option plan to provide that each option granted pursuant to the plan be priced at the closing price of our shares of common stock on The NASDAQ Global Market on the day of the option grant.

During 2009, we granted, in the aggregate, the following options to our executive officers as follows:

Named Executive Officer	Options (#)
Robert Kirkman	300,000
Gary Christianson	130,000
Diana Hausman	80,000
Scott Peterson	75,000
Shashi Karan	57,500

Benefits

We provide the following benefits to our named executive officers, generally on the same basis provided to all of our employees:

- health, dental insurance and vision (for the employee and eligible dependents);
- flexible spending accounts for medical and dependent care;
- life insurance;
- employee assistance plan (for the employee and eligible dependents);
- short-and long-term disability, accidental death and dismemberment; and
- a 401(k) plan with an employer match into the plan.

Severance/Termination Protection

We entered into offer letters with our named executive officers when each was recruited for his or her current position. These offer letters provide for general employment terms and, in some cases, benefits payable in connection with the termination of employment or a change in control. The compensation committee considers such benefits in order to be competitive in the hiring and retention of employees, including executive officers.

In addition, these benefits are intended to incentivize and retain our officers during the pendency of a proposed change in control transaction and align the interests of our officers with our stockholders in the event of a change in control. The compensation committee believes that proposed or actual change in control transactions can adversely impact the morale of officers and create uncertainty regarding their continued employment. Without these benefits, officers may be tempted to leave the company prior to the closing of the change in control, especially if they do not wish to remain with the entity after the transaction closes. Such departures could jeopardize the consummation of the transaction or our interests if the transaction does not close and we remain independent.

All arrangements with the named executive officers and the potential payments that each of the named executive officers would have received if a change in control or termination of employment would have occurred on December 31, 2009, are described in "— Employment Agreements and Offer Letters" and "— Potential Payments on Termination or Change in Control" included elsewhere in this Annual Report on Form 10-K.

Accounting and Tax Considerations

Section 162(m) limits the amount that we may deduct for compensation paid to our chief executive officer and to each of our four most highly compensated officers to $1,000,000 per person, unless certain exemption requirements are met. Exemptions to this deductibility limit may be made for various forms of "performance-based" compensation. In addition to salary and bonus compensation, upon the exercise of stock options that are not treated as incentive stock options, the excess of the current market price over the option price, or option spread, is treated as compensation and accordingly, in any year, such exercise may cause an officer's total compensation to exceed $1,000,000. Under certain regulations, option spread compensation from options that meet certain requirements will not be subject to the $1,000,000 cap on deductibility. While the compensation committee cannot determine with certainty how the deductibility limit may impact our compensation program in future years, the compensation committee intends to maintain an approach to executive compensation that strongly links pay to performance. While the compensation committee has not adopted a formal policy regarding tax deductibility of compensation paid to our chief executive officer and our four most highly compensated officers, the compensation committee intends to consider tax deductibility under Section 162(m) as a factor in compensation decisions.

Compensation Committee Interlocks and Insider Participation

During 2009, Richard Jackson, Christopher Henney and W. Vickery Stoughton served on our compensation committee. During 2009, no member of our compensation committee was an officer or employee or formerly an officer of our company, and no member had any relationship that would require disclosure under Item 404 of Regulation S-K of the Securities Exchange Act of 1934. None of our executive officers has served on the board of directors or the compensation committee (or other board committee performing equivalent functions) of any other entity, one of whose executive officers served on our board of directors or on our compensation committee.

Compensation Committee Report

The information contained in this report will not be deemed to be "soliciting material" or to be "filed" with the SEC, nor will such information be incorporated by reference into any future filing under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate it by reference in such filing.

In reliance on the reviews and discussions referred to above and the review and discussion of the section captioned "Compensation Discussion and Analysis" with our management, the compensation committee has recommended to the board of directors and the board of directors has approved, that the section captioned "Compensation Discussion and Analysis" be included in this Annual Report on Form 10-K and the proxy statement for our annual meeting of stockholders.

COMPENSATION COMMITTEE

Richard Jackson, Chairman
Christopher Henney
W. Vickery Stoughton

Summary Compensation Table — 2009, 2008 and 2007

The following table sets forth the compensation earned by or awarded to, as applicable, our principal executive officer, principal financial officer and other executive officers during each of 2007, 2008 and 2009. We refer to these officers in this Annual Report on Form 10-K as the "named executive officers."

Name and Principal Position	Year	Salary ($)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)(2)	All Other Compensation ($)(3)	Total ($)
Robert Kirkman(4)	2009	$375,000	$796,412	$131,250	$11,586	$1,314,248
President, Chief Executive Officer and Director	2008	375,000	131,737	176,250	15,066	698,053
	2007	320,000	812,100	116,000	10,272	1,258,372
Shashi Karan(5)	2009	165,000	183,932	29,700	5,961	384,593
Corporate Controller and Corporate Secretary	2008	112,500	29,275	22,500	3,575	167,850
Gary Christianson(6)	2009	250,000	380,868	70,000	7,836	708,704
Chief Operating Officer	2008	247,200	43,912	93,500	31,198	415,810
	2007	92,769	85,831	40,000	2,923	221,523
Diana Hausman(7)	2009	96,667	289,222	29,000	3,012	417,501
Vice President, Clinical Development						
Scott Peterson(8)	2009	72,917	287,250	18,229	2,109	380,505
Vice President, Research and Development						

(1) These amounts represent the aggregate grant date fair value of option awards for fiscal years 2007, 2008 and 2009. These amounts do not represent the actual amounts paid to or realized by the named executive officer for these awards during fiscal years 2007, 2008 or 2009. The value as of the grant date for stock options is recognized over the number of days of service required for the grant to become vested. For a more detailed description of the assumptions used for purposes of determining grant date fair value, see "Part II — Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Significant Judgments and Estimates — Stock-Based Compensation" and "Note 11 — Stock-Based Compensation" of the audited financial statements included elsewhere in this Annual Report on Form 10-K.

(2) The amounts in this column represent total performance-based bonuses earned for services rendered during the year under our performance review policy, for 2007, 2008 and 2009, for executive officers, in which all employees were eligible to participate. Under the applicable bonus plan for each year, each executive was eligible to receive a cash bonus based on achievement of a combination of corporate or divisional objectives. Please see "—Compensation Discussion and Analysis — Variable Cash Compensation — Incentive Bonuses" included elsewhere in this Annual Report on Form 10-K for additional information regarding our variable cash compensation policies for executive officers.

(3) Except as disclosed in the other footnotes, the amounts in this column consist of contributions made by us pursuant to our 401(k) plan.

(4) Amounts listed in "All Other Compensation" include life insurance premiums of $336 for each of 2007, 2008 and 2009.

(5) Mr. Karan's employment with the Company began on April 1, 2008 and he was appointed principal financial officer and principal accounting officer effective January 1, 2009. Amounts listed in "All Other Compensation" include life insurance premiums of $252 and $336 for 2008 and 2009, respectively.

(6) Mr. Christianson's employment with the Company began on August 1, 2007. Amounts listed in "All Other Compensation" include life insurance premiums of $140, $336 and $336 for 2007, 2008 and 2009, respectively, and $22,246 for relocation costs in 2008.

(7) Dr. Hausman's employment with the Company began on September 1, 2009. Amounts listed in "All Other Compensation" include life insurance premiums of $112.

(8) Dr. Peterson's employment with the Company began on August 1, 2009. Amounts listed in "All Other Compensation" include life insurance premiums of $140.

Grants of Plan-Based Awards

The following table sets forth each grant of an award made to a named executive officer during 2009 under any of our incentive plans or equity plans.

Name	Grant Date (1)	Estimated Future Payouts Under Non-Equity Incentive Plan Awards Target ($)(2)(3)	All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards ($/Sh)(1)	Grant Date Fair Value of Stock and Option Awards ($)(4)
Robert L. Kirkman(5) . .	March 11, 2009	$187,500	100,000	$ 1.10	$ 86,689
	December 3, 2009	—	200,000	4.71	709,723
Shashi Karan(6)	March 11, 2009	33,000	7,500	1.10	6,502
	December 3, 2009	—	50,000	4.71	177,431
Gary Christianson(7) . .	March 11, 2009	87,500	30,000	1.10	26,007
	December 3, 2009	—	100,000	4.71	354,862
Diana Hausman(8)	October 1, 2009	87,000	30,000	4.96	111,791
	December 3, 2009	—	50,000	4.71	177,431
Scott Peterson(9).	August 3, 2009	43,750	25,000	6.56	109,819
	December 3, 2009	—	50,000	4.71	177,431

(1) Consistent with the provisions of our share option plan in effect at the date of grant, options were priced at the closing sales price of our shares of common stock in trading on The NASDAQ Global Market on the grant date.

(2) Performance bonuses were earned in 2009. The actual amounts paid to each of the named executive officers for 2009 are set forth in the individual footnotes below.

(3) There was no set "Threshold" or "Maximum" performance bonus amounts established with respect to our 2009 non-equity incentive plan awards, pursuant to the description set forth under the heading "— Compensation Discussion and Analysis — Variable Cash Compensation— Incentive Bonuses" included elsewhere in this Annual Report on Form 10-K.

(4) These amounts represent the grant date fair value of option awards granted in 2009. These amounts do not represent the actual amounts paid to or realized by the named executive officer for these awards during fiscal year 2009. The value as of the grant date for stock options is recognized over the number of days of service required for the grant to become vested. For a more detailed description of the assumptions used for purposes of determining grant date fair value, see "Part II — Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Significant Judgments and Estimates — Stock-Based Compensation" and "Note 11 — Stock-Based Compensation" of the audited financial statements included elsewhere in this Annual Report on Form 10-K.

(5) On December 3, 2009, the compensation committee approved a performance bonus of $131,250 under the performance review policy.

(6) On December 3, 2009, the compensation committee approved a performance bonus of $29,700 under the performance review policy.

(7) On December 3, 2009, the compensation committee approved a performance bonus of $70,000 under the performance review policy.

(8) On December 3, 2009, the compensation committee approved a performance bonus of $29,000 under the performance review policy, which represents a bonus paid at target and pro-rated for her length of service during 2009.

(9) On December 3, 2009, the compensation committee approved a performance bonus of $18,229 under the performance review policy, which represents a bonus paid at target and pro-rated for his length of service during 2009.

Outstanding Equity Awards at 2009 Fiscal Year-End

The following table sets forth the equity awards outstanding at December 31, 2009 for each of the named executive officers. Except as set forth in the footnotes to the following table, each stock option is fully vested.

	Option Awards			
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($Cdn. or $U.S.)(1)	Option Expiration Date
Robert L. Kirkman . .	450,000	—(2)	Cdn.$7.38	August 29, 2014
	68,769	68,768(3)	Cdn.$8.04	May 3, 2015
	11,250	33,750(4)	$ 3.43	June 4, 2016
	—	100,000(5)	$ 1.10	March 11, 2017
	—	200,000(6)	$ 4.71	December 3, 2017
Shashi K. Karan	2,500	7,500(4)	$ 3.43	June 4, 2016
	—	7,500(5)	$ 1.10	March 11, 2017
	—	50,000(6)	$ 4.71	December 3, 2017
Gary Christianson . .	8,333	8,333(7)	Cdn.$6.72	June 29, 2015
	3,750	11,250(4)	$ 3.43	June 4, 2016
	—	30,000(5)	$ 1.10	March 11, 2017
	—	100,000(6)	$ 4.71	December 3, 2017
Diana Hausman	—	30,000(8)	$ 4.96	September 1, 2017
	—	50,000(6)	$ 4.71	December 3, 2017
Scott Peterson	—	25,000(9)	$ 6.56	August 1, 2017
	—	50,000(6)	$ 4.71	December 3, 2017

(1) In April 2008, the board of directors approved an amendment to the Company's amended and restated share option plan, which provided that the exercise price of any future grants would equal the closing price of the Company's common stock traded on The NASDAQ Global Market on the date of grant. Unless otherwise indicated, all exercise prices are denominated in U.S. dollars.

(2) This stock option fully vests on August 29, 2009, and vests at a rate of 1/3 annually on the anniversary of grant.

(3) This stock option fully vests on May 3, 2011, and vests at a rate of 1/4 annually on the anniversary of grant.

(4) This stock option fully vests on June 4, 2012, and vests at a rate of 1/4 annually on the anniversary of grant.

(5) This stock option fully vests on March 11, 2013, and vests at a rate of 1/4 annually on the anniversary of grant.

(6) This stock option fully vests on December 3, 2013, and vests at a rate of 1/4 annually on the anniversary of grant.

(7) This stock option fully vests on June 29, 2011, and vests at a rate of 1/4 annually on the anniversary of grant.

(8) This stock option fully vests on September 1, 2013, and vests at a rate of 1/4 annually on the anniversary of grant.

(9) This stock option fully vests on August 1, 2013, and vests at a rate of 1/4 annually on the anniversary of grant.

Option Exercises and Stock Vested

None of our named executive officers exercised stock options during 2009. We have not granted any stock awards to date.

Employment Agreements and Offer Letters

Unless stated otherwise, all compensation data in the section below is expressed in U.S. dollars.

Employee Benefit Plans

Our share option plan, in which our employees and officers participate, provides for the acceleration of vesting of awards in connection with or following a change in control of the company. A "change in control" shall be deemed to have occurred if (i) our board of directors passes a resolution to the effect that, for purposes of the share option plan, a change in control has occurred or (ii) any person or any group of two or more persons acting jointly or in concert becomes the beneficial owner, directly or indirectly, or acquires the right to control or direct, twenty-five (25)% per cent or more of our outstanding voting securities or any successor entity in any manner, including without limitation as a result of a takeover bid or an amalgamation with any other corporation or any other business combination or reorganization. See "— Share Option Plan" included elsewhere in this Annual Report on Form 10-K.

Robert Kirkman

On August 29, 2006, we entered into an offer letter with Robert Kirkman, M.D., our president and chief executive officer. In consideration for his services, Dr. Kirkman was initially entitled to receive a base salary of $320,000 per year, subject to increases as may be approved by the compensation committee. In January 2008, Dr. Kirkman's base salary was increased to $375,000 for 2008. Dr. Kirkman's base salary remained at $375,000 for 2009, but in December 2009, the compensation committee increased Dr. Kirkman's salary to $386,250 for 2010. Dr. Kirkman is also entitled to receive a performance bonus of up to 50% of his base salary based on his achievement of predetermined objectives and on December 3, 2009, Dr. Kirkman received a performance bonus of $131,250. In addition, the compensation committee may award, in its sole discretion, Dr. Kirkman additional performance bonuses in recognition of his performance and on March 6, 2009, Dr. Kirkman received a special bonus of $120,000 for the successful completion of our December 2008 transaction with Merck KGaA.

In accordance with the offer letter of August 29, 2006, Dr. Kirkman was granted an option to purchase 450,000 shares of our common stock at a price of Cdn.$7.38 per share. As a result of the ProlX acquisition, which we completed in October 2006, and the financing we completed in December 2006, on May 3, 2007, Dr. Kirkman was granted an additional option to purchase 137,537 shares of our common stock on May 3, 2007 at an exercise price of Cdn.$8.04, in connection with the terms of his offer letter, under which he was eligible to receive an additional option award to purchase a number of shares equal to 3% of any shares issued during his first year of employment with us and 100% of these shares will vest if there is a change of control transaction.

In December 2009, we entered into an amendment to Dr. Kirkman's offer letter. Pursuant to the terms of the amendment, Dr. Kirkman will receive the following benefits if we undergo a change of control transaction (as defined in the share option plan), in addition to the stock option vesting acceleration described above:

- lump sum payment of two year's base salary, less required withholding; and
- lump sum payment of two year's equivalent of performance review bonus at target, less required withholding.

Additionally, if Dr. Kirkman is terminated without cause (as defined in the December 2009 amendment), he will receive the following benefits:

- lump sum payment of one year's base salary, less required withholding; and

- lump sum payment of one year's equivalent of performance review bonus at target, less required withholding.

Shashi Karan

We are parties to an offer letter dated March 24, 2008 with Shashi Karan, our corporate controller and corporate secretary. In consideration for his services, Mr. Karan was initially entitled to receive a base salary of $150,000 per year, subject to increases as may be approved by the compensation committee. In March 2009 and December 2009, Mr. Karan's base salary was increased to $165,000 for 2009 and $175,000 for 2010, respectively. Mr. Karan is also entitled to receive a performance bonus of up to 20% of his base salary based on his achievement of predetermined objectives and on December 3, 2009, Mr. Karan received a performance bonus of $29,700.

In accordance with the offer letter of March 24, 2008, Mr. Karan was granted an option to purchase 10,000 shares of our common stock at a price of $3.43 per share and 100% of these shares will vest if there is a change of control transaction.

In December 2009, we entered into an amendment to Mr. Karan's offer letter. Pursuant to the terms of the amendment, Mr. Karan will receive the following benefits if we undergo a change of control transaction (as defined in the share option plan), in addition to the stock option vesting acceleration described above:

- lump sum payment of one year's base salary, less required withholding; and
- lump sum payment of one year's equivalent of performance review bonus at target, less required withholding.

Gary Christianson

We are parties to an offer letter dated June 29, 2007 with Gary Christianson, our chief operating officer. In consideration for his services, Mr. Christianson was initially entitled to receive a base salary of $240,000 per year, subject to increases as may be approved by the compensation committee. In January 2008 and March 2009, Mr. Christianson's base salary was increased to $247,200 for 2008 and $250,000 for 2009, respectively. In December 2009, Mr. Christianson's base salary was increased to $275,000 for 2010. Mr. Christianson is also entitled to receive a performance bonus of up to 35% of his base salary based on his achievement of predetermined objectives and on December 3, 2009, Mr. Christianson received a performance bonus of $70,000. In addition, the compensation committee may award, in its sole discretion, Mr. Christianson additional performance bonuses in recognition of his performance and on March 6, 2009, Mr. Christianson received a special bonus of $20,000 for the successful completion of our December 2008 transaction with Merck KGaA.

In accordance with the offer letter of June 29, 2007, Mr. Christianson was granted an option to purchase 16,666 shares of our common stock at a price of Cdn.$6.72 per share and 100% of these shares will vest if there is a change of control transaction.

In December 2009, we entered into an amendment to Mr. Christianson's offer letter. Pursuant to the terms of the amendment, Mr. Christianson will receive the following benefits if we undergo a change of control transaction (as defined in the share option plan), in addition to the stock option vesting acceleration described above:

- lump sum payment of one year's base salary, less required withholding; and
- lump sum payment of one year's equivalent of performance review bonus at target, less required withholding.

Additionally, if Mr. Christianson is terminated without cause (as defined in the June 2007 offer letter), he will receive the following benefits:

- lump sum payment of nine month's base salary, less required withholding;

- lump sum payment of nine month's equivalent of performance review bonus at target, less required withholding; and
- health insurance coverage for a period of nine months.

Diana Hausman

We are parties to an offer letter dated July 6, 2009 with Diana Hausman, M.D., our vice president of clinical development. In consideration for her services, Dr. Hausman was initially entitled to receive a base salary of $290,000 per year, subject to increases as may be approved by the compensation committee. In December 2009, Dr. Hausman's base salary was increased to $298,700 for 2010. Dr. Hausman is also entitled to receive a performance bonus of up to 30% of her base salary based on her achievement of predetermined objectives and on December 3, 2009, Dr. Hausman received a performance bonus of $29,000.

In accordance with the offer letter of July 6, 2009, Dr. Hausman was granted an option to purchase 30,000 shares of our common stock at a price of $4.96 per share and 100% of these shares will vest if there is a change of control transaction.

In December 2009, we entered into an amendment to Dr. Hausman's offer letter. Pursuant to the terms of the amendment, Dr. Hausman will receive the following benefits if we undergo a change of control transaction (as defined in the share option plan), in addition to the stock option vesting acceleration described above:

- lump sum payment of one year's base salary, less required withholding; and
- lump sum payment of one year's equivalent of performance review bonus at target, less required withholding.

Additionally, if Dr. Hausman is terminated without cause (as defined in the July 2009 offer letter), she will receive the following benefits:

- lump sum payment of six month's base salary, less required withholding; and
- lump sum payment of six month's equivalent of performance review bonus at target, less required withholding.

Scott Peterson

We are parties to an offer letter dated June 4, 2009 with Scott Peterson, Ph.D., our vice president of research and development. In consideration for his services, Dr. Peterson was initially entitled to receive a base salary of $175,000 per year, subject to increases as may be approved by the compensation committee. In December 2009, Dr. Peterson's base salary was increased to $180,250 for 2010. Dr. Peterson is also entitled to receive a performance bonus of up to 25% of his base salary based on his achievement of predetermined objectives and on December 3, 2009, Dr. Peterson received a performance bonus of $18,229.

In accordance with the offer letter of June 4, 2009, Dr. Peterson was granted an option to purchase 25,000 shares of our common stock at a price of $6.56 per share and 100% of these shares will vest if there is a change of control transaction.

In December 2009, we entered into an amendment to Dr. Peterson's offer letter. Pursuant to the terms of the amendment, Dr. Peterson will receive the following benefits if we undergo a change of control transaction (as defined in the share option plan), in addition to the stock option vesting acceleration described above:

- lump sum payment of one year's base salary, less required withholding; and
- lump sum payment of one year's equivalent of performance review bonus at target, less required withholding.

Potential Payments Upon Termination or Change in Control

The tables below describe the payments and benefits our named executive officers would be entitled to receive assuming the occurrence on December 31, 2009 of either a change of control transaction or termination of their employment without "cause" (as defined below). For additional details regarding the payments and benefits our named executive officers are entitled to, please see "— Employment Agreements and Offer Letters" included elsewhere in this Annual Report on Form 10-K.

Robert L. Kirkman

	Change of Control			Termination Other Than for Cause(3)		
Name	Equity Acceleration (1)	Salary (2)	Insurance Benefits	Equity Acceleration (4)	Salary (5)	Insurance Benefits
Robert L. Kirkman . .	$631,150	$1,125,000	$—	$—	$562,500	$—

(1) The amount shown in this column is calculated as the spread value of all unvested stock options held by Dr. Kirkman on December 31, 2009, assuming a stock price of $5.39 per share, the last reported sale price of our common stock on The NASDAQ Global Market on December 31, 2009.

(2) The amount shown in this column is a lump sum payment equal to two times Dr. Kirkman's base salary for 2009 plus two year's equivalent of his performance review bonus at target. Such payments will be made within 60 days following a change of control, provided that, within 45 days of a change of control, Dr. Kirkman signs a separation agreement in a form reasonably satisfactory to us, which shall include a general release of all claims against us.

(3) For purposes of Dr. Kirkman's offer letter, "cause" includes, among other things (i) willful engaging in illegal conduct or gross misconduct which is injurious to us, (ii) being convicted of, or entering a plea of *nolo contendere* or guilty to, a felony or a crime of moral turpitude, (iii) engaging in fraud, misappropriation, embezzlement or any other act or acts of dishonesty resulting or intended to result directly or indirectly in a gain or personal enrichment of him at our expense, (iv) material breach of any of our written policies, or (v) willful and continual failure substantially to perform his duties, which failure has continued for a period of at least 30 days after written notice by us.

(4) Pursuant to the terms of our share option plan, there is no acceleration of vesting if Dr. Kirkman is terminated without cause.

(5) The amount shown in this column is a lump sum payment equal to Dr. Kirkman's base salary for 2009 plus one year's equivalent of his performance review bonus at target. Such payments will be made within 60 days following termination other than for cause, subject to any payment delay in order to comply with Section 409A of the Internal Revenue Code.

Shashi Karan

	Change of Control		
Name	Equity Acceleration(1)	Salary(2)	Insurance Benefits
Shashi Karan	$80,875	$198,000	$—

(1) The amount shown in this column is calculated as the spread value of all unvested stock options held by Mr. Karan on December 31, 2009, assuming a stock price of $5.39 per share, the last reported sale price of our common stock on The NASDAQ Global Market on December 31, 2009.

(2) The amount shown in this column is a lump sum payment equal to Mr. Karan's base salary for 2009 plus one year's equivalent of his performance review bonus at target.

Such payments will be made within 60 days following a change of control, provided that, within 45 days of a change of control, Mr. Karan signs a separation agreement in a form reasonably satisfactory to us, which shall include a general release of all claims against us.

Gary Christianson

	Change of Control			Termination Other Than for Cause(3)		
Name	Equity Acceleration (1)	Salary (2)	Insurance Benefits	Equity Acceleration (4)	Salary (5)	Insurance Benefits
Gary Christianson . .	$218,750	$337,500	$—	$—	$253,125	8,085

(1) The amount shown in this column is calculated as the spread value of all unvested stock options held by Mr. Christianson on December 31, 2009, assuming a stock price of $5.39 per share, the last reported sale price of our common stock on The NASDAQ Global Market on December 31, 2009.

(2) The amount shown in this column is a lump sum payment equal to Mr. Christianson's base salary for 2009 plus one year's equivalent of his performance review bonus at target. Such payments will be made within 60 days following a change of control, provided that, within 45 days of a change of control, Mr. Christianson signs a separation agreement in a form reasonably satisfactory to us, which shall include a general release of all claims against us.

(3) For purposes of Mr. Christianson's offer letter, "cause" includes, among other things (i) willful engaging in illegal conduct or gross misconduct which is injurious to us, (ii) being convicted of, or entering a plea of *nolo contendere* or guilty to, a felony or a crime of moral turpitude, (iii) engaging in fraud, misappropriation, embezzlement or any other act or acts of dishonesty resulting or intended to result directly or indirectly in a gain or personal enrichment of him at our expense, (iv) material breach of any of our written policies, or (v) willful and continual failure substantially to perform his duties, which failure has continued for a period of at least 30 days after written notice by us.

(4) Pursuant to the terms of our share option plan, there is no acceleration of vesting if Mr. Christianson is terminated without cause.

(5) The amount shown in this column is a lump sum payment equal to nine months of Mr. Christianson's base salary for 2009 plus nine month's equivalent of his performance review bonus at target. If Mr. Christianson is a "specified employee" within the meaning of Section 409A of the Internal Revenue Code and any final regulations and official guidance promulgated thereunder, at the time of his separation from service, then, if required, the amounts shown in this column, which are otherwise due on or within the six-month period following the separation from service will accrue, to the extent required, during such six-month period and will become payable in a lump sum payment six months and one day following the date of separation from service.

Diana Hausman

	Change of Control			Termination Other Than for Cause(3)		
Name	Equity Acceleration (1)	Salary (2)	Insurance Benefits	Equity Acceleration (4)	Salary (5)	Insurance Benefits
Diana Hausman . . .	$46,900	$377,000	$—	$—	$188,500	$—

(1) The amount shown in this column is calculated as the spread value of all unvested stock options held by Dr. Hausman on December 31, 2009, assuming a stock price of $5.39 per share, the last reported sale price of our common stock on The NASDAQ Global Market on December 31, 2009.

(2) The amount shown in this column is a lump sum payment equal to Dr. Hausman's base salary for 2009 plus one year's equivalent of her performance review bonus at target. Such payments will be made within 60 days following a change of control, provided that, within 45 days of a change of control, Dr. Hausman signs a separation agreement in a form reasonably satisfactory to us, which shall include a general release of all claims against us.

(3) For purposes of Dr. Hausman's offer letter, "cause" includes, among other things (i) willful engaging in illegal conduct or gross misconduct which is injurious to us, (ii) being convicted of, or entering a plea of *nolo contendere* or guilty to, a felony or a crime of moral turpitude, (iii) engaging in fraud, misappropriation, embezzlement or any other act or acts of dishonesty resulting or intended to result directly or indirectly in a gain or personal enrichment of him at our expense, (iv) material breach of any of our written policies, or (v) willful and continual failure substantially to perform his duties, which failure has continued for a period of at least 30 days after written notice by us.

(4) Pursuant to the terms of our share option plan, there is no acceleration of vesting if Dr. Hausman is terminated without cause.

(5) The amount shown in this column is a lump sum payment equal to six months of Dr. Hausman's base salary for 2009 plus six month's equivalent of her performance review bonus at target.

Scott Peterson

	Change of Control		
Name	Equity Acceleration(1)	Salary(2)	Insurance Benefits
Scott Peterson	$34,000	$218,750	$—

(1) The amount shown in this column is calculated as the spread value of all unvested stock options held by Dr. Peterson on December 31, 2009, assuming a stock price of $5.39 per share, the last reported sale price of our common stock on The NASDAQ Global Market on December 31, 2009.

(2) The amount shown in this column is a lump sum payment equal to Dr. Peterson's base salary for 2009 plus one year's equivalent of his performance review bonus at target. Such payments will be made within 60 days following a change of control, provided that, within 45 days of a change of control, Dr. Peterson signs a separation agreement in a form reasonably satisfactory to us, which shall include a general release of all claims against us.

Share Option Plan

Our board of directors adopted our share option plan on December 9, 1992 and our stockholders approved it on May 26, 1993. Our share option plan was amended and restated as of May 3, 2007, April 3, 2008 and October 22, 2009. Unless further amended by our stockholders, our share option plan will terminate on May 3, 2017. Our share option plan provides for the grant of nonstatutory stock options to selected employees, directors and persons or companies engaged to provide ongoing management or consulting services for us, or any entity controlled by us. The employees, directors and consultants who have been selected to participate in our share option plan are referred to below as "participants."

Share Reserve

The total number of shares of common stock issuable pursuant to options granted under our share option plan shall, at any time, be 10% of our issued and outstanding shares of common stock. We had reserved a total of 2,575,341 shares of our common stock for issuance pursuant to our share option plan as of December 31, 2009. As of December 31,

2009, options to purchase 1,836,657 shares of our common stock were outstanding and 738,684 shares of our common stock were available for future grant under our share option plan.

Administration

The compensation committee of our board of directors administers our share option plan. Under our share option plan, the plan administrator has the power, subject to certain enumerated restrictions in our share option plan, to determine the terms of the awards, including the employees, directors and consultants who will receive awards, the exercise price of the award, the number of shares subject to each award, the vesting schedule and exercisability of each award and the form of consideration payable upon exercise.

In addition, the compensation committee has delegated to the new employee option committee the authority to approve grants of stock options to newly hired employees who are not our chief executive officer, president, chief financial officer (or principal financial officer, if no person holds the office of chief financial officer), vice president or a Section 16 officer (as determined pursuant to the rules promulgated under the Securities Exchange Act of 1934). The new employee option committee is composed of our chief executive officer, our principal financial officer and our head of human resources. The new employee option committee meets during the last full week of each month and may only grant stock option awards. The stock options granted by the new employee option committee must have an exercise price equal to the closing sales price of our common stock as reported by The NASDAQ Global Market on the last trading day of the month in which such grants were approved. These grants must fall within a predetermined range approved by the compensation committee and may not deviate from the standard vesting terms (i.e., awards vest over a four year period, with 25% of the shares subject to an award vesting on the first anniversary of the optionee's commencement of employment and the balance vesting in equal monthly increments for 36 months following the first anniversary of the commencement of employment).

Share Options

The exercise price of the shares subject to options granted under our share option plan shall be determined by our compensation committee or board of directors, but shall not be less than the fair market value of the shares. Generally, the exercise price will be the closing price of our common stock on the day of the option grant. Until April 3, 2008, for purposes of our share option plan, the fair market value meant the closing price of our common stock as reported by the Toronto Stock Exchange on the day preceding the day on which the option is granted. If no trade of shares of our common stock was reported on the Toronto Stock Exchange that day, then the fair market value was not less than the mean of the bid and ask quotations for our common stock on the Toronto Stock Exchange at the close of business on such preceding day. On April 3, 2008, our board of directors amended our option plan to provide that options granted pursuant to the plan be priced at the closing price of our shares of common stock on The NASDAQ Global Market on the day of the option grant. If the grant date would otherwise occur during a closed quarterly trading window under our insider trading policy, the compensation committee or board of directors will identify a future date as the grant date (which typically will be the first day the trading window opens after a closed quarterly trading window). Effective October 22, 2009, in connection with our voluntary delisting from the Toronto Stock Exchange, the share option plan was amended and restated to remove references to the Toronto Stock Exchange and to make certain other housekeeping changes necessitated by the voluntary delisting.

Termination of Service Provider Relationship

Upon the termination without cause of a participant's employment or service with us (or any of our subsidiaries), other than a termination due to death or retirement (as such terms are defined in our share option plan), the participant's option will continue to vest and may be exercised at any time up to and including, but not after, the date which is 180 days after the date of the termination or the date prior to the close of the business on the expiry date of the option, whichever is the earlier. If termination is for cause, the option will immediately terminate in its entirety. An option may never be exercised after the expiration of its term.

For our president or any of our vice presidents, in the event of a termination of the participant's service or employment with us (or any of our subsidiaries) without cause, any option granted to the participant will continue to vest and may be exercised at any time up to and including, but not after, the date which is the second anniversary of the date of his or her termination or the date before the close of business on the expiry date of his or her option, whichever is the earlier.

In the event of the retirement, as such term is defined in our share option plan, of the participant while in the employment of us (or any of our subsidiaries), any option granted to the participant will continue to vest and may be exercised by the participant in accordance with the terms of the option at any time up to and including, but not after, the expiry date of the option.

In the event of the death of the participant while in the employment or service of us (or any of our subsidiaries), the option will continue to vest and may be exercised by a legal representative of the participant at any time up to and including, but not after, the date which is 180 days after the date of the death of the optionee or before the close of business on the expiry date of the option, whichever is earlier.

Effect of a Change in Control

Our share option plan provides that, if a change in control occurs, as such term is defined in our share option plan, including our merger with or into another corporation or the sale of all or substantially all of our assets, or if there is an offer to purchase, a solicitation of an offer to sell, or an acceptance of an offer to sell our shares of common stock made to all or substantially all of the holders of shares of common stock, a participant, who at the time of the change of control is an employee, director or service provider, shall have the right to immediately exercise his or her option as to all shares of common stock subject to such option, including as to those shares of common stock with respect to which such option cannot be exercised immediately prior to the occurrence of the change of control, and the participant shall have 90 days from the date of the change of control to exercise his or her option (unless the option expires prior to such date).

Transferability

Unless otherwise determined by the plan administrator, our share option plan generally does not allow for the sale or transfer of awards under our share option plan other than by will or the laws of descent and distribution, and may be exercised only during the lifetime of the participant and only by that participant.

Additional Provisions

Our board of directors has the authority to amend (subject to stockholder approval in some circumstances) or discontinue our share option plan, so long as that action does not materially and adversely affect any option rights granted to a participant without the written consent of that participant.

During the period January 1 to December 31, 2009, options to purchase 783,000 shares of common stock were granted under our share option plan at a weighted average exercise price of $3.97 per share.

Restricted Share Unit Plan

Our board of directors adopted our restricted share unit plan on May 18, 2005 and our stockholders approved it on May 18, 2005. Our restricted share unit plan was amended and restated as of June 12, 2009 to add additional shares to the plan and again as of October 22, 2009 to remove references to the Toronto Stock Exchange and make certain other housekeeping changes necessitated by our voluntary delisting from the TSX. Our restricted share unit plan provides for the grant of restricted share units to non-employee members of our board of directors. The directors who receive restricted share units under our restricted share unit plan are referred to below as participants.

Share Reserve

We have reserved a total of 466,666 of our shares of common stock for issuance pursuant to our restricted share unit plan. As of December 31, 2009, grants covering 186,266 shares of our common stock were outstanding, 260,771 shares of our common stock were available for future grant under our restricted share unit plan and 19,629 shares had been issued upon conversion of RSUs.

Administration

The corporate governance and nominating committee of our board of directors administers our restricted share unit plan. Under our restricted share unit plan, the plan administrator has the power, subject to certain enumerated restrictions in our restricted share unit plan, to determine the terms of the grants, including the directors who will receive grants, the grant period (as such term is defined in our restricted share unit plan) of any awards, and any applicable vesting terms in order for the restricted share units to be issued, and such other terms and conditions as the board of directors deems appropriate.

Each grant of restricted share units will be evidenced by a written notice, which we call the notice of grant, with such notice, in connection with our restricted share unit plan, governing the terms and conditions of the grant. Each notice of grant will state the number of restricted share units granted to the participant and state that each restricted share unit, subject to and in accordance with the terms of our restricted share unit plan, will entitle the participant to receive one share of our common stock in settlement of a restricted share unit granted pursuant to our restricted share unit plan.

Right to Restricted Share Units in the event of Death, Retirement, or Resignation

In the event of the death of a participant while a director of us, and with respect to each grant of restricted share units for which the grant period has not ended and for which the restricted share units have not been otherwise issued prior to the date of death, all unvested restricted share units will immediately vest and the shares of our common stock subject to such restricted share units will be issued by the later of the end of the calendar year of the date of death, or by the 15th day of the third calendar month following the participant's date of death.

In the event the participant's service as a director terminates for any reason other than death, and provided such participant is not a specified employee (as such term is defined in our restricted share unit plan) on the date of his or termination, with respect to the restricted share units as to which the release date (as such term is defined in our restricted share unit plan) has not occurred, and for which shares of our common stock have not been issued, the participant will receive such shares as if the grant period had ended and

such shares will be issued by the later of the end of the calendar year of the date of termination or by the 15th day of the third calendar month following the date of the termination. If the participant is a specified employee on the date of his or her termination, and if such termination is for any reason other than death, with respect to the restricted share units as to which the release date has not occurred, and for which shares of our common stock have not been issued, the participant will receive such shares as if the grant period had ended and such shares will be delivered by the 30th day of the date following the date which is six months following the participant's date of termination.

Effect of a Change in Control

In the event of a change in control (as such term is defined in our restricted share unit plan), with respect to all grants of restricted share units that are outstanding as of the date of such change in control, all unvested restricted share units will immediately vest and each participant who has received any such grants will be entitled to receive, on the date that is ten business days following the change in control date, an amount in full settlement of each restricted share unit covered by the grant. Such amount will be either one share of our common stock for each restricted share unit, or if so specified in a written election by the participant, a cash payment equal to the special value (as such term is defined in our restricted share unit plan) for each covered restricted share unit.

Transferability

The rights or interests of a participant under our restricted share unit plan will not be assignable or transferable, other than by will or the laws governing the devolution of property in the event of death and such rights or interests will not be encumbered.

Additional Provisions

Our board of directors has the authority to amend (subject to stockholder approval in some circumstances), suspend or terminate our restricted share unit plan in whole or in part from time to time.

Risk Analysis of Compensation Plans

The mix and design of the elements of executive compensation do not encourage management to assume excessive risks. Any risks arising from our compensation policies and practices for our employees are not reasonably likely to have a material adverse effect on the company.

The compensation committee extensively reviewed the elements of executive compensation to determine whether any portion of executive compensation encouraged excessive risk taking and concluded:

- significant weighting towards long-term incentive compensation discourages short-term risk taking; and
- goals are appropriately set to avoid targets that, if not achieved, result in a large percentage loss of compensation.

Compensation of Directors

We pay our non-employee directors an annual cash fee of $50,000 for their service on our board of directors and its committees. We also pay the chairman of our board an additional annual fee of $50,000, the Chairman of our audit committee an additional annual fee of $25,000, and the Chairmen of our other standing committees of the board of directors an additional annual fee of $5,000 each. In addition, each non-employee member of our board is entitled to an annual restricted share unit grant equal to $30,000 divided by the closing price of our common stock on the NASDAQ Global Market on the date of grant. On March 11, 2009 and June 12, 2009, each board member (excluding Dr. Williams

who did not join the board of directors until October 2009) received 19,352 RSUs and 2,076 RSUs, respectively, for fiscal year 2008. On December 4, 2009 each board member was awarded 6,185 RSUs for fiscal year 2009. Board members receive cash compensation in U.S. dollars. We also reimburse our directors for travel and other necessary business expenses incurred in the performance of their services for us.

Fiscal Year 2009 Director Compensation

The following table sets forth compensation information for our non-employee directors for the year ended December 31, 2009. The table excludes Dr. Kirkman who did not receive any compensation from us in his role as director in the year ended December 31, 2009. All compensation numbers are expressed in U.S. dollars.

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($) (1)(2)(3)	Total ($)
Christopher Henney	$105,000	$ 56,513	$ 161,513
Richard Jackson	55,000	56,513	111,513
Daniel Spiegelman	75,000	56,513	131,513
W. Vickery Stoughton	50,000	56,513	106,513
Douglas Williams	12,500	30,000	42,500

(1) These amounts represent the aggregate grant date fair value of RSUs granted in 2009.

(2) As of December 31, 2009, our non-employee directors held RSUs and outstanding options to purchase the number of shares of common stock as follows: Dr. Henney (53,602 options, 84,156 RSUs); Dr. Jackson (9,362 options, 34,156 RSUs); Mr. Stoughton (13,594 options, 34,156 RSUs); Mr. Spiegelman (zero options, 27,613 RSUs); Dr. Williams (zero options, 6,185 RSUs).

(3) Each RSU may be converted into one share of our common stock at the end of the grant period, which is five years for each of the RSUs granted prior to June 12, 2009 and two years for each of the RSUs granted on or after June 12, 2009.

ITEM 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

Equity Compensation Plan Information as of December 31, 2009

The following table sets forth the securities authorized for issuance under Oncothyreon's equity compensation plans.

Plan Category	(A) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	(B) Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	(C) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (A))(1)
Equity compensation plans approved by security holders:			
Share option plan ($Cdn.)(2)	947,032	$8.59	—
Share option plan ($U.S.)(2)	889,625	$3.92	738,684
RSU plan	186,266	N.A.	260,771
Equity compensation plans not approved by security holders	—	N.A.	—
Total	2,022,923	N.A.	999,455

(1) All of these are available for grants of restricted stock, restricted share units and other full-value awards, as well as for grants of stock options and stock appreciation rights.

(2) Under the terms of the Amended and Restated Share Option Plan, the total number of shares issuable pursuant to options under the plan is 10% of the issued and outstanding shares. Shares issued upon the exercise of options do not reduce the percentage of shares which may be issuable pursuant to options under the Plan.

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth certain information regarding beneficial ownership of our capital stock as of March 31, 2010 by (i) each person known by us to be the beneficial owner of more than 5% of any class of our voting securities, (ii) each of our directors, (iii) each of our "named executive officers" and (iv) our directors and executive officers as a group, including shares they had the right to acquire within 60 days after March 31, 2010.

	Common Stock Beneficially Owned	
Name of Beneficial Owner(1)	Number of Shares(2)	Percent of Class(3)
Directors and Executive Officers:		
Christopher Henney(4)	78,602	*
Richard Jackson(5)	14,362	*
W. Vickery Stoughton(6)	17,760	*
Daniel Spiegelman	—	*
Douglas Williams	—	*
Robert Kirkman(7)	597,736	2.27%
Gary Christianson(8)	19,583	*
Shashi Karan(9)	9,375	*
Diana Hausman	—	*
Scott Peterson	166	*
All directors and executive officers as a group (10 persons)(10)	737,584	2.79%

* Represents less than 1% of class or combined classes.

(1) Except as otherwise indicated, the address of each stockholder identified is c/o Oncothyreon Inc., 2601 Fourth Avenue, Suite 500, Seattle, Washington 98121. Except as indicated in the other footnotes to this table, each person named in this table has sole voting and investment power with respect to all shares of stock beneficially owned by that person.

(2) Options and warrants exercisable within 60 days after March 31, 2010 are deemed outstanding for the purposes of computing the percentage of shares owned by that person, but are not deemed outstanding for purposes of computing the percentage of shares owned by any other person.

(3) Based on 25,753,405 shares of common stock issued and outstanding as of March 31, 2010.

(4) Includes 53,602 shares of common stock that Dr. Henney has the right to acquire under outstanding options exercisable within 60 days after March 31, 2010.

(5) Includes 9,362 shares of common stock that Dr. Jackson has the right to acquire under outstanding options exercisable within 60 days after March 31, 2010.

(6) Includes 13,594 shares of common stock that Mr. Stoughton has the right to acquire under outstanding options exercisable within 60 days after March 31, 2010.

(7) Includes 589,403 shares of common stock that Dr. Kirkman has the right to acquire under outstanding options exercisable within 60 days after March 31, 2010.

(8) Includes 19,583 shares of common stock that Mr. Christianson has the right to acquire under outstanding options exercisable within 60 days after March 31, 2010.

(9) Includes 4,375 shares of common stock that Mr. Karan has the right to acquire under outstanding options exercisable within 60 days after March 31, 2010.

(10) Includes 689,916 shares of common stock that can be acquired under outstanding options exercisable within 60 days after March 31, 2010.

ITEM 13. *Certain Relationships and Related Transactions and Director Independence*

Certain Relationships and Related Transactions

In addition to the arrangements described below, we have also entered into the arrangements which are described where required under the heading titled "Part III — Item 11 — Executive Compensation — Employment Agreements and Offer Letters" and "Part III — Item 11 — Executive Compensation — Potential Payments Upon Termination or Change in Control" included elsewhere in this Annual Report on Form 10-K.

Approval of Related Party Transactions

We have adopted a formal, written policy that our executive officers, directors (including director nominees), holders of more than 5% of any class of our voting securities, or any member of the immediate family of or any entities affiliated with any of the foregoing persons, are not permitted to enter into a related party transaction with us without the prior approval or, in the case of pending or ongoing related party transactions, ratification of our audit committee. For purposes of our policy, a related party transaction is a transaction, arrangement or relationship where the company was, is or will be involved and in which a related party had, has or will have a direct or indirect material interest. Certain transactions with related parties, however, are excluded from the definition of a related party transaction including, but not limited to (i) transactions involving the purchase or sale of products or services in the ordinary course of business, not exceeding $20,000, (ii) transactions where a related party's interest derives solely from his or her service as a director of another entity that is a party to the transaction, (iii) transactions where a related party's interest derives solely from his or her ownership of less than 10% of the equity interest in another entity that is a party to the transaction, and (iv) transactions where a related party's interest derives solely from his or her ownership of a class of our equity securities and all holders of that class received the same benefit on a pro rata basis. No member of the audit committee may participate in any review, consideration or approval of any related party transaction where such member or any of his or her immediate family members is the related party. In approving or rejecting the proposed agreement, our audit committee shall consider the relevant facts and circumstances available and deemed relevant to the audit committee, including, but not limited to (i) the benefits and perceived benefits to the company, (ii) the materiality and character of the related party's direct and indirect interest, (iii) the availability of other sources for comparable products or services, (iv) the terms of the transaction, and (v) the terms available to unrelated third parties under the same or similar circumstances. In reviewing proposed related party transactions, the audit committee will only approve or ratify related party transactions that are in, or not inconsistent with, the best interests of the company and our stockholders. We have determined that there were no new related party transactions to disclose in 2009.

Indebtedness of Directors and Officers

None of our or any of our subsidiaries' current or former directors or executive officers is indebted to us or any our subsidiaries, nor are any of these individuals indebted to another entity which indebtedness is the subject of a guarantee, support agreement, letter of credit or other similar arrangement or understanding provided by us, or any of our subsidiaries. One non executive employee is indebted to us for approximately $127,000 (excluding accrued and unpaid interest).

None of our directors, executive officers, or associates of any of them, is, or, at any time since the beginning of the most recently completed financial year has been, indebted to us or any of our subsidiaries, to another entity which indebtedness is the subject of a guarantee, support agreement, letter of credit or other similar arrangement or understanding provided by us or any of our subsidiaries, or pursuant to any stock purchase program or any other program.

Determinations Regarding Director Independence

The board of directors has determined that each of our current directors, except Dr. Kirkman, is an "independent director" as that term is defined in NASDAQ Marketplace Rule 5605(a)(2). The independent directors generally meet in executive session at each quarterly board of directors meeting.

The board of directors has also determined that each member of the audit committee, the compensation committee, and the corporate governance and nominating committee meets the independence standards applicable to those committees prescribed by the NASDAQ, the SEC, and the Internal Revenue Service.

Finally, the board of directors has determined that Mr. Spiegelman, the chairman of the audit committee, is an "audit committee financial expert" as that term is defined in Item 407(d)(5) of Regulation S K promulgated by the SEC.

ITEM 14. *Principal Accountant Fees and Services*

Fees Billed to Us by Deloitte & Touche LLP during Fiscal 2009

Audit Fees

Fees and related expenses for the 2009 and 2008 audits by Deloitte & Touche LLP of our annual financial statements, its review of the financial statements included in our quarterly reports and other services that are provided in connection with statutory and regulatory filings totaled $412,407 and $422,601, respectively.

Audit-Related Fees

For the years 2009 and 2008, Deloitte & Touche LLP billed us $66,272 and $95,786, respectively, for its services related to financings, acquisitions, consultations on accounting issues, and other audit-related matters.

Tax Fees

For the years 2009 and 2008, Deloitte & Touche LLP billed us $230,381 and $255,868, respectively, for professional services related to preparation of our tax returns and tax consulting.

All Other Fees

For the years 2009 and 2008, Deloitte & Touche LLP billed us $126,572 and $0, respectively, for other services. Fees incurred for other services related primarily to our efforts to monetize the tax losses in our Canadian subsidiary, Oncothyreon Canada Inc.

Policy on Audit Committee Pre Approval of Fees

In its pre-approval policy, the audit committee has authorized our chief executive officer or our chief financial officer to engage the services of Deloitte & Touche LLP with respect to the following services:

- audit related services that are outside the scope of our annual audit and generally are (i) required on a project, recurring, or on a one-time basis, (ii) requested by one of our business partners (e.g., a review or audit of royalty payments), or (iii) needed by us to assess the impact of a proposed accounting standard;

- audits of the annual statutory financial statements required by the non-U.S. governmental agencies for our overseas subsidiaries;
- accounting services related to potential or actual acquisitions or investment transactions that if consummated would be reflected in our financial results or tax returns (this does not include any due diligence engagements, which must be pre-approved by the audit committee separately); and
- other accounting and tax services, such as routine consultations on accounting and/or tax treatments for contemplated transactions.

Notwithstanding this delegation of pre-approval authority, the audit committee is informed of all audit and non-related services performed by Deloitte & Touche LLP. On an annual basis prior to the completion of the audit, the audit committee will review a listing prepared by management of all proposed non-audit services to be performed by the external auditor for the upcoming fiscal year, such listing to include scope of activity and estimated budget amount. On an annual basis, prior to completion of the external audit, the audit committee will review a listing prepared by the external auditors of all non-audit services performed during the immediately preceding fiscal year. The audit committee, if satisfied with the appropriateness of the services, will provide ratification to all services prior to completion of the audit. If non-audit services are required subsequent to the annual pre-approval of services, management will seek approval of such services at the next regularly scheduled audit committee meeting. If such services are required prior to the next audit committee meeting, management will confer with the audit committee chairman regarding either conditional approval subject to full audit committee ratification or the necessity to reconvene a meeting. The audit committee has considered the non-audit services provided to us by Deloitte & Touche LLP and has determined that the provision of such services is compatible with Deloitte & Touche LLP's independence.

All audit-related, tax and other fees were approved by the audit committee.

PART IV

ITEM 15. *Exhibits and Financial Statement Schedules*

(a) The following documents are filed as part of this Annual Report on Form 10-K:

1. *Financial Statements:*

The consolidated financial statements of the Company are contained in Item 8 of this annual report on Form 10-K.

2. *Financial Statement Schedules:*

All financial statement schedules have been omitted because the required information is either included in the financial statements or notes thereto, or is not applicable.

3. *Exhibits:*

The exhibits required by Item 601 of Regulation S-K are listed in paragraph (b) below.

(b) Exhibits:

The following exhibits are filed herewith or are incorporated by reference to exhibits previously filed with the SEC:

Exhibit Number	Description
2.1(a)	Agreement and Plan of Reorganization among ProlX Pharmaceuticals Corporation, D. Lynn Kirkpatrick, Garth Powis and Biomira Inc., dated October 30, 2006 (incorporated by reference from Exhibit 2.1 to Registration Statement on Form S-4/A filed on October 29, 2007).
2.1(b)	Amendment No. 1 to Agreement and Plan of Reorganization dated November 7, 2007.
3.1	Amended and Restated Certificate of Incorporation of Oncothyreon Inc. (incorporated by reference from Exhibit 3.1 to Registration Statement on Form S-4/A filed on September 27, 2007).
3.2	Bylaws of Oncothyreon Inc. (incorporated by reference from Exhibit 3.1 to Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009 filed on August 14, 2009).
4.1	Form of registrant's common stock certificate. (incorporated by reference from Exhibit 4.1 to Registration Statement on Form S-4/A filed on September 27, 2007)
10.1*	Form of Indemnification Agreement (incorporated by reference from Exhibit 10.1 to Registration Statement on Form S-4/A filed on September 27, 2007).
10.2†	License Agreement between Biomira Inc. and the Dana-Farber Cancer Institute, Inc., dated November 22, 1996 (incorporated by reference from Exhibit 10.6 to Registration Statement on Form S-4 filed on September 12, 2007).
10.3*	Severance Agreement between Biomira Inc. and Edward Taylor, dated July 6, 1998 (incorporated by reference from Exhibit 10.7 to Registration Statement on Form S-4 filed on September 12, 2007).
10.4†	Exclusive License Agreement between the University of Arizona and ProlX Pharmaceuticals, Inc., dated June 3, 1999 (incorporated by reference from Exhibit 10.9 to Registration Statement on Form S-4/A filed on September 27, 2007).
10.5†	Amended and Restated License Agreement between Imperial Cancer Research Technology Limited and Biomira Inc., dated November 14, 2000 (incorporated by reference from Exhibit 10.11 to Registration Statement on Form S-4/A filed on September 27, 2007).
10.6†	Exclusive License Agreement among Georgetown University, the University of Arizona and ProlX Pharmaceuticals Corporation, dated July 5, 2001 (incorporated by reference from Exhibit 10.12 to Registration Statement on Form S-4 filed on September 12, 2007).
10.7	Consent and Acknowledgement among Biomira Inc., Biomira International Inc., Biomira Europe B.V., Imperial Cancer Research Technology Limited and Merck KGaA, dated February 5, 2002 (incorporated by reference from Exhibit 10.13 to Registration Statement on Form S-4 filed on September 12, 2007).
10.8†	License Agreement between the Governors of the University of Alberta and Biomira Inc., dated December 1, 2001 (incorporated by reference from Exhibit 10.14 to Registration Statement on Form S-4/A filed on September 27, 2007).
10.9†	Letter Agreement between Biomira Inc. and Cancer Research Technology Limited (formerly Imperial Cancer Research Technology Limited), dated March 9, 2004 (incorporated by reference from Exhibit 10.16 to Registration Statement on Form S-4/A filed on September 27, 2007).

Exhibit Number	Description
10.10†	Exclusive License Agreement between the University of Arizona and ProlX Pharmaceuticals Corporation, dated July 29, 2004 (incorporated by reference from Exhibit 10.18 to Registration Statement on Form S-4 filed on September 12, 2007).
10.11†	Adjuvant License Agreement between Biomira International Inc. and Corixa Corporation, dated October 20, 2004 (incorporated by reference from Exhibit 10.19 to Registration Statement on Form S-4/A filed on September 27, 2007).
10.12†	Adjuvant Supply Agreement between Biomira International Inc. and Corixa Corporation, dated October 20, 2004 (incorporated by reference from Exhibit 10.20 to Registration Statement on Form S-4/A filed on September 27, 2007).
10.13†	Exclusive Patent License Agreement between the University of Arizona and ProlX Pharmaceuticals Corporation, dated September 15, 2005 (incorporated by reference from Exhibit 10.21 to Registration Statement on Form S-4 filed on September 12, 2007).
10.14*	Severance Agreement between Biomira Inc. and Rao Koganty, dated March 21, 2006 (incorporated by reference from Exhibit 10.25 to Registration Statement on Form S-4 filed on September 12, 2007).
10.15*	Offer letter with Robert Kirkman, dated August 29, 2006 (incorporated by reference from Exhibit 10.27 to Registration Statement on Form S-4 filed on September 12, 2007).
10.15(a)*	Amendment to Robert Kirkman Offer Letter dated December 31, 2008 (incorporated by reference from Exhibit 10.18(a) to Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed on March 30, 2009).
10.15(b)*	Amendment to Robert Kirkman Offer Letter dated December 3, 2009 (incorporated by reference from Exhibit 10.1 to Current Report on Form 8-K filed on December 7, 2009).
10.16†	Letter Agreement between the University of Arizona and Biomira Inc., dated October 6, 2006 (incorporated by reference from Exhibit 10.28 to Registration Statement on Form S-4 filed on September 12, 2007).
10.17*	2006 Variable Pay Plan (incorporated by reference from Exhibit 10.36 to Registration Statement on Form S-4 filed on September 12, 2007).
10.18	Form of Purchase Warrant issued by Biomira Inc. to each of the individuals and entities listed on Schedule 1 to this Exhibit 10.18, dated December 18, 2006 (incorporated by reference from Exhibit 10.41 to Registration Statement on Form S-4 filed on September 12, 2007).
10.19	Purchase Warrant issued by Biomira Inc. to Rodman & Renshaw, LLC, dated December 18, 2006 (incorporated by reference from Exhibit 10.42 to Registration Statement on Form S-4 filed on September 12, 2007).
10.20	Security Agreement between Jeffrey Millard and Biomira Inc., dated November 8, 2006 (incorporated by reference from Exhibit 10.43 to Registration Statement on Form S-4 filed on September 12, 2007).
10.21	General Security Agreement between Jeffrey Millard and Biomira Inc., dated November 8, 2006 (incorporated by reference from Exhibit 10.44 to Registration Statement on Form S-4 filed on September 12, 2007).
10.22	Security Agreement between Linda Pestano and Biomira Inc., dated November 8, 2006 (incorporated by reference from Exhibit 10.45 to Registration Statement on Form S-4 filed on September 12, 2007).

Exhibit Number	Description
10.23	General Security Agreement between Linda Pestano and Biomira Inc., dated November 8, 2006 (incorporated by reference from Exhibit 10.46 to Registration Statement on Form S-4 filed on September 12, 2007).
10.24	Promissory Note between Jeffrey Millard and Biomira Inc., dated November 8, 2006 (incorporated by reference from Exhibit 10.49 to Registration Statement on Form S-4 filed on September 12, 2007).
10.24(a)	Note Amendment Agreement by and between Oncothyreon Inc. and Jeffrey Millard, dated April 20, 2008 (incorporated by reference from Exhibit 10.36(a) to Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed on March 30, 2009).
10.25	Promissory Note between Linda Pestano and Biomira Inc., dated November 8, 2006 (incorporated by reference from Exhibit 10.50 to Registration Statement on Form S-4 filed on September 12, 2007).
10.25(a)	Note Amendment Agreement by and between Oncothyreon Inc. and Linda Pestano, dated April 20, 2008 (incorporated by reference from Exhibit 10.37(a) to Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed on March 30, 2009).
10.25(b)	Note Amendment Agreement by and between Oncothyreon Inc. and Linda Pestano, dated November 30, 2009.
10.26*	Offer Letter with Gary Christianson, dated June 29, 2007 (incorporated by reference from Exhibit 10.1 to Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2008 filed on November 10, 2008).
10.26(a)*	Amendment to Gary Christianson Offer Letter dated December 31, 2008 (incorporated by reference from Exhibit 10.40(a) to Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed on March 30, 2009).
10.26(b)*	Amendment to Gary Christianson Offer Letter dated December 3, 2009 (incorporated by reference from Exhibit 10.2 to Current Report on Form 8-K filed on December 7, 2009).
10.27	Sublease Agreement between Muze Inc. and Oncothyreon Inc., dated May 9, 2008 (incorporated by reference from Exhibit 10.2 to Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2008 filed on November 10, 2008).
10.28	Lease Agreement between Selig Holdings Company and Oncothyreon Inc., dated May 9, 2008 (incorporated by reference from Exhibit 10.3 to Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2008 filed on November 10, 2008).
10.29	Amendment Number 1 to Adjuvant License Agreement and Adjuvant Supply Agreement between Corixa Corporation, d/b/a GlaxoSmithKline Biologicals N.A. and Biomira Management Inc., dated August 8, 2008 (incorporated by reference from Exhibit 10.4 to Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2008 filed on November 10, 2008).
10.30†	Amended and Restated License Agreement between Biomira Management, Inc. and Merck KGaA, dated December 18, 2008 (incorporated by reference from Exhibit 10.1 to Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2009 filed on May 15, 2009).
10.31†	Asset Purchase Agreement by and among Oncothyreon Canada Inc., Biomira Management, Inc., Oncothyreon Inc., Merck KGaA and EMD Serono Canada Inc., dated December 18, 2008 (incorporated by reference from Exhibit 10.45 to Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed on March 30, 2009).

Exhibit Number	Description
10.32*	Offer Letter dated March 24, 2008 between Oncothyreon Inc. and Shashi Karan (incorporated by reference from Exhibit 99.1 to Current Report on Form 8-K filed on March 11, 2009).
10.32(a)*	Amendment to Shashi Karan Offer Letter dated December 3, 2009 (incorporated by reference from Exhibit 10.5 to Current Report on Form 8-K filed on December 7, 2009).
10.33	Form of Warrant (incorporated by reference from Annex A to the Company's free writing prospectus, dated as of May 19, 2009, and filed on May 20, 2009).
10.34*	Offer Letter dated June 9, 2009 between Oncothyreon Inc. and Scott Peterson, Ph.D. (incorporated by reference from Exhibit 10.2 to Current Report on Form 8-K filed on June 15, 2009).
10.34(a)*	Amendment to Scott Peterson Offer Letter dated December 3, 2009 (incorporated by reference from Exhibit 10.4 to Current Report on Form 8-K filed on December 7, 2009).
10.35*	Offer Letter dated July 6, 2009 between Oncothyreon Inc. and Diana Hausman, M.D. (incorporated by reference from Exhibit 10.1 to Current Report on Form 8-K filed on August 4, 2009).
10.35(a)*	Amendment to Diana Hausman Offer Letter dated December 3, 2009 (incorporated by reference from Exhibit 10.3 to Current Report on Form 8-K filed on December 7, 2009).
10.36	Form of Warrant (incorporated by reference from Annex A to the Company's free writing prospectus, dated as of August 4, 2009, and filed on August 5, 2009).
10.37*	Amended and Restated Share Option Plan (incorporated by reference from Exhibit 10.2 to Current Report on Form 8-K filed on October 14, 2009).
10.38*	Form of Stock Option Agreement under the Amended and Restated Share Option Plan (incorporated by reference from Exhibit 10.3 to Current Report on Form 8-K filed on October 14, 2009).
10.39*	Amended and Restated Restricted Share Unit Plan (incorporated by reference from Exhibit 10.1 to Current Report on Form 8-K filed on October 14, 2009).
10.40*	Form of Restricted Share Unit Agreement under the Amended and Restated Restricted Share Unit Plan (incorporated by reference from Exhibit 10. to Current Report on Form 8-K filed on June 15, 2009).
10.41	Common Stock Purchase Agreement by and among Biomira Inc., Biomira International Inc. and Merck KGaA dated May 2, 2001.
10.42	Tax Indemnity Agreement by and between Biomira International Inc. and Merck KGaA dated May 3, 2001.
18.1	Letter Regarding the Preferability of Change in Accounting Principle.
21.1	Subsidiaries of Oncothyreon Inc.
23.1	Consent of Deloitte & Touche LLP, independent registered chartered accountants.
23.2	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
24.1	Power of Attorney (included on signature page).
31.1	Certification of Robert L. Kirkman, M.D., President and Chief Executive Officer, pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Shashi K. Karan, Corporate Controller, pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

Exhibit Number	Description
32.1	Certification of Robert L. Kirkman, M.D., President and Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Shashi K. Karan, Corporate Controller, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* Executive Compensation Plan or Agreement.

† Confidential treatment has been granted for portions of this exhibit.

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 in the City of Seattle, County of King, State of Washington on May 6th, 2010.

ONCOTHYREON INC

By: /s/ Robert L. Kirkman
Robert L. Kirkman
President, CEO and Director

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints Robert L. Kirkman and Shashi K. Karan, and each of them severally, his true and lawful attorneys-in-fact and agents, with full power to act without the other and with full power of substitution and resubstitution, to execute in his name and on his behalf, individually and in each capacity stated below, any and all amendments and supplements to this Report, and any and all other instruments necessary or incidental in connection herewith, and to file the same with the Commission.

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/ Robert L. Kirkman Robert L. Kirkman	President, Chief Executive Officer and Director (Principal Executive Officer)	May 6, 2010
/s/ Shashi K. Karan Shashi K. Karan	Principal Financial and Accounting Officer and Corporate Controller	May 6, 2010
/s/ Christopher S. Henney Christopher S. Henney	Chairman and Director	May 6, 2010
/s/ Richard L. Jackson Richard L. Jackson	Director	May 6, 2010
/s/ Daniel K. Spiegelman Daniel K. Spiegelman	Director	May 6, 2010
/s/ W. Vickery Stoughton W. Vickery Stoughton	Director	May 6, 2010
/s/ Douglas Williams Douglas Williams	Director	May 6, 2010

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Oncothyreon Inc.
Seattle, Washington

We have audited the accompanying consolidated balance sheets of Oncothyreon Inc. and subsidiaries (the "Company") as of December 31, 2009 and 2008, and the related consolidated statements of operations and comprehensive income (loss), stockholders' equity, and cash flows for the years then ended. 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, such consolidated financial statements present fairly, in all material respects, the financial position of Oncothyreon Inc. and subsidiaries as of December 31, 2009 and 2008, and the results of their operations and their cash flows for each of the years then ended, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2009, based on the criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated May 5, 2010 expressed an adverse opinion on the Company's internal control over financial reporting because of material weaknesses.

As discussed in Note 2 to the consolidated financial statements, the accompanying 2008 consolidated financial statements have been restated.

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for licensing revenue in 2008.

/s/ Deloitte & Touche LLP

Seattle, Washington
May 5, 2010

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Oncothyreon Inc.
Seattle, Washington

We have audited the internal control over financial reporting of Oncothyreon Inc. and subsidiaries (the "Company") 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 Company'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 Management's 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 by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. The following material weaknesses have been identified and included in management's assessment: the Company does not have adequately designed controls in place to ensure the appropriate accounting for and disclosure of complex transactions in accordance with generally accepted accounting

principles, and it does not have in place an adequately designed and implemented risk assessment process to identify complex transactions requiring specialized knowledge in accordance with generally accepted accounting principles. These material weaknesses were considered in determining the nature, timing, and extent of audit tests applied in our audit of the consolidated financial statements as of and for the year ended December 31, 2009, of the Company and this report does not affect our report on such financial statements.

In our opinion, because of the effect of the material weaknesses identified above on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of December 31, 2009, based on the criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2009, of the Company and our report dated May 5, 2010 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche LLP

Seattle, Washington
May 5, 2010

REPORT OF INDEPENDENT REGISTERED CHARTERED ACCOUNTANTS

To the Board of Directors and Stockholders of Oncothyreon Inc.

We have audited the consolidated balance sheet of Oncothyreon Inc. and subsidiaries (the "Company") as of December 31, 2007 (not included herein) and the accompanying consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for the year then ended. 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 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 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 audit provides a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Oncothyreon Inc. and subsidiaries as of December 31, 2007 and the results of their operations and their cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 2 to the financial statements, the accompanying 2007 financial statements have been restated to correct a misstatement.

/s/ Deloitte & Touche LLP

Independent Registered Chartered Accountants
Edmonton, Alberta, Canada
March 13, 2008 (May 5, 2010 as to the effects of the restatement discussed in Note 2)

ONCOTHYREON INC.

Consolidated Balance Sheets

	As of December 31, 2009	2008
	(In thousands, except share amounts)	
ASSETS		
Current		
Cash and cash equivalents	**$ 18,974**	$ 19,166
Short-term investments	**14,244**	—
Accounts receivable	**41**	1,828
Government grant receivable	**—**	40
Notes receivable from employees	**36**	—
Prepaid expenses	**233**	384
	33,528	21,418
Plant and equipment, net	**2,076**	867
Lease deposits	**354**	354
Notes receivable from employees	**150**	215
Goodwill	**2,117**	2,117
Total Assets	**$ 38,225**	$ 24,971
LIABILITIES		
Current		
Accounts payable	**$ 600**	$ 401
Accrued liabilities	**653**	1,650
Accrued compensation and related liabilities	**804**	1,607
Current portion of deferred revenue	**18**	18
	2,075	3,676
Notes payable	**199**	199
Deferred revenue	**149**	164
Deferred rent	**295**	185
Warrant liability	**10,059**	—
Class UA preferred stock, 12,500 shares authorized, 12,500 shares issued and outstanding in 2009 and 2008	**30**	30
	12,807	4,254
Contingencies, commitments, and guarantees (See Note 17)		
STOCKHOLDERS' EQUITY		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized, no shares issued and outstanding in 2009 and 2008	**—**	—
Common stock, $0.0001 par value; 100,000,000 shares authorized, 25,753,405 and 19,492,432 shares issued and outstanding	**345,836**	325,043
Warrants	**—**	64
Additional paid-in capital	**16,285**	15,094
Accumulated deficit	**(331,637)**	(314,418)
Accumulated other comprehensive loss	**(5,066)**	(5,066)
	25,418	20,717
Total liabilities and equity	**$ 38,225**	$ 24,971

See accompanying notes to the consolidated financial statements

ONCOTHYREON INC.

Consolidated Statements of Operations and Comprehensive Income (Loss)
Years ended December 31

	2009	2008	2007
	(In thousands, except per share amounts)		
Revenue			
Contract research and development	**$ —**	$ —	$ 631
Contract manufacturing	**—**	15,582	2,536
Licensing revenue from collaborative and license agreements	**2,051**	24,713	440
Licensing, royalties, and other revenue	**27**	—	103
	2,078	40,295	3,710
Expenses			
Research and development, net	**6,081**	8,783	9,584
Manufacturing	**—**	13,675	2,564
General and administrative	**6,589**	10,284	12,224
Marketing and business development	**—**	—	565
Depreciation	**269**	422	246
Investment and other (income) loss, net	**8**	(298)	371
Interest expense	**—**	7	5
Change in fair value of warrant liability	**6,150**	—	(1,421)
	(19,097)	(32,873)	(24,138)
Income (Loss) before income taxes	**(17,019)**	7,422	(20,428)
Income tax:			
Current	**200**	—	—
Net Income (loss)	**(17,219)**	7,422	(20,428)
Other comprehensive income	**—**	—	3,243
Comprehensive net income (loss)	**$ (17,219)**	$ 7,422	$ (17,185)
Earnings (loss) per share — basic	**$ (0.76)**	$ 0.38	$ (1.05)
Earnings (loss) per share — diluted	**$ (0.76)**	$ 0.38	$ (1.05)
Shares used to compute basic earnings (loss) per share	**22,739,138**	19,490,621	19,485,889
Shares used to compute diluted earnings (loss) per share	**22,739,138**	19,570,170	19,485,889

See accompanying notes to the consolidated financial statements

ONCOTHYREON INC.

Consolidated Statements of Stockholders' Equity

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss
	Number	Amount			
	(In thousands, except share amounts)				
Balance at January 1, 2007	**19,485,889**	**$324,992**	**$ 11,955**	**$ (301,412)**	**$(8,309)**
Stock-based compensation expense			1,681		
Net loss				(20,428)	
Unrealized holding gains on available-for-sale securities, net of tax of ($0)					(48)
Foreign currency translation adjustments, net of tax of ($0)					3,291
Other comprehensive income					3,243
Balance at December 31, 2007	**19,485,889**	**$324,992**	**$13,636**	**$(321,840)**	**$(5,066)**
Stock-based compensation expense			1,509		
Net loss				7,422	
Conversion of restricted share units	6,543	51	(51)		
Balance at December 31, 2008	**19,492,432**	**$325,043**	**$15,094**	**$ (314,418)**	**$(5,066)**
Stock-based compensation expense			1,266		
Issuance of common stock	6,159,553	20,050			
Warrant exercises	91,500	668			
Net loss				(17,219)	
Conversion of restricted share units	9,920	75	(75)		
Balance at December 31, 2009	**25,753,405**	**$345,836**	**$ 16,285**	**$ (331,637)**	**$(5,066)**

See accompanying notes to the consolidated financial statements

ONCOTHYREON INC.

Consolidated Statements of Cash Flows
Years ended December 31

	2009	2008	2007
		(In thousands)	
Operating			
Net income (loss)	**$ (17,219)**	$ 7,422	$(20,428)
Adjustment to reconcile net income (loss) used in operating Activities:			
Depreciation	**269**	422	246
Stock-based compensation expense	**1,266**	1,509	1,681
Change in fair value of warrant liability	**6,150**	—	(1,421)
Gain on disposal of short term investments	**—**	—	(48)
(Gain) loss on disposal of plant and equipment	**7**	(48)	7
Proceeds from collaborative agreements	**—**	3,000	10,000
Proceeds from contract manufacturing	**—**	4,060	5,798
Deferred revenue	**(15)**	(25,143)	(946)
Deferred rent	**110**	185	—
Changes in assets and liabilities:			
Accounts receivable	**1,782**	194	10
Government grants receivable	**40**	512	—
Prepaid expenses	**151**	144	(171)
Inventory	**—**	5,069	(3,466)
Long term deposits	**—**	(354)	—
Accounts payable	**147**	166	(181)
Accrued liabilities	**(997)**	(1,808)	1,205
Accrued compensation and related liabilities	**(803)**	(216)	683
Net cash used in operating activities	**(9,112)**	(4,886)	(7,031)
Investing			
Purchase of short-term investments	**(16,127)**	(22,376)	(37,574)
Redemption of short-term investments	**1,883**	34,246	42,655
Purchase of plant and equipment	**(1,433)**	(744)	(684)
Proceeds from sale of plant and equipment	**—**	548	—
Business acquisition	**—**	—	(238)
Payments received on notes receivable from employees	**34**	151	—
Net cash provided by (used in) investing activities	**(15,643)**	11,825	4,159
Financing			
Proceeds from issuance of common stock and warrants, net of issue costs	**24,563**	—	(165)
Repayment of capital lease obligations	**—**	(93)	(71)
Net cash provided by (used in) financing activities	**24,563**	(93)	(236)
	(192)	6,846	(3,108)
Effect of exchange rate fluctuations on cash and cash equivalents	**—**	285	1,734
Increase (decrease) in cash and cash equivalents	**(192)**	7,131	(1,374)
Cash and cash equivalents, beginning of year	**19,166**	12,035	13,409
Cash and cash equivalents, end of year	**$ 18,974**	$ 19,166	$ 12,035
Supplemental disclosure of cash flow information			
Amount of interest paid in the year	**$ —**	$ 7	$ 5
Amount of income taxes paid in the year	**$ 200**	$ —	$ —

See accompanying notes to the consolidated financial statements

1. DESCRIPTION OF BUSINESS

Oncothyreon Inc. (the "Company" or "Oncothyreon") is a clinical-stage biopharmaceutical company incorporated in the State of Delaware on September 7, 2007. Oncothyreon is focused primarily on the development of therapeutic products for the treatment of cancer. Oncothyreon's goal is to develop and commercialize novel synthetic vaccines and targeted small molecules that have the potential to improve the lives and outcomes of cancer patients. Oncothyreon's operations are not subject to any seasonality or cyclicality factors.

Change in reporting entity

On December 10, 2007, Oncothyreon became the successor corporation to Biomira Inc. (the "Company" or "Biomira") by way of a plan of arrangement approved at special meeting of the stockholders of Biomira and the Alberta Court of Queen's Bench under Canadian law in December 2007. Biomira was incorporated under the Canada Business Corporations Act in 1985.

On December 11, 2007, Oncothyreon's common stock began trading on The NASDAQ Global Market under the symbol "ONTY" and on the Toronto Stock Exchange under the symbol "ONY." On October 22, 2009, at the Company's voluntary request, its shares ceased trading on the Toronto Stock Exchange. Holders of common shares of the former Biomira received one-sixth of a share of common stock of Oncothyreon in exchange for each common share of Biomira, which had the effect of a 6 for 1 reverse stock split of the outstanding common shares. The holder of the 12,500 outstanding Biomira Class A preference shares received one share of Class UA Preferred Stock of Oncothyreon for each Biomira Class A preference share. The consolidated financial statements have been prepared giving effect to the 6 for 1 share exchange and basic and diluted loss per share for all periods presented.

All Biomira common stock options, restricted share units and warrants that were in existence prior to the plan of arrangement were exchanged for stock options, restricted share units and warrants in Oncothyreon on a 6 for 1 basis with no change in any of the terms and conditions.

Oncothyreon's Board of Directors and management immediately following the plan of arrangement were the same as Biomira's immediately before the plan of arrangement became effective.

In accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 805, *Business Combinations*, the plan of arrangement was a transaction among entities under common control. Assets and liabilities transferred between entities under common control are accounted for at historical cost. Accordingly, the assets and liabilities of the predecessor Biomira have been reflected at their historical cost in the accounts of Oncothyreon. In addition, these financial statements reflect the historical accounts of Biomira up to December 10, 2007 with the exception of basic and diluted loss per share amounts, descriptions and amounts of all common stock, stock options, restricted share units and warrants and their corresponding exercise prices where applicable; which have been recast to reflect the 6 for 1 common share exchange effected by the plan of arrangement.

In these financial statements, the reference to "Company" means Biomira for periods prior to December 10, 2007 and Oncothyreon for periods thereafter.

2. RESTATEMENT — 2008 CHANGE IN ACCOUNTING POLICY NOT PREVIOUSLY REPORTED AND OTHER ERROR CORRECTIONS

2008 change in accounting policy not previously reported

Subsequent to the issuance of the Company's 2008 consolidated financial statements, Company management determined that it had changed its revenue recognition policy for up-front license payments and contingent payments received from license agreements under which a license deliverable qualifies as a separate unit of accounting from recognition over the applicable amortization period (the "Proportional Performance Model") to recognition upon commencement of the license term (the "Specific Performance Model"), assuming all other revenue recognition criteria have been met. The Company failed to provide the required disclosures under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 250, *Accounting Changes and Error Corrections*, with respect to such change. Accordingly, the consolidated financial statements as of and for the year ended December 31, 2008 have been restated to reflect the change in accounting policy. The restatement as it relates to the failure to provide the required disclosures of the change in accounting policy did not change the Company's consolidated balance sheet, consolidated statements of operations, consolidated changes in stockholders' equity or consolidated cash flows as of and for the year ended December 31, 2008.

As described in Note 12, on December 18, 2008, the Company and Merck KGaA entered into a license agreement and asset purchase agreement (the "2008 Agreements") which replaced the 2007 Agreements (as defined in Note 12). Pursuant to the 2008 license agreement, the Company licensed to Merck KGaA all rights related to the development, commercialization and manufacture of Stimuvax. The only deliverable under the 2008 license agreement was the license. Pursuant to the asset purchase agreement, the Company sold to Merck KGaA certain assets related to the manufacture of, and inventory of, Stimuvax, placebo and raw materials, and Merck KGaA agreed to assume certain liabilities related to the manufacturing of Stimuvax and the Company's obligations related to the lease of the Company's Edmonton, Alberta, Canada facility. The license to Merck KGaA was effective upon the execution of the 2008 Agreements and all future Company performance obligations related to the collaboration for the development of Stimuvax were removed and continuing involvement by the Company in the manufacturing of Stimuvax ceased.

Upon entering into the 2008 Agreements, the Company changed its revenue recognition policy for upfront cash payments and contingent payments related to license deliverables that qualify as a separate unit of accounting under ASC 605-25, *Multiple Element Arrangements*, such as those under the 2008 license agreement with Merck KGaA, from the Proportional Performance Model to the Specific Performance Model. The Company concluded that the Specific Performance Model is the preferable method for recognizing such revenue as this model more closely reflects the culmination of the earnings process when the Company has no ongoing deliverables and all other revenue recognition criteria have been met. The Company also believes this more accurately reflects the economic substance of the transaction, as there is no remaining economic obligation associated with such revenue. Additionally, the Company believes that for arrangements that provide an exclusive license with a duration that approximates the useful life of the intellectual property, the transaction is similar to an outright product sale and therefore a Specific Performance Model (or upfront revenue recognition) is preferable. In the absence of this change in its revenue recognition policy, the Company would have continued to amortize license payments over the estimated product life of Stimuvax, which is the period through 2018.

Under ASC 250, a change in accounting policy requires retrospective application of the new accounting policy to all prior periods, unless it is impractical to do so. As the deliverables for which the Company received up-front cash payments and contingent payments prior to the 2008 Agreements did not qualify as separate units of accounting, none of the periods prior to the 2008 Agreements presented in the Company's consolidated financial statements were affected by the change in accounting policy and there was not a cumulative effect on retained earnings as of January 1, 2006.

The following tables set forth the impact on the Company's consolidated financial statements as a result of changing its accounting policy as described above and after the restatement of the other error corrections described below the following tables (in thousands, except share and per share data):

Statement of Operations and Comprehensive Income and Loss Data

	Year Ended December 31, 2008		
	As Computed Under Proportional Performance Model	As Reported Under Specific Performance Model	Effect of Change
Licensing revenue from collaborative and license agreements	$ 11,757	$ 24,713	$ 12,956
Income (loss) before income taxes	$ (5,534)	$ 7,422	$ 12,956
Net income (loss)	$ (5,534)	$ 7,422	$ 12,956
Earnings (loss) per share — basic	$ (0.28)	$ 0.38	$ 0.66
Earnings (loss) per share — diluted	$ (0.28)	$ 0.38	$ 0.66
Shares used to compute diluted earnings (loss) per share	19,490,621	19,570,170	79,549

Balance Sheet Data

	As of December 31, 2008		
	As Computed Under Proportional Performance Model	As Reported Under Specific Performance Model	Effect of Change
Current portion of deferred revenue	$ 1,412	$ 18	$ (1,394)
Deferred revenue	$ 11,726	$ 164	$(11,562)
Accumulated deficit	$(327,374)	$(314,418)	$12,956

Statement of Cash Flows Data

	Year Ended December 31, 2008		
	As Computed Under Proportional Performance Model	As Reported Under Specific Performance Model	Effect of Change
Operating:			
Net income (loss)	$(5,534)	$ 7,422	$ 12,956
Adjustment to reconcile net income (loss) used in operating activities:			
Deferred revenue	$(12,187)	$(25,143)	$(12,956)

Other error corrections

In addition to the error described above, the Company also identified an error in the period over which up-front cash payments received in 2001 for Stimuvax were recognized as revenue. In connection with the failure of Theratope and the return of Theratope rights and technology to the Company in June 2004 (See "Note 12 — Collaborative and License Agreements"), the Company failed to reevaluate the nature of its remaining deliverables under the 2001 Agreements, which consisted principally of the development efforts related to Stimuvax. Such reevaluation by management should have resulted in the amortization of all remaining deferred revenue over a period to end in 2018 (the period estimated by management to represent the estimated useful life of the product and the estimated period of the Company's ongoing obligations, which corresponded to the estimated life of the issued patents for Stimuvax). While total operating cash flows for any period presented in the consolidated statement of cash flows was not affected, the impact of correcting the error on the consolidated statements of operations resulted in an increase in net loss and a corresponding decrease in the net change in deferred revenue of $0.1 million in the year ended December 31, 2007 and an increase in net income and a corresponding increase in the net change in deferred revenue of $0.3 million in the year ended December 31, 2008, respectively. The correction of the error also resulted in an increase to accumulated deficit as of January 1, 2007 of $0.2 million.

The Company has also corrected for an error in classification of legal costs related to patents, which had incorrectly been included as research and development, net expense. The Company has reclassified $0.5 million and $0.4 million of legal costs related to patents previously reported in research and development, net expense to general and administrative expense for 2008 and 2007, respectively. This correction had no effect on the consolidated balance sheet or consolidated cash flows. Additionally, the Company corrected for an error in the classification of $0.2 million of long-term deferred rent from current liabilities to long-term liabilities in 2008. The consolidated statement of cash flows has been adjusted to reflect the reduction in accrued liabilities and the related non-cash portion of rent expense for the year ended December 31, 2008. Finally, the Company corrected for an error in the disclosure of deferred tax assets (See "Note 16 — Income Tax").

3. SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

These consolidated financial statements have been prepared using accounting principles generally accepted in the United States of America ("U.S. GAAP") and reflect the following significant accounting policies.

Basis of consolidation

The Company's consolidated financial statements include the accounts of its wholly-owned subsidiaries, including Oncothyreon Canada Inc., Biomira Management Inc., ProlX Pharmaceuticals Corporation, Biomira BV, Oncothyreon Luxembourg and its 90% owned subsidiary Oncodigm Biopharma Inc., on a fully consolidated basis. All intercompany balances and transactions have been eliminated upon consolidation.

Accounting estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make complex and subjective judgments in making estimates and

assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. By their nature, these judgments are subject to an inherent degree of uncertainty and as a consequence actual results may differ from those estimates.

Significant estimates inherent in the preparation of the accompanying financial statements include the valuation of goodwill, the fair value of stock options and restricted share units granted to employees, the fair value of the Company's warrants classified as liabilities, the useful lives of plant and equipment, the amortization period of deferred revenues, the valuation allowance offsetting deferred tax assets, and whether goodwill is subject to impairment.

Cash and cash equivalents

Cash equivalents include short-term, highly liquid investments that are readily convertible to known amounts of cash with original maturities of 90 days or less at the time of purchase. At December 31, 2009, cash and cash equivalents was comprised of $9.6 million in cash, $8.0 million in money market investments and $1.4 million in certificates of deposit with original maturities of 90 days or less. As of December 31, 2008 the amounts were $14.1 million, $5.0 million and zero respectively. The carrying value of cash equivalents approximates their fair value.

Investments

Investments are classified as available for sale securities and are carried at market value with unrealized temporary holding gains and losses, where applicable, excluded from income and reported in other comprehensive income and also as a net amount in accumulated other comprehensive income until realized. Available-for-sale securities are written down to fair value through income whenever it is necessary to reflect an other-than-temporary impairment. As at December 31, 2008, the Company had no short term investments. Available for sale securities are written down to fair value through income whenever it is necessary to reflect an other-than-temporary impairment. As at December 31, 2009, short term investments consisted of certificates of deposits denominated at or below $250,000 issued by banks insured by the Federal Deposit Insurance Corporation.

Derivative financial instruments

The Company does not utilize derivative financial instruments. Warrants issued in connection with the Company's May 2009 financing are recorded as liabilities as they have an exercise price which may vary under certain circumstances and have the potential for cash settlement upon the occurrence of a fundamental transaction (as defined in the warrant). Changes in the fair value of the warrants are recognized in the consolidated statements of operations and comprehensive income (loss).

Plant and equipment and depreciation

Plant and equipment are recorded at cost and depreciated over their estimated useful lives on a straight-line basis, as follows:

Scientific and office equipment	5 years
Manufacturing equipment	4 years
Computer software and equipment. .	3 years
Leased equipment.	Shorter of useful life or the term of the lease
Leasehold improvements.	Shorter of useful life or the term of the lease

Long-lived assets

Long-lived assets, such as plant and equipment, and purchased intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset be tested for impairment, the Company first compares the undiscounted cash flows expected to be generated by the asset to the carrying value of the asset. If the carrying value of the long-lived asset is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying value exceeds its estimated fair value. Fair value is determined by management through various valuation techniques, including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary. There were no impairment charges recorded for any of the periods presented.

Goodwill

Goodwill is carried at cost and is not amortized, but is reviewed annually for impairment in the fourth quarter, or more frequently when events or changes in circumstances indicate that the asset may be impaired. In the event that the carrying value of goodwill exceeds its fair value, an impairment loss would be recognized. There were no impairment charges recorded for any of the periods presented.

Deferred Rent

Rent expense is recognized on a straight-line basis over the term of the lease. Lease incentives, including rent holidays provided by lessors, and rent escalation provisions are accrued as deferred rent. The related benefits are included in research and development expense and general and administrative expense.

Revenue recognition

The Company recognizes revenue when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable, and collection is reasonably assured. In accordance with ASC Topic 605-25, the Company evaluates revenue from arrangements with multiple deliverables to determine whether the deliverables represent one or more units of accounting. A delivered item is considered a separate unit of accounting if the following separation criteria are met: (1) the delivered item has stand-alone value to the customer; (2) there is objective and reliable evidence of the fair value of any undelivered items; and (3) if the arrangement includes a general right of return relative to the delivered item, the delivery of undelivered items is probable and substantially in the Company's control. The relevant revenue recognition accounting policy is then applied to each unit of accounting.

The Company has historically generated revenue from the following activities:

Contract research and development. Revenue from contract research and development consists of non-refundable research and development payments received under the terms of collaborative agreements. Payments under these arrangements compensate the Company for clinical trial activities performed with respect to the collaborative development programs for certain product candidates of the Company. Revenue is recognized on a proportionate performance basis as clinical activities are performed under the terms of collaborative agreements based on the activities performed to date compared to the total estimated activities.

Contract manufacturing. Revenue from contract manufacturing consists of payments received under the terms of supply agreements for the manufacturing of clinical trial material. Such payments compensate the Company for the cost of manufacturing clinical trial material and are recognized after shipment of the clinical trial material and upon the earlier of the expiration of a specified return period, as returns cannot be reasonably estimated, and formal acceptance of the clinical trial material by the customer.

Licensing revenue from collaborative and license agreements. Revenue from collaborative and license agreements consists of (1) up-front cash payments for initial technology access or licensing fees and (2) contingent payments triggered by the occurrence of specified events or other contingencies derived from the Company's collaborative and license agreements. Royalties from the commercial sale of products derived from the Company's collaborative and license agreements are reported as licensing, royalties, and other revenue.

If the Company has continuing obligations under a collaborative agreement and the deliverables within the collaboration cannot be separated into their own respective units of accounting, the Company utilizes a Multiple Attribution Model for revenue recognition as the revenue related to each deliverable within the arrangement should be recognized upon the culmination of the separate earnings processes and in such a manner that the accounting matches the economic substance of the deliverables included in the unit of accounting. As such, (1) up-front cash payments are recorded as deferred revenue and recognized as revenue ratably over the period of performance under the applicable agreement and (2) contingent payments are recorded as deferred revenue when all the criteria for revenue recognition are met and recognized as revenue ratably over the estimated period of the Company's ongoing obligations. Royalties based on reported sales of licensed products, if any, are recognized based on the terms of the applicable agreement when and if reported sales are reliably measurable and collectibility is reasonably assured.

Licensing, royalties, and other revenue. Licensing, royalties, and other revenue consists of revenue from sales of compounds and processes from patented technologies to third parties and royalties received pursuant to collaborative agreements and license agreements. Royalties based on reported sales, if any, of licensed products are recognized based on the terms of the applicable agreement when and if reported sales are reliably measurable and collectibility is reasonably assured.

If the Company has no continuing obligations under a license agreement, or a license deliverable qualifies as a separate unit of accounting included in a collaborative arrangement, license payments that are allocated to the license deliverable are recognized as revenue upon commencement of the license term and contingent payments are

recognized as revenue upon the occurrence of the events or contingencies provided for in such agreement, assuming collectibility is reasonably assured.

Government grants

Government assistance is recognized when the related research and development expenditures that qualify for assistance are made and the Company has complied with the conditions for the receipt of government assistance. Government assistance is applied to reduce eligible expenses incurred unless such amounts are required to be repaid regardless of the outcome of the research and development effort. For amounts subject to repayment solely on the results of the research and development effort, a liability to repay, if any, is recorded in the period in which conditions arise that cause the assistance to become repayable.

Research and development costs

Research and development expenses include personnel and facility related expenses, outside contract services including clinical trial costs, manufacturing and process development costs, research costs and other consulting services. Research and development costs are expensed as incurred. In instances where the Company enters into agreements with third parties for clinical trials, manufacturing and process development, research and other consulting activities, costs are expensed as services are performed. Amounts due under such arrangements may be either fixed fee or fee for service, and may include upfront payments, monthly payments, and payments upon the completion of milestones or receipt of deliverables.

The Company's accruals for clinical trials are based on estimates of the services received and pursuant to contracts with numerous clinical trial centers and clinical research organizations. In the normal course of business the Company contracts with third parties to perform various clinical trial activities in the ongoing development of potential products. The financial terms of these agreements are subject to negotiation and variation from contract to contract and may result in uneven payment flows. Payments under the contracts depend on factors such as the achievement of certain events, the successful accrual of patients, and the completion of portions of the clinical trial or similar conditions. The objective of the Company's accrual policy is to match the recording of expenses in its consolidated financial statements to the actual services received. As such, expense accruals related to clinical trials are recognized based on its estimate of the degree of completion of the event or events specified in the specific clinical study or trial contract.

Foreign exchange

The Company's consolidated financial statements are reported in U.S. dollars. Assets and liabilities of foreign subsidiaries with a non-U.S. dollar functional currency are translated to U.S. dollars at the exchange rates in effect on the balance sheet date. Revenues and expenses for these subsidiaries are translated to U.S. dollars using an average rate for the relevant reporting period. Translation adjustments resulting from this process are included, net of tax, in accumulated other comprehensive income in stockholders' equity. Gains and losses that arise from exchange rate fluctuations for balances that are not denominated in an entity's functional currency are included in the consolidated statements of operations and comprehensive income (loss). Currency gains and losses of intercompany balances deemed to be long-term in nature are included, net of tax, in accumulated other comprehensive income (loss) in stockholders' equity.

Effective January 1, 2008, the Company changed its functional currency to the U.S. dollar from the Canadian dollar in order to more accurately represent the currency of the economic environment in which it operates as a result of the Company's redomicile into the United States effective December 10, 2007 (See "Note 1 — Description of Business") and increasing U.S. dollar denominated revenues and expenditures. The Company's financial statements for periods prior to this change have not been restated for the change in functional currency. For periods subsequent to January 1, 2008, the Company's foreign subsidiaries are considered to be integrated foreign operations and, accordingly, have the same functional currency as the parent, the U.S. dollar.

Accumulated other comprehensive loss consists of cumulative translation adjustments related to the consolidation of the Company's investments in foreign subsidiaries arising in periods prior to the change in functional currency discussed above. Should the Company liquidate or substantially liquidate its investments in its foreign subsidiaries, the Company would be required to recognize the related cumulative translation adjustments pertaining to the liquidated or substantially liquidated subsidiaries, currently included as a component of other comprehensive loss, as a charge to earnings in the Company's consolidated statement of operations and comprehensive income (loss).

Earnings per share

Basic earnings per common share were calculated using the weighted average number of common shares outstanding during the year.

Diluted earnings per common share were calculated on the basis of the weighted average number of shares outstanding during the period, plus the additional common shares that would have been outstanding if potentially dilutive common shares underlying stock options, restricted share units and warrants had been issued using the treasury stock method.

Income taxes

The Company follows the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the future income tax consequences attributable to differences between the carrying amounts and tax bases of assets and liabilities and losses carried forward and tax credits. Deferred tax assets and liabilities are measured using enacted tax rates and laws applicable to the years in which the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided to the extent that it is more likely than not that deferred tax assets will not be realized.

The Company follows the guidance that clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements by prescribing a minimum recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company does not believe any such uncertain tax positions currently pending will have a material adverse effect on its consolidated financial statements.

Accumulated other comprehensive income (loss)

Comprehensive income (loss) is comprised of net income (loss) and other comprehensive income (loss). Other comprehensive income (loss) primarily consists of foreign currency translation adjustments which arose from the conversion of the Canadian dollar functional

currency consolidated financial statements to the U.S. dollar reporting currency consolidated financial statements prior to January 1, 2008.

Stock-based compensation

The Company recognizes in the income statement the estimated grant date fair value of share-based compensation awards granted to employees over the requisite service period. Stock-based compensation expense in the consolidated statements of operations is recorded on a straight-line basis over the requisite service period for the entire award, which is generally the vesting period, with the offset to additional paid-in capital. The Company uses the Black-Scholes option pricing model to estimate the fair value of stock options granted to employees.

Recent accounting pronouncements

Collaborative arrangements

In October 2009, the FASB issued an accounting standards update ("ASU") entitled, *Multiple-Deliverable Revenue Arrangements, a consensus of the FASB Emerging Issues Task Force*. This standard prescribes the accounting treatment for arrangements that contain multiple-deliverable elements and enables vendors to account for products or services (deliverables) separately, rather than as a combined unit, in certain circumstances. Prior to this standard, only certain types of evidence were acceptable for determining the relative selling price of the deliverables under an arrangement. If that evidence was not available, the deliverables were treated as a single unit of accounting. This updated standard expands the nature of evidence which may be used to determine the relative selling price of separate deliverables to include estimation. This standard is applicable to arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010. Early adoption is permitted; however, if the standard is adopted early, and the period of adoption is not the beginning of a company's fiscal year, the company will be required to apply the amendments retrospectively from the beginning of the company's fiscal year. The Company has not yet adopted this standard or determined the impact of this standard on its results of operations, cash flows and financial position.

Fair value measurements

On January 1, 2009, the Company adopted the provisions of Topic 820, on a prospective basis, for its non-financial assets and liabilities that are not recognized or disclosed at fair value on a recurring basis. The Company estimates the fair value of financial and non-financial assets and liabilities using the fair value hierarchy established in Topic 820. The adoption of the provisions under Topic 820 did not have any impact on the Company's financial position or results of operations.

On April 9, 2009, the FASB issued FASB Staff Position ("FSP") FAS 115-2 and FAS 124-2, codified as ASC Topic 320-10-35, which modifies the existing other-than-temporary-impairments ("OTTI") model for investments in debt securities. Under the new guidance, the primary change to the OTTI model for debt securities is the change in focus from an entity's intent and ability to hold a security until recovery. Instead, an OTTI is triggered if (1) an entity has the intent to sell the security, (2) it is more likely than not that it will be required to sell the security before recovery, or (3) it does not expect to recover the entire amortized cost basis of the security.

In addition, the new guidance changes the presentation of an OTTI in the income statement if the only reason for recognition is a credit loss (i.e., the entity does not expect

to recover its entire amortized cost basis). For debt securities in an unrealized loss position which are deemed to be other-than-temporary, the difference between the security's then-current amortized cost basis and fair value is separated into (1) the amount of the impairment related to the credit loss (i.e., the credit loss component) and (2) the amount of the impairment related to all other factors (i.e., the non-credit loss component). The credit loss component is recognized in earnings. The non-credit loss component is recognized in accumulated other comprehensive loss.

Instruments indexed to an entity's own stock

In September 2008, the FASB ratified the consensus reached on Emerging Issues Task Force Issue No. 07-5, *Determining Whether an Instrument (or an Embedded Feature) is Indexed to an Entity's Own Stock*, codified as ASC 815-40-15-5 (Topic 815-40-15-5). Topic 815-40-15-5 provides guidance for determining whether an equity-linked financial instrument (or embedded feature) is indexed to an entity's own stock and applies to any freestanding financial instrument or embedded feature that has all the characteristics of a derivative under ASC 815-10-15-13 through 15-139, for purposes of determining whether that instrument or embedded feature qualifies for the scope exception under ASC 815-10-15-74. Topic 815-40-15-5 also applies to any freestanding financial instrument that is potentially settled in an entity's own stock, regardless of whether the instrument has all the characteristics of a derivative for purposes of determining whether the instrument is within the scope of ASC subtopic 815-40. Topic 815-40-15-5 was effective beginning the first quarter of fiscal 2009 and was applied by the Company in its accounting for the warrants issued in May and August 2009. See "Note 4 — Fair Value Measurements" and "Note 10 — Share Capital" for further discussion.

4. FAIR VALUE MEASUREMENTS

The Company measures at fair value certain financial assets and liabilities in accordance with a hierarchy which requires an entity to maximize the use of observable inputs which reflect market data obtained from independent sources and minimize the use of unobservable inputs which reflect the Company's market assumptions when measuring fair value. There are three levels of inputs that may be used to measure fair value:

- Level 1 — quoted prices in active markets for identical assets or liabilities;
- Level 2 — observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- 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.

The Company's financial assets and liabilities measured at fair value consisted of the following as of December 31, 2009:

	December 31, 2009				December 31, 2008			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Money market funds (asset)	**$8,039**	**$ —**	**$ —**	**$ 8,039**	$5,029	$—	$—	$5,029
Certificates of deposits (asset)	**—**	**14,244**	**—**	**14,244**	—	—	—	—
Warrants (liability)	**—**	**—**	**10,059**	**10,059**	—	—	—	—

If quoted market prices in active markets for identical assets are not available to determine fair value, then the Company uses quoted prices from similar assets or inputs other than the quoted prices that are observable either directly or indirectly. These investments are included in Level 2 and consist of certificates of deposits denominated at or below $250,000 issued by banks insured by the Federal Deposit Insurance Corporation.

The estimated fair value of warrants accounted for as liabilities was determined on the date of closing and marked to market at each financial reporting period. The change in fair value of the warrants is recorded in the statement of operations as a gain (loss) and is estimated using the Black-Scholes option-pricing model with the following inputs:

	For the Year Ended December 31, 2009
Exercise price	**$ 3.92**
Market value of stock at end of period	**$ 5.39**
Expected dividend rate	**0%**
Expected volatility	**76%**
Risk-free interest rate	**2.4%**
Expected life (in years)	**4.40**

The changes in fair value of the warrants during the year ended December 31, 2009 were as follows (in thousands):

Balance at January 1, 2009	$ —
Issuance of warrants	4,218
Change in fair value recorded in earnings	6,150
Transferred to equity upon exercise	(309)
Balance at December 31, 2009	$10,059

5. ACCOUNTS RECEIVABLE AND GOVERNMENT GRANT RECEIVABLE (in thousands)

	2009	2008 (In thousands)
Customer, net of allowance for doubtful accounts — $0 (2008 — $0)	**$ —**	$1,777
Other	**41**	51
Accounts receivable	**$41**	$1,828
Government grant receivable	**$ —**	$ 40

One customer accounted for 100% of customer accounts receivable at December 31, 2008. The Company does not require a provision for doubtful accounts.

6. NOTES RECEIVABLE, EMPLOYEES

	2009	2008
	(In thousands)	
Notes receivable	**$186**	$215

Pursuant to the acquisition of ProlX, the Company advanced notes of $0.3 million to certain employees of ProlX and a former director of ProlX. The principal amount of the loans, together with interest accrued at the rate of 5.0% per annum to the date of payment, was due and payable on April 28, 2009. The former director repaid his loan in 2008 and one of the employees repaid $38,635 of interest and principal during 2009. The original due dates for the remaining loans were extended to April 28, 2010 and to April 28, 2011. Interest income of $9,000 and $12,000 related to these loans has been recorded in the consolidated statements of operations in 2009 and 2008, respectively.

7. PLANT AND EQUIPMENT

	2009		
	Cost	Accumulated Depreciation	Carrying Value
		(In thousands)	
Scientific equipment	**$ 968**	**$ 515**	**$ 453**
Office equipment	**100**	**80**	**20**
Computer software and equipment	**308**	**183**	**125**
Leasehold improvements	**1,527**	**49**	**1,478**
	$2,903	**$827**	**$2,076**

	2008		
	Cost	Accumulated Depreciation	Carrying Value
		(In thousands)	
Scientific equipment	$ 856	$399	$457
Office equipment	95	80	15
Computer software and equipment	313	84	229
Leasehold improvements	179	13	166
	$1,443	$576	$867

8. LEASE OBLIGATIONS

Operating leases

The Company is committed to annual minimum payments under operating lease agreements for premises over the next five years, as follows (in thousands):

2010	$ 436
2011	441
2012	573
2013	582
2014	591
Thereafter	2,432
	$5,055

Minimum rental expense for premises and equipment in the amount of $0.7 million, $0.7 million and $0.5 million have been recorded in the consolidated statements of operations in 2009, 2008 and 2007 respectively. In May 2008, the Company entered into a sublease agreement for an office and laboratory facility in Seattle, Washington totaling approximately 17,000 square feet where the Company has consolidated certain of its operations. The sublease expires on December 17, 2011. The sublease provides for a monthly base rent of $33,000 increasing to $36,000. In May 2008, the Company also entered into a lease agreement directly with the landlord beginning on December 18, 2011 for a period of 84 months to December 18, 2017. The lease provides for a monthly base rent of $48,000 increasing to $0.1 million in 2017.

The lease for the Company's corporate facilities in Edmonton, Alberta was assumed by Merck KGaA in December 2008. (See "Note 12 — Collaborative and License Agreements")

9. NOTES PAYABLE

The Company has two non-interest bearing notes payable to Innovation Works Inc which are payable upon the earlier of the successful commercialization of or the date consideration is received on the sale and license of PX-12. No interest is imputed for these notes payable as amounts that will be paid and the timing thereof cannot be determined with any certainty. The Company does not anticipate payment on these notes in the foreseeable future

10. SHARE CAPITAL

Authorized shares

Class UA preferred stock

As of December 31, 2009, the Company had 12,500 shares of Class UA preferred stock authorized, issued and outstanding. The Class UA preferred stock has the following rights, privileges, and limitations:

Voting. Each share of Class UA preferred stock will not be entitled to receive notice of, or to attend and vote at, any Stockholder meeting unless the meeting is called to consider any matter in respect of which the holders of the shares of Class UA preferred stock would be entitled to vote separately as a class, in which case the holders of the shares of Class UA preferred stock shall be entitled to receive notice of and to attend and vote at such meeting. Amendments to the certificate of incorporation of Oncothyreon that would increase or decrease the par value of the Class UA preferred stock or alter or change the

powers, preferences or special rights of the Class UA preferred stock so as to affect them adversely would require the approval of the holders of the Class UA preferred stock.

Conversion. The Class UA preferred stock is not convertible into shares of any other class of Oncothyreon capital stock.

Dividends. The holders of the shares of Class UA preferred stock will not be entitled to receive dividends.

Liquidation preference. In the event of any liquidation, dissolution or winding up of the Company, the holders of the Class UA preferred stock will be entitled to receive, in preference to the holders of the Company's common stock, an amount equal to the lesser of (1) 20% of the after tax profits ("net profits"), determined in accordance with Canadian generally accepted accounting principles, where relevant, consistently applied, for the period commencing at the end of the last completed financial year of the Company and ending on the date of the distribution of assets of the Company to its stockholders together with 20% of the net profits of the Company for the last completed financial year and (2) CDN $100 per share.

Holders of Class UA preferred stock are entitled to mandatory redemption of their shares if the Company realizes "net profits" in any year. For this purpose, "net profits . . . means the after tax profits determined in accordance with generally accepted accounting principles, where relevant, consistently applied." The Company has taken the position that this applies to Canadian GAAP and accordingly there have been no redemptions to date.

Redemption. The Company may, at its option and subject to the requirements of applicable law, redeem at any time the whole or from time to time any part of the then-outstanding shares of Class UA preferred stock for CDN $100 per share. The Company is required each year to redeem at CDN $100 per share that number of shares of Class UA preferred stock as is determined by dividing 20% of the net profits by CDN $100.

The difference between the redemption value and the book value of the Class UA preferred stock will be recorded at the time that the fair value of the shares increases to redemption value based on the Company becoming profitable.

Preferred stock

As of December 31, 2009, the Company had 10,000,000 shares of undesignated preferred stock, $0.0001 par value per share, authorized, with none outstanding. Shares of preferred stock may be issued in one or more series from time to time by the Board of Directors of the Company, and the Board of Directors is expressly authorized to fix by resolution or resolutions the designations and the powers, preferences and rights, and the qualifications, limitations and restrictions thereof, of the shares of each series of preferred stock. Subject to the determination of the Board of Directors of the Company, the preferred stock would generally have preferences over common stock with respect to the payment of dividends and the distribution of assets in the event of the liquidation, dissolution or winding up of the Company.

Common stock

As of December 31, 2009, the Company had 100,000,000 shares of common stock, $0.0001 par value per share, authorized. The holders of common stock are entitled to receive such dividends or distributions as are lawfully declared on the Company's common stock, to have notice of any authorized meeting of stockholders, and to exercise one vote for each share of common stock on all matters which are properly submitted to a vote of the Company's stockholders. As a Delaware corporation, the Company is subject to

statutory limitations on the declaration and payment of dividends. In the event of a liquidation, dissolution or winding up of the Company, holders of common stock have the right to a ratable portion of assets remaining after satisfaction in full of the prior rights of creditors, including holders of the Company's indebtedness, all liabilities and the aggregate liquidation preferences of any outstanding shares of preferred stock. The holders of common stock have no conversion, redemption, preemptive or cumulative voting rights.

Warrants

On May 26, 2009, the Company closed the sale of 3,878,993 shares of its common stock and warrants to purchase an additional 2,909,244 shares of common stock for gross proceeds of approximately $11.1 million. The purchase price per unit, consisting of one share of common stock and a warrant to purchase 0.75 shares of common stock, was $2.85. The exercise price of the warrants is $3.92 per share. The warrants are exercisable at any time on or after November 26, 2009 and on or prior to May 26, 2014. Upon exercise, holders of the warrants are required to deliver the aggregate exercise price with respect to the number of underlying shares; provided that if a registration statement is not available with respect to the issuance of such shares upon exercise, under certain circumstances, holders may exercise warrants on a "net" basis. If holders exercise warrants on a "net" basis, the Company would not receive any cash in respect of the shares issued upon exercise. At the election of the warrant holder, upon certain transactions, including a merger, tender offer or sale of substantially all of the assets of the Company, the holder may receive cash in exchange for the warrant, in an amount determined by application of the Black-Scholes option valuation model.

Due to certain provisions in the warrants issued in May 2009 that provide for an adjustment to the exercise price, if the Company issues or sells shares below the exercise price and cash settlement upon the occurrence of a fundamental transaction (as defined in the warrant agreement), the warrants have been classified as a liability, as opposed to equity. The warrants were valued on date of closing and subsequent changes in their estimated fair value at each financial reporting period are recorded in the statement of operations as a gain (loss).

On August 7, 2009, the Company closed the sale of 2,280,502 shares of its common stock and warrants to purchase an additional 684,150 shares of common stock for gross proceeds of approximately $15.0 million. The purchase price per unit, consisting of one share of common stock and a warrant to purchase 0.30 shares of common stock, was $6.5775. The exercise price of the warrants is $6.5775 per share. The warrants are exercisable at any time on or after August 7, 2009 and on or prior to August 7, 2011. Upon exercise, holders of the warrants are required to deliver the aggregate exercise price with respect to the number of underlying shares; provided that if a registration statement is not available with respect to the issuance of such shares upon exercise, under certain circumstances, holders may exercise warrants on a "net" basis. If holders exercise warrants on a "net" basis, the Company would not receive any cash in respect of the shares issued upon exercise. Holders of warrants issued in the August 2009 financing are not entitled to receive cash in connection with a merger, tender offer or sale of substantially all of the assets of the Company. The warrants issued in August 2009 have been classified as equity.

A summary of outstanding warrants as of December 31, 2009 and 2008 and changes during the years then ended is presented below (in thousands).

	2009 Shares Underlying Warrants	2008 Shares Underlying Warrants
Warrant		
Balance, beginning of year	**795,150**	795,150
Equity placements	**3,593,394**	—
Exercise of warrants	**(91,500)**	—
Expiration of warrants	**(458,126)**	—
Balance, end of year	**3,838,918**	795,150

The following table summarizes information regarding warrants outstanding at December 31, 2009:

Exercise Prices	Shares Underlying Outstanding Warrants	Expiry Date
$11.16	337,024	December 18, 2010
$3.92	2,817,744	May 26, 2014
$6.5775	684,150	August 7, 2011
	3,838,918	

	For the Years Ended December 31, 2009	2008
Shares underlying warrants outstanding classified as liabilities	**2,817,744**	—
Shares underlying warrants outstanding classified as equity	**1,021,174**	795,150

Conversion of restricted share units

Restricted share units of 9,920 and 6,543 with a weighted average fair value of $7.56 and $7.81 were converted in 2009 and 2008, respectively. No restricted share units were converted in 2007.

Exercise of warrants

In 2009, holders of warrants exercised such warrants with respect to 91,500 shares of the Company's common stock. No warrants were exercised during 2008 or 2007.

Earnings (loss) per share

The following is a reconciliation of the numerators and denominators of basic and diluted earnings per share computations (in thousands):

	2009	2008	2007
Numerator:			
Net income (loss)	**$ (17,219)**	$ 7,422	$ (20,428)
Denominator:			
Weighted average shares outstanding used to compute earnings per share — basic	**22,739,138**	19,490,621	19,485,889
Effect of dilutive RSU's	**—**	79,549	—
Weighted average shares outstanding and dilutive securities used to compute earnings per share — diluted	**22,739,138**	19,570,170	19,485,889

Shares potentially issuable upon the exercise or conversion of director and employee stock options of 1,836,657, 1,223,386 and 1,315,036; non-employee director restricted share units of 186,266, 0 and 86,092; and warrants of 3,838,918, 795,150 and 795,150 have been excluded from the calculation of diluted loss per share in years ended December 31, 2009, 2008 and 2007, respectively because their effect was anti-dilutive.

For 2009 and the comparative years presented, shares contingently issuable in connection with the May 2, 2001 Merck KGaA agreement (discussed below), contingently issuable shares in connection with the October 30, 2006 ProlX acquisition, and purchase warrants issued in connection with the 2004, 2006 and 2009 equity financings, have been excluded from the calculation of diluted loss per share because the effect would have been anti-dilutive.

In May 2001, under the terms of a common stock purchase agreement, the Company issued to Merck KGaA 318,702 shares of Company common stock for proceeds of $15.0 million net of issue costs of $9,000. Upon the first submission of a BLA for Stimuvax, if any, the Company is required to sell and Merck KGaA is required to purchase from the Company a number of shares of Company common stock equal to (1) $1.5 million divided by (2) 115% of the 90-day weighted average per share price of such shares immediately prior to such submission date. During periods presented, no additional common shares were issued to Merck KGaA under such agreement.

11. STOCK-BASED COMPENSATION

Stock option plan

The Company sponsors a stock option plan (the "Option Plan") under which a maximum fixed reloading percentage of 10% of the issued and outstanding common shares of the Company may be granted to employees, directors, and service providers. Prior to April 1, 2008, options were granted with a per share exercise price, in Canadian dollars, equal to the closing market price of the Company's shares of common stock on the Toronto Stock Exchange on the date immediately preceding the date of the grant. After April 1, 2008, options were granted with a per share exercise price, in U.S. dollars, equal to the closing price of the Company's shares of common stock on The NASDAQ Global Market on the date of grant. Canadian dollar amounts reflected in the tables below approximate their U.S. dollar equivalents as differences between the U.S. dollar and Canadian dollar exchange rates for the periods reflected below are not material. In general, options granted under

the Option Plan begin to vest after one year from the date of the grant, are exercisable in equal amounts over four years on the anniversary date of the grant, and expire eight years following the date of grant. The current maximum number of shares of common stock reserved for issuance under the Option Plan is 2,575,340. As of December 31, 2009, 738,683 shares of common stock remain available for future grant under the Option Plan.

A summary of the status of the Option Plan as of December 31, 2009, 2008 and 2007, and changes during the years ended on those dates is presented below. As described above, prior to April 1, 2008, exercise prices were denominated in Canadian dollars and in U.S. dollars thereafter. The weighted average exercise prices listed below are in their respective dollar denominations.

	2009		2008		2007	
	Stock Options	Weighted Average Exercise Price	Stock Options	Weighted Average Exercise Price	Stock Options	Weighted Average Exercise Price $CDN
Outstanding, beginning of year $CDN	**1,119,486**	**$ 9.85**	1,315,036	$ 13.99	1,150,414	$ 15.51
Outstanding, beginning of year $US	**103,900**	**3.43**				
Granted $CDN	**0**	**0**	8,000	4.60	246,266	7.93
Granted $US	**786,000**	**3.97**	142,600	3.43	—	—
Exercised $US	**(250)**					
Forfeited $CDN	**(146,373)**	**12.88**	(112,774)	17.45	(81,644)	17.12
Forfeited $US	**(25)**	**2.45**	(38,700)	3.43	—	—
Expired $CDN	**(26,081)**	**37.95**	(90,776)	59.90	—	—
Balance, end of the year $CDN	**947,032**	**8.59**	1,119,486	9.85	1,315,036	13.99
Balance, end of the year $US	**889,625**	**3.92**	103,900	3.43	—	—
Options exercisable, end of year $CDN	**843,553**	**$ 8.68**	764,973	$ 10.74	625,704	$20.35
Options exercisable, end of year $US	**27,250**	**3.43**				

As of December 31, 2009, there were 843,806 U.S. dollar denominated options vested and expected to vest with a weighted-average exercise price of U.S. $3.87, a weighted-average remaining contractual term of 7.47 years and an aggregate intrinsic value of $1.3 million. For the same period, there were 865,780 Canadian dollar denominated options vested and expected to vest with a weighted-average exercise price of CDN $8.27, a weighted-average remaining contractual term of 4.25 years and an aggregate intrinsic value of CDN $4,700.

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying awards and the quoted price of the Company's common stock for all options that were in-the-money at December 31, 2009. The aggregate intrinsic value at December 31, 2009 for options outstanding was $1.3 million and for options exercisable was $0.1 million. The aggregate intrinsic value of options exercised under the Option Plan was immaterial during 2009. No options were exercised in 2008 and 2007.

The following table summarizes information on stock options outstanding and exercisable at December 31, 2009. The range of exercise prices and weighted average exercise prices are listed in their respective dollar denominations.

	Stock Options Outstanding			Stock Options Exercisable		
Range of Exercise Prices ($CDN per share)	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price
4.60 — 7.50	488,431	4.58	$ 7.31	476,424	4.55	$ 7.34
7.51 — 10.00	279,078	4.49	8.14	187,606	4.29	8.18
10.01 — 12.50	55,808	1.56	10.88	55,808	1.56	10.88
12.51 — 15.00	121,152	1.83	13.30	121,152	1.83	13.30
15.01 — 25.00	897	1.93	16.02	897	1.93	16.02
25.01 — 36.42	1,666	.16	36.42	1,666	.16	36.42
	947,032	4.01	$ 8.59	843,553	3.89	$ 8.68
Range of Exercise Prices ($USD per share)						
1.10 — 3.00	172,625	7.19	$ 1.11	—	—	$ —
3.01 — 4.00	109,000	5.68	3.43	27,250	5.68	3.43
4.01 — 5.00	580,500	7.91	4.73	—	—	—
5.01 — 6.56	27,500	7.62	6.45	—	—	—
	889,625	7.49	$ 3.92	27,250	5.68	$ 3.43

There were 250 stock options exercised in 2009. No stock options were exercised in 2008 or 2007. As of December 31, 2009, there were 28,425 exercisable, in-the-money options based on the Company's closing share price of $5.39 on The NASDAQ Global Market.

A summary of the status of non-vested stock options as of December 31, 2009 and changes during 2009 is presented below:

	Number of Non-Vested Options	Weighted Average Grant Date Fair Value $
Balance at December 31, 2008 $CDN	354,513	$6.54
Balance at December 31, 2008 $US	103,900	2.93
Granted $US	786,000	3.03
Vested $CDN	(249,079)	6.55
Vested $US	(27,525)	2.93
Forfeited $CDN	(1,955)	6.90
Forfeited $US	—	—
Balance at December 31, 2009 $CDN	103,479	$6.29
Balance at December 31, 2009 $US	862,375	$3.03

Stock based compensation expense related to the stock option plan of $1.0 million, $1.5 million and $1.6 million were recognized in 2009, 2008 and 2007 respectively which related to the current period recognition of the estimated fair value of new awards, the unvested portion of existing awards and to awards modified, repurchased or cancelled

after January 1, 2006. The expense includes adjustments of $0, $0.1 million and $0.1 million in 2009, 2008 and 2007 respectively relating to workforce reduction costs described in Note 13. These adjustments include the immediate expensing of the remaining unrecognized fair value of the affected stock options and modification adjustments of the affected stock options. Total compensation cost related to non-vested stock options not yet recognized was $2.6 million as of December 31, 2009, which will be recognized over the next 41 months on a weighted-average basis.

The Company uses the Black-Scholes option pricing model to value the options at each grant date, under the following weighted average assumptions:

	2009	2008	2007
Weighted average grant-date fair value per stock option $CDN	**$ —**	$ 3.84	$ 6.47
Weighted average grant-date fair value per stock option $US	**$ 3.03**	$ 2.93	$ —
Expected dividend rate	**—**	—	—
Expected volatility	**92.46%**	114.19%	102.52%
Risk-free interest rate	**2.47%**	3.09%	4.21%
Expected life of options in years	**6.0**	6.0	6.0

Until April 1, 2008 the risk-free interest rate for the expected term of the option was based on the yield available on Government of Canada benchmark bonds with an equivalent expected term. Subsequent to April 1, 2008 the Company uses the yield at the time of grant of a U.S. Treasury security. The expected life of options in years represents the period of time stock-based awards are expected to be outstanding, giving consideration to the contractual terms of the awards, vesting schedules and historical employee behavior. The expected volatility is based on the historical volatility of the Company's common stock for a period equal to the stock option's expected life. The amounts estimated according to the Black-Scholes option pricing model may not be indicative of the actual values realized upon the exercise of these options by the holders.

Restricted share unit plan

The Company also sponsors a Restricted Share Unit Plan (the "RSU Plan") for non-employee directors that was established in 2005. The RSU Plan provides for grants to be made from time to time by the Board of Directors or a committee thereof. Each grant will be made in accordance with the RSU Plan and terms specific to that grant and will be converted into one common share of common stock at the end of the grant period (not to exceed five years) without any further consideration payable to the Company in respect thereof. The current maximum number of common shares of the Company reserved for issuance pursuant to the RSU Plan is 466,666. As of December 31, 2009, 260,771 shares of common stock remain available for future grant under the RSU Plan.

A summary of the status of the Company's RSU Plan as of December 31, 2009, 2008 and 2007, and changes during the years ending on those dates is presented below.

	2009		2008		2007	
	Restricted Share Units	Weighted Average Fair Value per Unit	Restricted Share Units	Weighted Average Fair Value per Unit	Restricted Share Units	Weighted Average Fair Value per Unit
Outstanding, beginning of year	**79,549**	**$ 7.25**	86,092	$7.29	80,158	$7.27
Granted	**116,637**	**2.20**	—	—	5,934	7.49
Converted	**(9,920)**	**7.56**	(6,543)	7.78	—	—
Outstanding, end of year	**186,266**	**4.07**	79,549	7.25	86,092	7.29
Restricted share units convertible, end of year	**—**	**$ —**	6,543	$7.78	6,543	$7.78

Stock based compensation expense of $0.3 million, $0 and $44,000 were recognized on the RSU Plan in 2009, 2008 and 2007 respectively, representing the fair value of restricted share units granted.

Amounts of $0.1 million, $0.1 million and $0 arising from the conversion of these restricted share units during the years ending 2009, 2008 and 2007 respectively were credited to share capital.

Prior to June 12, 2009 the fair value of the restricted share units has been determined to be the equivalent of the Company's common shares closing trading price on the date immediately prior to the grant as quoted in Canadian dollars on the Toronto Stock Exchange. Subsequent to June 12, 2009 the fair value of the restricted share units has been determined to be the equivalent of the Company's common shares closing trading price on the date immediately prior to the grant as quoted on The NASDAQ Global Market.

12. COLLABORATIVE AND LICENSE AGREEMENTS

2001 Merck KGaA Agreements

On May 3, 2001, the Company entered into a collaborative arrangement with Merck KGaA to pursue joint global product research, clinical development, and commercialization of two of the Company's product candidates, Stimuvax and Theratope. The collaboration covered the entire field of oncology for these two product candidates and was documented in collaboration and supply agreements (the "2001 Agreements"). The Company's deliverables under the 2001 Agreements included (1) the license of rights to the product candidates, (2) collaboration with Merck KGaA, including shared responsibilities for the clinical development and post-commercialization promotion of the product candidates, (3) participation in a joint steering committee, (4) participation in a manufacturing/CMC Project team, (5) delivery of any improvements of Stimuvax to Merck and (6) manufacturing of the product candidates.

Pursuant to the 2001 collaboration agreement, the Company granted a co-exclusive license to Merck KGaA with respect to the clinical development and commercialization of such product candidates in North America and an exclusive license with respect to the clinical development and commercialization of such product candidates in the rest of the world. Merck KGaA did not obtain the right to sublicense the rights licensed to it pursuant to the

2001 collaboration agreement. The license term commenced as of the effective date of the 2001 collaboration agreement. The exclusivity provisions of such license were to remain in effect during the period beginning on the effective date of such license agreement and ending, on a product-by-product and country-by-country basis, on the latter of (1) the expiration of patent rights with respect to the applicable product candidate and (2) the 15th anniversary of the product launch. After the expiration of such period, such license would be perpetual and non-exclusive.

Under the 2001 Agreements, the parties agreed to collaborate in substantially all aspects of the clinical development and commercialization of the product candidates and coordinate their activities through a joint steering committee. Pursuant to the 2001 collaboration agreement, the parties agreed to share the responsibilities and obligations, for the clinical development and commercialization of the product candidates in North America (other than with respect to the right to promote product candidates in Canada, which was retained by the Company). In the rest of the world, Merck KGaA was responsible for the clinical development of the product candidates (although the Company agreed to reimburse Merck KGaA for 50% of the clinical development and regulatory costs) and commercialization of the product candidates. The 2001 collaboration agreement's term corresponded with the exclusivity period of the Company's license to the product candidates. Additionally, Merck KGaA was, and is, entitled to terminate the agreements with us with respect to a particular product candidate upon 30 days prior written notice to the Company, if, in the exercise of Merck KGaA's reasonable judgment, it determined that there were issues concerning the safety or efficacy of such product candidate that would materially adversely affect the candidate's medical, competitive or economic viability. If the agreements are terminated by Merck KGaA in accordance with their terms, the Company does not have legal recourse against Merck KGaA with respect to contingent or other future payments.

Pursuant to the 2001 supply agreement, the Company was responsible for the manufacturing of the clinical and commercial supply of the product candidates for which Merck KGaA agreed to reimburse the Company for its manufacturing costs. The 2001 supply agreement's term corresponded to the exclusivity period of the Company's license to the product candidates.

In connection with the execution of the 2001 collaboration agreement and supply agreement, the Company received up-front cash payments of $2.8 million ($1.0 million for executing the agreement and $1.8 million as reimbursement of pre-agreement clinical development expenses incurred by the Company) and $4.0 million, respectively. In addition, under the 2001 Agreements the Company was entitled to receive (1) a $5.0 million payment contingent upon enrollment of the first patient in a Phase 3 clinical trial, (2) various additional contingent payments, up to a maximum of $90.0 million in the aggregate (excluding payments payable with respect to Theratope, the development of which was discontinued in 2004), tied to biologics license application, or BLA, submission for first and second cancer indications, for regulatory approval for first and second cancer indications, and for various sales milestones, and (3) royalties in the low twenties based on net sales outside of North America. Under the 2001 supply agreement, the Company was entitled to receive reimbursements from Merck KGaA for a portion of the Stimuvax manufacturing costs.

The Company recorded the payments received in connection with the execution of the 2001 Agreements as deferred revenue and recognized such revenue ratably over the period from the date of the 2001 Agreements to 2011. The Company determined that the

estimated useful life of the products and estimated period of its ongoing obligations corresponded to the estimated life of the issued patents for such products. The Company chose that amortization period because, at the time, the Company believed it reflected an anticipated period of "market exclusivity" based upon the Company's expectation of the life of the patent protection, after which the market entry of competitive products would likely occur. Under the 2001 supply agreement, the cost of manufacturing Stimuvax associated with clinical trial material costs was recorded as incurred and reported under contract research and development expense and revenue related to Merck KGaA's reimbursement of the Company's cost of manufacturing was recognized as payments were received from Merck KGaA, commensurate with the culmination of the separate earnings process, and reported under contract research and development revenue. The Company did not receive any contingent payments or royalties under the 2001 Agreements. For more information regarding the Company's revenue recognition policies, see "Note 3 — Significant Accounting Policies — Revenue Recognition."

In June 2004, following the failure of Theratope in a Phase 3 clinical trial, Merck KGaA returned to the Company all rights to Theratope and development of Theratope was discontinued; however, the parties continued to collaborate under the terms of the 2001 Agreements with respect to the development of Stimuvax, which in 2004 had shown positive results in a Phase 2 clinical trial. In connection with the discontinuation of Theratope, the Company accelerated recognition of approximately $4.5 million in previously deferred revenue, which corresponded to the portion of the up-front cash payments under the 2001 Agreements that was allocated to Theratope. The remaining deferred revenue related to Stimuvax was then amortized over a period to end in 2018, the period estimated by management to represent the estimated useful life of the product and estimated period of its ongoing obligations, which corresponded to the estimated life of the issued patents for Stimuvax.

2006 Merck KGaA LOI

On January 26, 2006, the parties entered into a binding letter of intent (the "LOI") pursuant to which the 2001 Agreements were amended in part and the parties agreed to negotiate in good faith to amend and restate the 2001 collaboration and supply agreements, as necessary, to implement the provisions contemplated by the LOI. The Company's deliverables under the 2001 Agreements, as amended by the LOI, remained (1) the license of rights to Stimuvax, (2) participation in a joint steering committee, (3) participation in a manufacturing/CMC Project team, (4) delivery of any improvements of Stimuvax to Merck and (5) manufacturing of the product candidate.

Pursuant to the LOI, in addition to the rights granted pursuant to the 2001 Collaboration Agreement, the Company granted to Merck KGaA an exclusive license with respect to the clinical development and commercialization of Stimuvax in the United States and, subject to certain conditions, to act as a secondary manufacturer of Stimuvax. The Company's right to commercialize Stimuvax in Canada remained unchanged. The license grant was effective as of March 1, 2006. The exclusivity period of such license corresponded to that under the 2001 collaboration agreement.

Pursuant to the LOI, the joint steering committee continued to meet and served as the vehicle through which Merck KGaA provided updates and shared information regarding clinical development and marketing; however, it ceased to be a decision-making body. The Company continued to have responsibility for manufacturing. Further, the parties'

collaboration, including the term of the 2001 collaboration agreement, was not otherwise affected.

Pursuant to the LOI, the Company continued to be responsible for the manufacturing of the clinical supply of Stimuvax for which Merck KGaA agreed to pay the Company its cost of manufacturing. The 2001 supply agreement's term was not modified by the LOI.

Further, under the LOI, the $5.0 million contingent payment payable to the Company under the 2001 Agreements upon enrollment of the first patient in a Phase 3 clinical trial was amended such that the Company was entitled to receive a $2.5 million contingent payment upon the execution of the amended and restated collaboration and supply agreements contemplated by the LOI and a $2.5 million contingent payment upon enrollment of the first patient in such Phase 3 clinical trial. In addition, under the LOI the Company was entitled to receive (1) various additional contingent payments tied to the same events and up to the same maximum amounts as under the 2001 Agreements, (2) royalties based on net sales outside of North America at the same rates as under the 2001 Agreements and (3) royalties based on net sales inside of the North America ranging from a percentage in the high-twenties to the mid-twenties, depending on the territory in which the net sales occur. The royalty rate was higher in North America than in the rest of the world in return for the Company relinquishing its rights to Stimuvax in the United States. In February 2007, the Company announced that the first patient had been enrolled in the global Phase 3 Stimuvax clinical trial for non-small cell lung cancer, triggering the contingent payment by Merck KGaA to the Company of $2.5 million. This payment was received in March 2007.

The Company assessed whether objective and reliable evidence of fair value of the undelivered elements under the 2001 Agreements, as amended by the LOI, existed as the manufacturing deliverable was shipped, and concluded such evidence did not exist. As a result, it was concluded that all deliverables in the arrangement were to be considered a single unit of accounting.

The Company recorded the payments received under the LOI as deferred revenue and recognized such revenue ratably over the remaining estimated product life of Stimuvax, which was until 2018. The Company did not receive any royalties under the LOI. For more information regarding the Company's revenue recognition policies, see "Note 3 — Significant Accounting Policies — Revenue Recognition."

2007 Merck KGaA Agreements

On August 8, 2007, the parties amended and restated the collaboration and supply agreements (as amended and restated, the "2007 Agreements"), which restructured the 2001 Agreements and formalized the terms set forth in the LOI. The Company's deliverables under the 2007 Agreements remained (1) the license of rights to Stimuvax, (2) participation in a joint steering committee, (3) participation in a manufacturing/CMC Project team, (4) delivery of any improvements of Stimuvax to Merck and (5) manufacturing of the product candidates.

Under the 2007 collaboration agreement, in addition to the rights granted pursuant to the 2001 collaboration agreement (as modified by the LOI), the Company granted to Merck KGaA an exclusive license to develop and commercialize Stimuvax in Canada. For accounting purposes, the license grant to develop Stimuvax in Canada was effective as of the date of the 2007 collaboration agreement. As a result, Merck KGaA obtained an exclusive world-wide license with respect to the development and commercialization of Stimuvax. The exclusivity period of such license corresponded to that under the 2001

collaboration agreement; however, where the license was perpetual and was subject to termination by Merck KGaA the Company believes that the appropriate amortization period, and therefore the period of performance under the agreements, for amounts arising under the contract corresponds to the estimated product life of Stimuvax, or until 2018.

Under the 2007 collaboration agreement, the joint steering committee continued to meet and serve as the vehicle through which Merck KGaA provided updates and shared information regarding clinical development and marketing; however, it ceased to be a decision-making body. The Company continued to have responsibility for the development of the manufacturing process and plans for the scale-up for commercial manufacturing and the parties' collaboration was not otherwise materially affected from the LOI. The 2007 collaboration agreement's term corresponded to that under the 2001 collaboration agreement.

Under the 2007 supply agreement, the Company continued to be responsible for the manufacturing of the clinical and commercial supply of Stimuvax for which Merck KGaA agreed to pay the Company its cost of goods (which included amounts owed to third parties) and provisions for certain contingent payments to the Company related to manufacturing scale-up and process transfer were added. The 2007 supply agreement's term corresponded to that under the 2001 collaboration agreement.

The entry into the 2007 Agreements triggered a payment to the Company of $2.5 million. Such payment was received in September 2007 and recorded as deferred revenue and recognized ratably over the remaining estimated product life of Stimuvax, which was until 2018. In addition, under the 2007 Agreements, the Company was entitled to receive (1) a $5.0 million payment tied to the transfer of certain assays and methodology related to the manufacturing of Stimuvax, a $3.0 million payment tied to the transfer of certain Stimuvax manufacturing technology and a $2.0 million payment tied to the receipt of the first manufacturing run at commercial scale of Stimuvax (provided that, in each case, such payments would have been payable by December 31, 2009, regardless of whether the applicable triggering event had been met), (2) various additional contingent payments tied to the same events and up to the same maximum amounts as under the 2001 Agreements, (3) royalties based on net sales outside of North America at the same rates as under the 2001 Agreements and (4) royalties based on net sales inside of North America with percentages in the mid-twenties, depending on the territory in which the net sales occur. If the manufacturing process payments due by December 31, 2009 were paid in full, the royalty rates would be reduced in all territories by 1.25%, relative to the 2001 Agreements and the LOI. In December 2007 and May 2008, the Company received from Merck KGaA a $5.0 million and a $3.0 million payment, respectively, related to the transfer of certain manufacturing information and technology.

The Company assessed whether objective and reliable evidence of fair value of the undelivered elements under the 2007 Agreements existed as the manufacturing deliverable was shipped, and concluded such evidence did not exist. As a result, it was concluded that all deliverables in the arrangement was to be considered a single unit of accounting.

The Company recorded the manufacturing process transfer payments received under the 2007 Agreements as deferred revenue and recognized such revenue ratably over the remaining estimated product life of Stimuvax. After execution of the 2007 supply agreement, the Company reported revenue and associated clinical trial material costs related to the supply of Stimuvax separately in the consolidated statements of operations

as contract manufacturing revenue and manufacturing expense, respectively. Under the 2007 supply agreement, the Company was entitled to invoice and receive a specified upfront payment on the contractual purchase price for Stimuvax clinical trial material after the receipt of Merck KGaA's quarterly 12-month rolling forecast requirements. The Company invoiced the remaining balance of the contractual purchase price after shipment of the clinical trial material to Merck KGaA. The upfront entitlements were recorded as deferred revenue and such entitlements and the remaining balance of the purchase price were recognized as contract manufacturing revenue after shipment to Merck KGaA upon the earlier of (1) the expiration of a 60-day return period (since returns could not be reasonably estimated) and (2) formal acceptance of the clinical trial material by Merck KGaA. Concurrently, the associated costs of the clinical trial material was removed from inventory and recorded as manufacturing expense. The Company did not receive any royalties under the 2007 Agreements. For more information regarding the Company's revenue recognition policies, see "Note 3 — Significant Accounting Policies — Revenue Recognition."

2008 Merck KGaA Agreements

On December 18, 2008, the Company entered into a license agreement with Merck KGaA which replaced the 2007 Agreements. Pursuant to the 2008 license agreement, in addition to the rights granted pursuant to the 2007 collaboration agreement, the Company granted to Merck KGaA the exclusive right to manufacture Stimuvax and the right to sublicense to other persons all such rights licensed to Merck KGaA. The license grant was effective as of the date of the 2008 license agreement. The exclusivity period of such license corresponded to that under the 2007 collaboration agreement.

In addition, (1) the joint steering committee was abolished, (2) the Company transferred certain manufacturing know-how to Merck KGaA, (3) the Company agreed not to develop any product that is competitive with Stimuvax, other than its product candidate ONT-10, (4) the Company granted to Merck KGaA a right of first negotiation in connection with any contemplated collaboration or license agreement with respect to the development or commercialization of ONT-10 and (5) the Company sold other Stimuvax-related assets as described in further detail below.

The only deliverable under the 2008 license agreement was the license grant. Upon the execution of the agreements with Merck KGaA in December 2008, all future Company performance obligations related to the collaboration for the clinical development and development of the manufacturing process of Stimuvax were removed and continuing involvement by the Company in the development and manufacturing of Stimuvax ceased (although the Company continues to be entitled to certain information rights with respect to clinical testing, development and manufacture of Stimuvax).

In return for the license of manufacturing rights and transfer of manufacturing know-how under the 2008 license agreement, the Company received an up-front cash payment of approximately $10.5 million. In addition, under the 2008 license agreement (1) the provisions with respect to contingent payments under the 2007 Agreements remained unchanged and (2) the Company is entitled to receive royalties based on net sales of Stimuvax ranging from a percentage in mid-teens to high single digits, depending on the territory in which the net sales occur. The royalties rates under the 2008 license agreement were reduced by a specified amount which management believes is consistent with the estimated costs of goods, manufacturing scale up costs and certain other expenses

assumed by Merck KGaA. In December 2009, the Company received the final manufacturing process transfer payment of $2.0 million.

Since the Company had no further deliverables under the 2008 License Agreement, the Company (1) recognized as revenue the balance of all previously deferred revenue of $13.2 million relating to the Merck KGaA collaboration and (2) the final $2.0 million manufacturing process transfer payment was recognized as revenue when received in December 2009. For more information regarding the Company's revenue recognition policies, see "Note 3 — Significant Accounting Policies — Revenue Recognition."

The table below presents the roll-forward of the deferred revenue balances resulting from the payments received from Merck KGaA:

	2009	2008	2007
		(In thousands)	
Deferred revenue balance, beginning of year	$ —	$ 18,067	$ 915
Additional revenues deferred in the year:			
Licensing revenue from collaborative and license agreements	—	3,000	10,000
Contract manufacturing	—	4,060	7,040
Less revenue recognized in the year:			
Licensing revenue from collaborative and license agreements	—	(25,009)	(423)
Contract research and development	—	—	(506)
Effect of changes in foreign exchange rates	—	(118)	1,041
Deferred revenue balance, end of year	—	—	18,067
Less deferred revenue — current portion	—	—	(5,697)
Deferred revenue — long term	$ —	$ —	$ 12,370
Manufacturing process transfer payment received and recognized currently	$2,000		

In connection with the entry into the 2008 license agreement, the Company also entered into an asset purchase agreement pursuant to which the Company sold to Merck KGaA certain assets related to the manufacture of, and inventory of, Stimuvax, placebo and raw materials, and Merck KGaA agreed to assume certain liabilities related to the manufacturing of Stimuvax and the Company's obligations related to the lease of the Company's Edmonton, Alberta, Canada facility.

The plant and equipment in the Edmonton facility and inventory of raw materials, work-in-process and finished goods were sold for a purchase price of $0.6 million (including the assumption of lease obligation of $0.1 million) and $11.2 million, respectively. The purchase price of the inventory was first offset against advances made in prior periods resulting in net cash to the company of $2.0 million. The Company recorded the net gain from the sale of the plant and equipment of $0.1 million in other income and $11.2 million as contract manufacturing revenue.

As result of the December 2008 transactions, 43 persons who had previously been employed by the Company in its Edmonton facility were transferred to Merck KGaA, which will significantly reduce the Company's operating expenses in future periods.

13. RESEARCH AND DEVELOPMENT COSTS

Government grant funding of $0.8 million, $1.3 million and $2.1 million were received in the year ended December 31, 2009, 2008 and 2007, respectively and credited against research and development costs for those years.

14. WORKFORCE REDUCTION COSTS

In 2008, as a result of the sale of the manufacturing rights and know-how to Merck KGaA, the Company reduced its workforce by eight employees (which does not take into account 43 employees who became employed by Merck KGaA as a result of December 2008 transactions described above, for which there were no workforce reduction costs). During 2007 the Company reduced its workforce by three employees. During 2008, the Company recorded workforce reduction costs of $0.8 million, of which $0.3 million was reported as research and development expenses, and $0.5 million as general and administrative expenses. During 2007, the Company recorded workforce reduction costs of $0.9 million, of which $0.4 million was reported as research and development expense, $0.1 million as general and administrative expenses and $0.4 million as marketing and business development costs.

The following table provides details of the workforce reduction costs for 2009, 2008 and 2007:

	Accrued Workforce Reduction Costs at Beginning of Year	Accrued Workforce Reduction Costs	Draw downs		Accrued Workforce Reduction Costs at End of Year
			Cash	Non-Cash	
			(In thousands)		
2007					
Salaries and benefits	$408	$926	$(652)	$ —	$682
Stock compensation expense	—	82	—	(82)	—
Other	4		(4)		—
Effect of changes in foreign exchange rates	—	(85)	85	—	—
	$ 412	$923	$ (571)	$(82)	$682
2008					
Salaries and benefits	$682	$777	$(567)	$ —	$892
Stock compensation expense	—	53	—	(53)	—
Effect of changes in foreign exchange rates	—	2	(2)	—	—
	$682	$832	$(569)	$(53)	$892
2009					
Salaries and benefits	$892	$ —	$ (591)	$ —	$ 301
	$892	$	$ (591)	$	$ 301

The accrued workforce reduction costs at December 31, 2009 and December 31, 2008 have been recorded in accounts payable and accrued liabilities in the consolidated balance

sheets. The accrued workforce reduction costs at December 31, 2009 will be fully paid by the end of June 2010.

15. INVESTMENT AND OTHER (INCOME) LOSS, NET

Investment and other (income) loss includes the following components for the periods indicated:

	Years Ended December 31,		
	2009	2008	2007
	(In thousands)		
Investment (income) loss	**$(82)**	$(303)	$(1,069)
Net Foreign Exchange (income) loss	**83**	53	1,440
Sale of equipment (gain) loss	**7**	(48)	—
Total investment and other (income) loss, net	**$ 8**	$(298)	$ 371

16. INCOME TAX

The tax provision includes the following components for the periods indicated:

	Years Ended December 31,		
	2009	2008	2007
	(In thousands)		
Domestic	**$200**	—	—
Foreign	**—**	—	—

In 2009, the Company recorded a tax provision of $0.2 million for the year ended December 31, 2009, which consists of federal alternative minimum tax due to limitations on net operating loss usage.

The provision for income taxes is different from applying the statutory federal income tax rate as follows:

	2009	2008	2007
Tax expense at statutory rate	**35.0%**	35.0%	35.0%
Previously recognized revenue	**—**	(63.5)%	—
Research and development credits	**—**	(1.3)%	6.3%
Warrant liability	**(12.7)%**	—	—
Other	**(0.8)%**	—	(0.4)%
Change in valuation allowance	**(22.9)%**	29.8%	(40.0)%
Income tax provision	**(1.4)%**	—	—

Deferred income taxes are comprised of:

	2009	2008	2007
Net deferred income tax assets			
Plant and equipment	**$ (49)**	$ (58)	$ 660
Intangible assets	**1,520**	1,628	—
Other	**1,083**	837	—
Tax benefits from losses carried forward and tax credits	**121,944**	96,380	63,718
Net deferred income tax asset before allowance	**124,498**	98,787	64,378
Less valuation allowance	**(124,498)**	(98,787)	(64,378)
	$ —	$ —	$ —

Net deferred income tax asset before allowance changed from the previously reported amount in 2008 due to unrecorded intangible assets and tax benefits from losses carried forward and tax credits in the amounts of $1.6 million and $33.9 million, respectively. These previously unrecorded deferred income tax assets were fully offset by an increase in the valuation allowance in the same amounts.

Based on the available evidence, the Company has recorded a full valuation allowance against its net deferred income tax assets as it is more likely than not it will not realize the benefit of these deferred tax assets.

United States

The Company has accumulated net operating losses in the U.S. of $58.4 million and $50.9 million for federal purposes at December 31, 2009 and 2008 respectively, some of which are restricted pursuant to Section 382 of the Internal Revenue Code, and which may not be available entirely for use in future years. These losses expire in fiscal years 2010 through 2029. The Company also has federal research and development credits of $0.8 million that will expire in fiscal years 2010 through 2029, if not utilized.

Canada

The Company has unclaimed federal investment tax credits of $19.6 million and $16.9 million at December 31, 2009 and 2008, respectively that expire in fiscal years 2010 through 2018. Also available to offset income in future periods are Canadian scientific research and experimental development expenditures of $131.5 million and $113.3 million for federal purposes and $56.0 million and $48.2 million for provincial purposes at December 31, 2009 and 2008 respectively. These expenditures may be utilized in any period and may be carried forward indefinitely. The Company also has federal capital losses of $177.2 million and $152.7 million and provincial capital losses of $177.3 million and $152.7 million at December 31, 2009 and 2008 respectively that can be carried forward indefinitely to offset future capital gains. The Company has accumulated net operating losses of $5.5 million and $4.3 million at December 31, 2009 and 2008 for federal tax purposes which expire between 2017 and 2019.

Other

The Company files federal, state and foreign income tax returns in many jurisdictions in the United States and abroad. For federal income tax purposes, the statute of limitations is open for 1994 and onward for the United States and Canada due to NOLs carried forward.

17. CONTINGENCIES, COMMITMENTS, AND GUARANTEES

Royalties

In connection with the issuance of the Class UA preferred stock (See "Note 10 — Share Capital"), the Company has agreed to pay a royalty in the amount of 3% of the net proceeds of sale of any products sold by the Company employing technology acquired in exchange for the shares. None of the Company's products currently under development employ the technology acquired.

Pursuant to various license agreements, the Company is obligated to pay royalties based both on the achievement of certain milestones and a percentage of revenues derived from the licensed technology.

Employee benefit plan

Under a defined contribution plan available to permanent employees, the Company is committed to matching employee contributions up to limits set by the terms of the plan, as well as limits set by the and U.S. tax authorities. The Company's matching contributions to the plan totaled $0.1 million, $0.2 million and $0.2 million in 2009, 2008 and 2007, respectively. There were no changes to the plan during the year.

Guarantees

The Company is contingently liable under a mutual undertaking of indemnification with Merck KGaA for any withholding tax liability that may arise from payments under the license agreement (See "Note 16 — Income Tax — Other").

In the normal course of operations, the Company provides indemnities to counterparties in transactions such as purchase and sale contracts for assets or shares, service agreements, director/officer contracts and leasing transactions. These indemnification agreements may require the Company to compensate the counterparties for costs incurred as a result of various events, including environmental liabilities, changes in (or in the interpretation of) laws and regulations, or as a result of litigation claims or statutory sanctions that may be suffered by the counterparties as a consequence of the transaction. The terms of these indemnification agreements vary based upon the contract, the nature of which prevents the Company from making a reasonable estimate of the maximum potential amount that could be required to pay to counterparties. Historically, the Company has not made any significant payments under such indemnities and no amounts have been accrued in the accompanying consolidated financial statements with respect to these indemnities.

Under the agreement pursuant to which the Company acquired ProlX the Company agreed to indemnify the former ProlX stockholders with respect to certain tax liabilities that may arise as a result of actions taken by the Company through 2011. The Company estimates that the maximum potential amount of future payments to satisfy hypothetical, future claims under such indemnities is $15 million. The Company believes the probability of having to make any payments pursuant to such indemnities to be remote and therefore no amounts have been recorded thereon.

18. FINANCIAL INSTRUMENTS

Financial instruments consist of cash and cash equivalents, short-term investments, accounts receivable and notes receivable that will result in future cash receipts, as well as accounts payable and accrued liabilities, and notes payable that require future cash outlays.

Credit risk

The Company is exposed to credit risk on its short-term investments in the event of non-performance by counterparties, but does not anticipate such non-performance. The Company monitors the credit risk and credit standing of counterparties on a regular basis and deals with a small number of companies that management believes are reputable and stable. Restricting its portfolio to investment grade securities, and diversifying its investments across industries, geographic regions, and types of securities mitigates the Company's exposure to concentration of credit risk.

Interest rate risk

Historically, the Company's short-term investments are primarily comprised of fixed interest securities. The Company's earnings from its short-term investments are exposed to interest rate risk since individual investments held within the portfolio re-price to market interest rates as they mature and new investments are purchased. A 100 basis points decline in interest rates, occurring January 1, 2009 and sustained throughout the period ended December 31, 2009, would result in a decline in investment income of approximately $0.2 million for that same period.

Foreign exchange risk

Historically, the Company has purchased goods and services denominated primarily in U.S. and Canadian currencies and, to a lesser extent, in certain European currencies. Since the Company disposed of its Canadian operations in 2008, expenditures have been incurred primarily in U.S. dollars. The Company does not utilize derivative instruments.

At December 31, 2009, the Company had a minimal amount of Canadian dollar denominated cash and cash equivalents therefore as a result, for the foreseeable future exchange rate fluctuations should not have a material effect on the Company's results of operations.

Short-term investments

As of December 31, 2009, short term investments consisted of certificates of deposit insured by the Federal Deposit Insurance Corporation. The Company expects to and has the use of quoted market prices to determine the fair value of its marketable securities. When quoted market prices are unavailable, the Company uses quotes provided by its fund manager based on recent trading activity and other relevant information.

Accounts receivable, government grant receivable and accounts payable and accrued liabilities

The carrying amounts of accounts receivable, government grant receivable and accounts payable and accrued liabilities approximate their fair values due to the short-term nature of these financial instruments.

Notes receivable, employees

The fair value of notes receivable are assumed to be equal to their carrying value as the interest rate charged on the investments (See "Note 6 — Notes Receivable, Employees") approximates market.

Notes payable

The fair value of notes payable (See "Note 9 — Notes Payable") is assumed to be equal to their carrying value as the amounts that will be paid and the timing of the payments cannot be determined with any certainty.

Limitations

Fair value estimates are made at a specific point in time, based on relevant market information and information about the financial instrument. These estimates are subjective in nature and involve uncertainties and matters of significant judgment; therefore, they cannot be determined with precision. Changes in assumptions could significantly affect the estimates.

19. SEGMENT INFORMATION

The Company is engaged world-wide in a single business segment — research and development of therapeutic products for the treatment of cancer. Operations and long-lived assets by geographic region for the periods indicated are as follows:

	2009	2008	2007
		(In thousands)	
Revenue from operations in			
Canada	**$ 16**	$ 16	$ 120
United States	**2,062**	39,747	—
Barbados	**—**	509	3,517
Europe	**—**	23	73
	$2,078	$40,295	$ 3,710
Depreciation			
Canada	**$ —**	$ 280	$ 204
United States	**269**	142	42
	$ 269	$ 422	$ 246
Long-lived assets			
Canada	**$ —**	$ 99	$ 833
United States	**4,193**	2,885	2,662
	$ 4,193	$ 2,984	$3,495

Long-lived assets consist of plant and equipment and goodwill.

The Company derives significant revenue from one customer. Such customer is the only one that individually accounts for more than 10% of revenue and total revenue, as presented in the following table (in thousands):

	Customers	Revenue
2009	**1**	**$ 2,000**
2008	1	$40,280
2007	1	$ 3,554

20. SUBSEQUENT EVENTS

Announced and terminated sale of Canadian subsidiaries

On February 18, 2010, the Company entered into an arrangement agreement (the "Arrangement") pursuant to which it would sell its interests in its Canadian Subsidiaries for approximately Cdn $8.4 million (U.S. $8.0 at December 31, 2009) to Gamehost Income Fund ("Gamehost"). The consideration to be paid by Gamehost was to consist of Cdn $7.8 million (US $7.4 million at December 31, 2009) in cash being paid at closing of the Arrangement with Cdn $600,000 (U.S. $572,000 at December 31, 2009) being delivered through retained equity in post-arrangement Gamehost.

Due to a March 2010 change in the Income Tax Act (Canada), the Agreement was subsequently terminated. The Company continues to explore the sale of its interests in the Canadian Subsidiaries.

Temporary suspension of clinical development program for Stimuvax

On March 23, 2010, the Company announced that Merck KGaA temporarily suspended the clinical development program for Stimuvax as the result of a suspected unexpected serious adverse reaction in a patient with multiple myeloma participating in an exploratory clinical trial. This action is a precautionary measure while investigation of the cause of this adverse reaction is conducted. The suspension affects the Phase 3 clinical program for Stimuvax, including the trials in NSCLC and in breast cancer. During the suspension, further recruitment of patients into the trials and ongoing treatment with Stimuvax will be on hold.

NASDAQ deficiency notice

On April 22, 2010 the Company announced that it received a deficiency notice from the Listing Qualifications Department Staff of The NASDAQ Stock Market, or NASDAQ, stating that the Company was not in compliance with NASDAQ Marketplace Rule 5250(c)(1) because of the Company's failure to timely file this Annual Report on Form 10-K for the year ended December 31, 2009. The NASDAQ letter, which the Company had anticipated in connection with its delayed filing, requested that the Company submit a plan to regain compliance with respect to the NASDAQ's continued listing standards no later than June 18, 2010. If the Company fails to provide a timely plan or the NASDAQ staff determines the Company's plan is insufficient to regain compliance, the Company may be subject to delisting from The NASDAQ Stock Market. With the filing of this Annual Report on Form 10-K for the year ended December 31, 2009, the Company believes that it will regain full compliance with the NASDAQ continuing listing standards.

21. CONDENSED QUARTERLY FINANCIAL DATA (unaudited)

The following table contains selected unaudited statement of operations information for each quarter of 2009 and 2008. The unaudited information should be read in conjunction with the Company's audited financial statements and related notes included elsewhere in this report. The Company believes that the following unaudited information reflects all normal recurring adjustments necessary for a fair presentation of the information for the periods presented. The operating results for any quarter are not necessarily indicative of results for any future period.

Quarterly Financial Data (in thousands, except per share data):

	Three Months Ended,			
	March 31	June 30	September 30	December 31
2009				
Revenues	**$ 4**	**$ 31**	**$ 4**	**$ 2,039**
Net loss	**$(2,472)**	**$(6,332)**	**$(5,945)**	**$(2,470)**
Net loss per share — basic and diluted	**$ (0.13)**	**$ (0.30)**	**$ (0.24)**	**$ (0.10)**
2008(1)(2)				
Revenues	$ 1,996	$ 1,128	$ 778	$36,393
Net income (loss)	$ (5,138)	$(4,940)	$(3,594)	$21,094
Net income (loss) per share — basic and diluted	$ (0.26)	$ (0.25)	$ (0.18)	$ 1.08

(1) The effect of the asset purchase agreement and 2008 license agreement with Merck KGaA, is reflected in the fourth quarter of 2008. See "Note 12 — Collaborative and License Agreements" of the audited financial statements.

(2) The effects of the restatement discussed in "Note 2 — Restatement — 2008 Change in Accounting Policy Not Previously Reported and Other Error Corrections" had the following effects on revenues, net income (loss) and net income (loss) per share — basic and diluted for the three months ended March 31, June 30, September 30 and December 31, 2008:

	Three Months Ended,			
	March 31	June 30	September 30	December 31
Revenues	$(24)	$(24)	$(24)	$ 370
Net income (loss)	$(24)	$(24)	$(24)	$ 370
Net income (loss) per share — basic and diluted	$ —	$ —	$ —	$0.02