Table of Contents

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, 2008

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: 001-32295

ADHEREX TECHNOLOGIES INC.
(Exact Name of Registrant as Specified in Its Charter)

Canada	**20-0442384**
(State or Other Jurisdiction of Incorporation or Organization	**(I.R.S. Employer Identification No.)**
4620 Creekstone Drive, Suite 200 Research Triangle Park Durham, North Carolina	**27703**
(Address of Principal Executive Offices)	**(Zip Code)**

(919) 484-8484
(Registrant's telephone number, including area code)

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

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

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

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

Indicated 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 stock held by non-affiliates of the Registrant, computed by reference to the closing sales price of the Common Shares as reported by NYSE Alternext US LLC, formerly the American Stock Exchange on June 30, 2008, (the last business day of the Registrant's most recently completed second fiscal quarter) was $18,425,553 based upon a total of 83,752,514 shares held as of June 30, 2008 by persons believed to be non-affiliates of the Registrant. (For purposes of this calculation, all of the Registrant's officers, directors and 10% owners known to the Company are deemed to be affiliates of the Registrant.)

As of March 16, 2009, there were 128,226,787 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement to be filed for its 2009 Annual Meeting of Stockholders currently scheduled to be held May 19, 2009 are incorporated into Part III of this report.

Table of Contents

ADHEREX TECHNOLOGIES INC.
2008 FORM 10-K ANNUAL REPORT
TABLE OF CONTENTS

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements that involve significant risks and uncertainties. Our actual results, performance or achievements may be materially different from any results, performance or achievements expressed or implied by such forward-looking statements. Words such as “may,” “will,” “expect,” “believe,” “anticipate,” “intend,” “could,” “estimate,” “project,” “plan,” and other similar words are one way to identify such forward-looking statements. Forward-looking statements in this Annual Report include, but are not limited to, statements with respect to (1) our anticipated sources and uses of cash and cash equivalents; (2) our anticipated commencement dates, completion dates and results of clinical trials; (3) our efforts to pursue collaborations with the government, industry groups or other companies; (4) our anticipated progress and costs of our clinical and preclinical research and development programs; (5) our corporate and development strategies; (6) our expected results of operations; (7) our anticipated levels of expenditures; (8) our ability to protect our intellectual property; (9) the anticipated applications and efficacy of our drug candidates; and (10) our ability to attract and retain key employees. All statements, other than statements of historical fact, included in this Annual Report that address activities, events or developments that we expect or anticipate will or may occur in the future are forward-looking statements. We include forward-looking statements because we believe that it is important to communicate our expectations to our investors. However, all forward-looking statements are based on management’s current expectations of future events and are subject to a number of risks and uncertainties, including specifically our need to raise money in the very near term and others, as discussed below in Item 1.A., “Risk Factors.” Although we believe the expectations reflected in the forward-looking statements are based upon reasonable assumptions, we can give no assurance that our expectations will be attained, and we caution you not to place undue reliance on such statements.

Item 1. Business.

Overview

The recent turmoil in the worldwide financial markets has led to an overall tightening in the credit markets and a significant decline in the availability of capital, especially for small biotechnology companies, which are generally viewed as higher risk investments. As a result of our limited financial resources and the decline in the availability of further capital, we have implemented a prioritization initiative to focus our clinical development activities on our most attractive, nearer term value-generating opportunities. Accordingly, we have postponed or terminated some of our previously planned or ongoing clinical development programs as outlined below. In addition, we have implemented a 75% headcount reduction effective April 30, 2009, representing all 13 of our current non-executive positions. The members of the Board of Directors have agreed to continue to serve for the benefit of the shareholders without further compensation. We continue to pursue various strategic alternatives, including, collaborations with other pharmaceutical and biotechnology companies and we believe that our current cash and cash equivalents will be sufficient to satisfy our anticipated capital requirements into September 2009. However, if a strategic transaction is not completed or we do not otherwise obtain additional financial resources in the very near term, we might cease operations sooner than September 2009. Our projections of our capital requirements into September 2009 and beyond are subject to substantial uncertainty. Additional capital may be required earlier than September 2009 or more capital than we had anticipated thereafter may be required. To finance our operations beyond September 2009, or earlier if necessary, we will need to raise substantial additional funds through either the sale of additional equity, the issuance of debt, the establishment of collaborations that provide us with funding, the out-license or sale of certain aspects of our intellectual property portfolio, or from other sources. Given current economic conditions, we might not be able to raise the necessary capital or such funding may not be available on acceptable terms. If we cannot obtain adequate funding, we might be required to further delay, scale back or eliminate certain research and development studies, consider business combinations or shut down some, or all, of our operations.

We are a biopharmaceutical company focused on cancer therapeutics. We are in the business of solving problems for patients with cancer. We have three primary products in the clinical stage of development, including:

Eniluracil, an oral dihydropyrimidine dehydrogenase, or DPD, inhibitor, which may improve the tolerability and effectiveness of 5-fluorouracil (5-FU), one of the most widely used oncology drugs in the world. ADH-1 is a small peptide molecule that selectively targets N-cadherin, a protein present on certain tumor cells and the blood vessels of solid tumors. STS is a chemoprotectant being developed to reduce or prevent hearing loss that may result from treatment with platinum-based chemotherapy drugs.

- We are currently focusing our development efforts on a topical formulation of eniluracil for the prevention of hand-foot syndrome induced by capecitabine or Xeloda® in an investigator-initiated Phase I randomized trial. We believe the topical formulation represents a quicker and less expensive potential route to approval. As part of our prioritization initiative, we have closed patient enrollment in our Phase I/II trial studying oral eniluracil in liver cancer in Asia. We have also suspended patient enrollment in our oral Phase I clinical trial in the U.S. until we are able to secure adequate financial resources. That trial was designed to determine the maximum tolerated dose, or MTD, of oral 5-FU in combination with oral eniluracil.
- We are currently focusing our development of ADH-1 for the treatment of melanoma presenting in a patient’s arm or leg, where ADH-1 is used in combination with regionally-infused melphalan during a surgical procedure called isolated limb infusion, or ILI. Enrollment in the study was completed in November 2008 with a total of 51 patients recruited into the combined Phase I/IIb trial. We expect complete results to be presented at the ASCO annual meeting in June 2009. Patients will be monitored to determine the durability of response in their treated limb and any evidence of disease progression. We have postponed our planned Phase III clinical trial for ADH-1 in combination with melphalan until we are able to secure adequate financial resources.
- We continue to enroll patients in our Phase III trials of STS with the International Childhood Liver Tumour Strategy Group, known as SIOPEL and the Children’s Oncology Group, or COG. The SIOPEL trial is expected to enroll approximately 100

pediatric patients with liver (hepatoblastoma) cancer at participating SIOPEL centers worldwide and the COG study is expected to enroll up to 120 pediatric patients worldwide in five different disease indications.

Our current prioritization initiative focuses primarily on our clinical activities, and preclinical support will be limited only to those activities necessary to support the ongoing clinical programs. Our preclinical portfolio includes: (1) novel peptides and small chemical molecule successors to ADH-1; (2) peptides and small molecules targeting the cadherin-mediated metastatic spread of some cancers; and (3) peptides that combine both angiolytic and anti-angiogenic properties.

In addition to our current development efforts, we continue to pursue collaborations with other pharmaceutical and biotechnology companies, governmental agencies, academic or other corporate collaborators with respect to these molecules. A number of these preclinical molecules have been tested under agreements with third parties that may help to advance these products into future clinical development, either by us or under investigator-initiated studies. Our portfolio is supported by more than 50 issued patents that we either own or have licensed exclusively.

In December 2008 we were notified by the NYSE Alternext US LLC, formerly the American Stock Exchange, or AMEX, that the Company did not meet the minimum stockholders' equity requirement of at least $6 million with sustained net losses in the five most recent fiscal years. On January 20, 2009 we filed a notification to remove our common stock from the AMEX and effective January 30, 2009, our common stock no longer traded on the AMEX. Our common stock continues to trade the Toronto Stock Exchange, or TSX, and on the over the counter market, or pink sheets, in the U.S.

Given the continuing difficult market conditions and our limited financial resources, we have expanded our ongoing efforts to explore and review potential partnering opportunities for each of our three main product candidates as well as other strategic alternatives. In addition, we implemented a success-based incentive plan for the executive management for the completion of a partnership, asset sale, or merger transaction. Executives will be eligible for a success-based cash bonus ranging from 1% to 5% upon the completion of a transaction prior to July 31, 2009 provided the executive continues to be employed at the time of the transaction. The cash bonus paid under this incentive plan would be offset dollar for dollar from the value of any "in the money" stock options held by the executive.

Adherex Technologies Inc. was incorporated under the *Canada Business Corporations Act* and has three wholly-owned subsidiaries: Oxiquant, Inc. and Adherex, Inc., both Delaware corporations, and Cadherin Biomedical Inc., a Canadian company.

Eniluracil

Eniluracil was previously under development by GlaxoSmithKline, or GSK. GSK advanced eniluracil into a comprehensive Phase III clinical development program which did not produce positive results and GSK terminated further development. We developed a hypothesis as to why the GSK Phase III trials were not successful and licensed the compound from GSK in July 2005. We successfully completed a clinical proof of concept study using a modified dose and schedule of eniluracil and 5-FU. We believe that eniluracil might enhance and expand the therapeutic spectrum of activity of 5-FU, reduce the occurrence of a disabling side effect known as hand foot syndrome and allow 5-FU to be given orally.

Normally, 5-FU is rapidly broken down in the body by an enzyme known as DPD. Eniluracil irreversibly inhibits DPD, thereby substantially slowing the breakdown of 5-FU and prolonging exposure of the tumor cells to the drug.

While 5-FU is a current mainstay of contemporary oncology treatment, it has some therapeutic drawbacks:

- It must be given intravenously and often by prolonged, multi-day infusion.
- Its use is typically associated with variable blood and tissue levels. Variable levels can reduce its effectiveness and can increase its side effects.
- It can cause severe and often dose-limiting side effects. For example, a breakdown product of 5-FU known as F-BAL is thought to be associated with neurotoxicity and hand-foot syndrome, which are disabling and dose-limiting side effects of therapy with 5-FU and other 5-FU prodrugs like capecitabine.
- Some tumors may be resistant to 5-FU due to intrinsically elevated DPD levels in the tumor cells. In other cases, the tumor may develop resistance to 5-FU as DPD levels rise in the tumor.

When eniluracil is properly used in combination with 5-FU, it may resolve many of the therapeutic drawbacks of 5-FU noted above. For instance, combining eniluracil and 5-FU is expected to have the following benefits:

- 5-FU becomes orally active, eliminating the need for intravenous, or IV, administration.
- The blood and tissue levels become more consistent, resulting in improved efficacy.
- The consistent blood and tissue levels may also lead to an improved side effect profile.
- Elimination of F-BAL production may improve the side effect profile, particularly the reduction of hand-foot syndrome.

Thus, the use of eniluracil in combination with 5-FU has the potential to make 5-FU more effective, better tolerated and orally active.

The combination of eniluracil and 5-FU may also expand the range of cancers that currently respond to 5-FU. Some tumors, such as

liver, prostate and lung cancers, have inherently high levels of DPD that result in resistance to 5-FU. Eniluracil may eliminate these high levels of DPD activity in the tumor, thereby potentially expanding the use of 5-FU to new cancer indications.

GSK's clinical development program for the combination of 5-FU and eniluracil met with success in early development. However, three Phase III trials failed, and development was stopped. We believe new scientific data obtained by Adherex subsequent to those Phase III trials may account for the early suboptimal efficacy and provide a basis for enhancing the effectiveness of the combination. This proprietary data formed the basis of our patent application, which claims that the combination of eniluracil and 5-FU has the potential to be more effective than 5-FU alone when used in accordance with our proprietary methods.

As part of our prioritization initiative, we have suspended our oral development program of eniluracil and are focusing on a new topical formulation being studied in an investigator-initiated clinical trial for the prevention of hand-foot syndrome induced by capecitabine or Xeloda®. We believe the topical formulation represents a quicker and less expensive potential route to approval as compared to our oral eniluracil development program. We expect to have preliminary data on the eniluracil topical formulation by mid-2009. If we establish a partnership or secure adequate funding from other sources, we expect to resume the suspended clinical studies for oral eniluracil.

ADH-1

ADH-1 is a small peptide molecule that selectively targets N-cadherin, a protein present on certain tumor cells and tumor blood vessels. Pursuant to a general collaboration agreement, McGill University, or McGill, granted us an exclusive worldwide license to certain intellectual property rights related to ADH-1 and uses thereof. N-cadherin is found throughout the body and, like other cadherins, is important in cell-to-cell binding and in maintaining the structural integrity of cells. ADH-1 appears to inhibit the binding of the N-cadherin protein molecules to each other. Within tumors, the N-cadherin protein can be found on the tumor cells themselves and on the blood vessels that supply blood to the tumor. Therefore, N-cadherin is a single target where antagonizing N-cadherin binding with ADH-1 could have a dual effect; both on the tumor cells directly and on the tumor blood vessels. In our Phase I single-agent studies, radiologic changes consistent with areas of cell death (by either apoptosis or necrosis) were observed following administration of ADH-1.

In 2006, we began conducting preclinical studies of ADH-1 in combination with various chemotherapy agents. In preclinical melanoma studies, significant synergistic anti-tumor activity was observed when systemic ADH-1 was given in combination with regionally-infused melphalan (a generic chemotherapy typically used in this setting), where all of the animals on study achieved complete remission of their tumors, and the tumors remained in complete remission during the entire two-month timeframe of the studies. A similar study was conducted in a melanoma animal model that was resistant to treatment with melphalan. The combination of melphalan and ADH-1 in the melphalan-resistant animal models also produced striking synergistic effects, with significant tumor growth delay being observed compared to the untreated and melphalan-alone control groups.

Based on this preclinical data, we initiated a clinical program of ADH-1 in combination with various chemotherapeutic agents. In October 2006, we initiated a Phase I study intended to define the dose limiting toxicities and maximum tolerated dose, or MTD, of ADH-1 in combination with three separate chemotherapies: ADH-1 + docetaxel (Taxotere®), ADH-1 + carboplatin (a generically available agent), and ADH-1 + capecitabine (Xeloda®). In April 2008, we completed patient enrollment in this study and enrolled 39 patients. The study included 11 patients that received ADH-1 with docetaxel, 13 patients that received ADH-1 with carboplatin, and 15 patients that received ADH-1 with capecitabine. In general the patients were heavily pretreated for a Phase I study of this nature. All subjects enrolled reported adverse effects that were generally similar to those of chemotherapeutic agents alone. No patients experienced a complete response, however a number of patients had sustained, stable disease. We are currently evaluating the responses and the final clinical study report is being prepared. Due to their stable disease, four patients were enrolled into an extension study and two patients currently remain on therapy. The MTD for ADH-1 with docetaxel was defined as two grams; the MTD for ADH-1 with carboplatin and capecitabine was not reached at four grams. Once we evaluate all patients and complete the clinical study report, we plan to publish and present the final data.

In March 2007, we also initiated a Phase I study at Duke University combining systemic ADH-1 in combination with regionally-infused melphalan during a surgical procedure called isolated limb infusion, or ILI, for the treatment of melanoma presenting in a patient's arm or leg. In January 2008, we completed patient enrollment in the Phase I portion of this study and expanded the trial to a Phase IIb study that included multiple clinical sites. In November 2008 we completed patient enrollment in the Phase IIb study. Enrollment in the study included a total of 51 patients into the combined Phase I/IIb trial including 45 patients that received four grams of ADH-1, three patients that received two grams of ADH-1 and three patients that received one gram of ADH-1. This study was designed to broadly evaluate the degree of response of the therapy in the treated limb for 12 weeks after the procedure and the short term durability of the response in the treated limb. The study also monitored the progression of melanoma to other sites in the body, although this was only a regional treatment. Patients will be monitored to determine the durability of response in their treated limb and any evidence of disease progression. The data has continued to compare favorably to historical datasets of ILI melphalan alone, although comparisons are limited due to the non-randomized nature of the data. Complete results are expected to be presented at the ASCO annual meeting in June 2009. We have postponed our planned Phase III clinical trial for ADH-1 in combination with melphalan until we are able to secure adequate financial resources.

STS

STS is currently marketed for use in humans as part of a treatment for cyanide poisoning. We have licensed from OHSU intellectual property rights for the use of STS as a chemoprotectant, and are developing STS as a protectant against the hearing loss often caused by platinum-based anti-cancer agents, in both children and adults. Preclinical and clinical studies conducted by OHSU and others have indicated that STS can effectively reduce the incidence of hearing loss caused by platinum-based anti-cancer agents. We have received Orphan Drug Designation in the United States for the use of STS in the prevention of platinum-induced ototoxicity in pediatric patients.

Hearing loss among children receiving platinum-based chemotherapy is frequent, permanent and often severely disabling. The incidence of hearing loss in these children depends upon the dose and duration of chemotherapy, and many of these children require lifelong hearing aids. There is currently no established preventive agent for this hearing loss and only expensive, technically difficult and sub-optimal cochlear (inner ear) implants have been shown to provide some benefit. In addition, adults undergoing chemotherapy for several common malignancies, including ovarian cancer, testicular cancer, and particularly head and neck cancer and brain cancer, often receive intensive platinum-based therapy and may experience severe, irreversible hearing loss, particularly in the high frequencies.

Investigators at OHSU have conducted Phase I and Phase II studies which have shown STS reduces the hearing loss associated with platinum-based chemotherapy. In one study at OHSU, the need for hearing aids to correct high frequency hearing loss was reduced from about 50% to less than 5%.

In October 2007, we announced that our collaborative partner, the International Childhood Liver Tumour Strategy Group (known as SIOPEL), a multi-disciplinary group of specialists under the umbrella of the International Society of Pediatric Oncology, had launched a randomized Phase III clinical trial to investigate whether STS reduces hearing loss in children receiving cisplatin, a platinum-based chemotherapy often used in children. The study initially opened in the United Kingdom and will include SIOPEL centers in up to 33 further countries. The clinical trial is expected to enroll approximately 100 children with liver (hepatoblastoma) cancer. Patients will receive cisplatin alone or cisplatin plus STS. The study, which is being coordinated through the Children's Cancer and Leukemia Group in the United Kingdom, is intended to compare the level of hearing loss associated with cisplatin alone versus the combination of cisplatin plus STS, as well as the safety, tolerability and anti-tumor activity in both arms of the study. Under the terms of our agreement, SIOPEL will conduct and fund the clinical activity and we will provide drug, drug distribution and pharmacovigilance, or drug safety monitoring, for the study.

In March 2008, we announced the activation of a Phase III trial with STS to prevent hearing loss in children receiving cisplatin-based chemotherapy in collaboration with the Children's Oncology Group, or COG. The goal of this Phase III study is to evaluate in a multi-centered, randomized trial whether STS is an effective and safe means of preventing hearing loss in children receiving cisplatin-based chemotherapy for newly diagnosed germ cell, liver (hepatoblastoma), brain (medulloblastoma), nerve tissue (neuroblastoma) or bone (osteosarcoma) cancers. Eligible children will be one to eighteen years of age who are to receive cisplatin according to their disease-specific regimen and, upon enrollment in this study, will be randomized to receive STS or not. Efficacy of STS will be determined through comparison of hearing sensitivity at follow-up relative to baseline measurements using standard audiometric techniques. The trial is expected to enroll up to 120 patients in up to 230 COG centers in the United States, Canada, Australia and Europe. COG will fund the clinical activities for the study and we will be responsible for providing the drug, drug distribution and pharmacovigilance, or drug safety monitoring, for the study.

In 2007, the results of a Phase III trial conducted by the Netherlands Cancer Institute—Antoni van Leeuwenhoek Hospital, or NCI-AVL, in adults with head and neck cancer treated with cisplatin were reported demonstrating that STS was able to protect against cisplatin-induced hearing loss without any apparent affect on the anticancer treatment efficacy of cisplatin two years after treatment. In May 2008, we completed a license agreement with the NCI-AVL for an option to the exclusive use of the data from the completed Phase III trial. The agreement also includes an option to the exclusive license of data from a planned long-term study intended to provide follow-up on the hearing status, disease-free status and overall survival of patients from the completed Phase III trial. Our decision to exercise the option will be based on a quality assurance audit of the data which is expected to be completed by the second quarter of 2009.

We have indefinitely postponed our planned STS Phase III study in adult patients with head and neck cancer to evaluate hearing loss protection during platinum-based chemotherapy and radiation therapy. If we establish a partnership which provides funding for STS or we obtain additional funding from other sources, we may reconsider the launch of this Phase III clinical trial.

Preclinical Portfolio

Our product candidates are in the early stages of clinical development, so we strive to maintain a preclinical portfolio to hedge against unavoidable development risks and to provide possible new product candidates for the future. In considering our product candidates, note that we are subject to the risks of failure that are inherent in the development of therapeutic products based on innovative technologies as described in Item 1A, "Risk Factors."

Our current prioritization initiative is focused primarily on our clinical activities and preclinical support is limited to only those activities necessary to support the ongoing clinical programs. Our preclinical portfolio includes: (1) novel peptides and small chemical molecule successors to ADH-1; (2) peptides and small molecules targeting the cadherin-mediated metastatic spread of some cancers; and (3) peptides that combine both angiolytic and anti-angiogenic properties. We have synthesized small chemical molecules and peptide antagonists and agonists for a wide array of cadherin adhesion molecules, with drug candidates available to move into future clinical development, particularly in the following areas:

- Peptide N-cadherin antagonists. We have identified novel peptide molecules that differ in structure from ADH-1 and that have extended stability in plasma. These molecules offer the potential advantages of second generation molecules with extended plasma half-life and enhanced potency compared to ADH-1.
- Small molecule N-cadherin antagonists. We have identified a series of small chemical molecules that, in our preliminary studies, have displayed potent N-cadherin antagonism activity. Unlike ADH-1 and the other peptide N-cadherin antagonists, these next generations molecules are not peptides and are smaller and simpler in structure. Compared to

peptides, small chemical molecules are often active after oral administration, typically more stable and have different potency and toxicity profiles.

- OB-cadherin. OB-cadherin is reported to be involved in the metastatic spread of certain cancers to sites distant from the original tumor. Metastatic disease is a major determinant of both a patient's survival and quality-of-life. We have developed OB-cadherin peptides and small molecule antagonists with the potential to reduce or slow down the metastatic spread of tumors, such as breast and prostate cancers.
- VE-cadherin. Like N-cadherin, VE-cadherin is important in the structural integrity of certain tumor blood vessels. We have developed peptide VE-cadherin antagonists that have the potential to be synergistic with our N-cadherin antagonists.

In addition to our own development efforts, we intend to pursue collaborations with other pharmaceutical companies, government entities or corporate collaborators with respect to our drug candidates. In 2005, we received approval from the Drug Development Group, or DDG, of the National Cancer Institute's, or NCI, Division of Cancer Treatment and Diagnosis for a Level III collaboration for the clinical development of our lead biotechnology compound, ADH-1. As part of that collaboration, we executed a Clinical Trial Agreement, or CTA, with the NCI's Cancer Therapy Evaluation Program and Developmental Therapeutics Program to support additional preclinical studies of ADH-1 in preparation for future NCI-sponsored clinical trials to further evaluate the anti-cancer and vascular targeting effects of ADH-1 both as a single agent and in combination with other anti-cancer agents. The NCI has recently confirmed their intention to support further clinical trials with ADH-1 in multiple cancer indications. We also entered into a standard form screening agreement with the NCI in 2003, under which NCI continues to screen and test select Adherex compounds from our preclinical pipeline for their anti-cancer properties in various preclinical anti-cancer assays and tumor models. The NCI has no obligation to sponsor future clinical trials of ADH-1 or to continue to perform preclinical or screening work for us and may terminate the CTA or screening agreement at any time, as may we.

Intellectual Property

Our general policy is to seek patent protection in the United States, major European countries, Japan, Canada and other jurisdictions as appropriate for our compounds and methods. Our cadherin-based patent portfolio currently includes patents with respect to our unique composition of matter, broad claims with respect to modulating cell adhesion, specific claims for the use of these compounds in various diseases and pharmaceutical formulations of these compounds.

Currently, we own or have licensed more than 50 issued U.S. patents. ADH-1 is currently protected under issued composition of matter patents in the United States that we exclusively licensed from McGill that expire in 2017. Eniluracil is currently protected under issued composition of matter and method patents that we exclusively licensed from GSK that expire in 2014 and 2015 (in combination with 5-fluorouracil). STS is currently protected by method of use patents that we exclusively licensed from OHSU that expire in Europe in 2021 and are currently pending in the United States. None of the above expiry dates take into consideration additional pending patent applications for ADH-1 and eniluracil that, if issued, could provide additional patent protection nor possible patent term extensions or periods of data exclusivity that may be available upon marketing approval in the various countries worldwide. In addition, periods of marketing exclusivity for ADH-1 and STS may also be possible in the United States under orphan drug status. We obtained U.S. Orphan Drug Designation for the use of STS in the prevention of platinum-induced ototoxicity in pediatric patients in 2004 and for the use of ADH-1 in conjunction with melphalan for the treatment of Stage IIB/C, III, and IV malignant melanoma in 2008, and as a result, if approved, will have seven years of exclusivity in the United States from the approval date.

Our success is significantly dependent on our ability to obtain and maintain patent protection for our product candidates, both in the United States and abroad. The patent position of biotechnology and pharmaceutical companies, in general, is highly uncertain and involves complex legal and factual questions, which often results in apparent inconsistencies regarding the breadth of claims allowed and general uncertainty as to their legal interpretation and enforceability. Further, some of our principal candidates, including STS, are based on previously known compounds, and candidates or products that we develop in the future may include or be based on the same or other compounds owned or produced by other parties, some or all of which may not be subject to effective patent protection. In addition, regimens that we may develop for the administration of pharmaceuticals, such as specifications for the frequency, timing and amount of dosages, may not be patentable. Accordingly, our patent applications may not result in patents being issued and issued patents may not afford effective protection. In addition, products or processes that we develop may turn out to be covered by third party patents, in which case we may require a license under such patents if we intend to continue the development of those products or processes.

Corporate Relationships

General Collaboration Agreement with McGill University

In February 2001, we entered into a general collaboration agreement with McGill University. Pursuant to the terms of the agreement, McGill granted us a 27-year exclusive worldwide license to develop, use and market certain cell adhesion technology and compounds. In particular, McGill granted us an exclusive worldwide license to U.S. Patent 6,031,072 covering specific compounds including ADH-1 (composition of matter), U.S. Patent 6,551,994 covering alpha-catenin and beta-catenin inhibiting compounds, related international filings under the Patent Cooperation Treaty, or PCT, continuations and certain other patents and patent applications.

In consideration, we issued 508,416 shares of our common stock to McGill. We also agreed to pay to McGill future royalties of 2% of any gross revenues from the use of the technology and compounds. In addition, we agreed to fund research at McGill over a period of 10 years totaling CAD$3.3 million. Annual funding commenced in 2001, the first year of the agreement, for a total of CAD$200,000, and increases annually by 10% through 2010, when the required annual funding reaches CAD$500,000. This research commitment can be deferred in any given year if it would exceed 5% of our cash and cash equivalents. To date, there have been no deferrals and we have paid

out approximately CAD$1.5 million in research and milestone funding to McGill pursuant to this agreement and other research-related payments. Pursuant to the terms of the agreement, we are entitled to certain intellectual property rights that result from this research.

The term of the general collaboration agreement expires on September 23, 2028, unless earlier terminated by operation of law or as provided in the agreement. The agreement is terminable by either party in the event of an uncured breach by either party after 60 days prior written notice.

License Agreement with Oregon Health & Science University

In November 2002, we acquired an exclusive license agreement with OHSU through our acquisition of Oxiquant, which had entered into the license agreement with OHSU in September 2002. Pursuant to the license agreement, OHSU granted us an exclusive worldwide license to intellectual property directed to thiol-based compounds including STS and their use in oncology. In consideration, OHSU was issued 250,250 shares of common stock of Oxiquant that were subsequently converted upon the acquisition of Oxiquant into 382,514 shares of Adherex common stock and warrants to purchase shares of Adherex common stock that subsequently expired in 2007. In addition, we are required to make the following milestone payments: (i) $50,000 upon completion of Phase I clinical trials, (ii) $200,000 upon completion of Phase II clinical trials, (iii) $500,000 upon completion of Phase III clinical trials, and (iv) $250,000 upon the first commercial sale for any licensed product. We are also required to pay OHSU a 2.5% royalty on net sales of any licensed products and a 15% royalty on any consideration received from sublicensing of the licensed technology.

The term of the license agreement expires on the date of the last to expire claim(s) covered in the patents licensed to us, unless earlier terminated as provided in the agreement. The agreement is terminable by OHSU in the event of a material breach of the agreement by us or our sublicensees after 60 days prior written notice from OHSU. We have the right to terminate the agreement at any time upon 60 days prior written notice and payment of all fees due to OHSU under the agreement.

Development and License Agreement with GlaxoSmithKline

In July 2005, we licensed eniluracil from GlaxoSmithKline, or GSK. Under the original terms of the agreement, we received an exclusive license for eniluracil for all indications, and GSK retained options to buy back the compound at various points in time during its development in return for milestone payments and sales royalties to Adherex. GSK made a concurrent equity investment of $3.0 million to assist in its further development.

In March 2007, we purchased all of GSK’s remaining options to buy back eniluracil under the agreement for a $1.0 million fee. We are now in full control of the development of eniluracil and are required to pay GSK development and sales milestone payments and sales royalties. Specifically, if we file a New Drug Application, or NDA, with the Food and Drug Administration, or FDA, we will be obligated to pay GSK development milestones of $5.0 million. Depending upon the commercial success of eniluracil, we may also be required to pay GSK up to an additional $70.0 million in development and sales milestones, plus double-digit royalties based on our annual net sales. If we pursue other indications, we may be required to pay up to an additional $15.0 million to GSK for each indication approved by the FDA.

Competition

Competition in the biotechnology and pharmaceutical industries is intense. We expect that if any of our product candidates achieve regulatory approval for sale, they will compete on the basis of drug efficacy, safety, patient convenience, reliability, ease of manufacture, price, marketing, distribution and patent protection, among other variables. Our competitors may develop technologies or drugs that are more effective, safer or affordable than any we may develop.

There are a number of different approaches to the development of therapeutics for the treatment of cancer that are currently being used and studied. These approaches include: (i) surgery to excise the cancerous tissue; (ii) radiation therapy, which attacks cancerous cells but does not easily distinguish between healthy and diseased cells; (iii) chemotherapy, which works by preventing a cancerous cell from dividing or by killing cells that quickly divide; (iv) immunotherapy, which stimulates the body’s immune system to respond to the disease; and (v) hormone therapy, which may slow the growth of cancer cells or even kill them.

We are aware of a number of companies engaged in the research, development and testing of new cancer therapies or means of increasing the effectiveness of existing therapies, including, among many others, Abbott Laboratories, Amgen, Antisoma, AstraZeneca, Bayer, Bristol-Myers Squibb, EntreMed, Genentech, Merck & Co., NeoPharm, Novartis, Johnson & Johnson, OSI Pharmaceuticals, Onyx, OXiGENE, Peregrine Pharmaceuticals, Pfizer, Roche, Taiho and Sanofi-Aventis. Some of these companies have products that have already received, or are in the process of receiving, regulatory approval or are in later stages of clinical development than our products. Many of them have much greater financial resources than we do. Many of these companies have marketed drugs or are developing targeted cancer therapeutics which, depending upon the mechanism of action of such agents, could be viewed as competitors. There are an estimated 250 anti-angiogenic/vascular disruptive/vascular targeting agent drugs in active development for the treatment of various cancers, from early preclinical to marketed drugs. However, we are not aware of any other N-cadherin targeted compounds in clinical trials. Because cancer treatment often consists of using different drug combinations, it is possible that agents that are either marketed (e.g., Taxotere®) or investigational could be combined with ADH-1 (after achievement of applicable regulatory requirements and approvals) in an effort to improve the efficacy in comparison to the agents used alone. In other words, while a drug with a similar mechanism of action, or with anti-tumor activity in a disease where ADH-1 is also shown to be active, could be viewed as a potential competitor when both drugs are used alone, the combination could prove to be superior to the current standard of care.

We are aware of at least four companies, AstraZeneca, Aventis, OXiGENE and Roche that are clinically developing cancer angiolytics. Their product candidates are tubulin depolymerizing agents that destroy the scaffold-like structure that supports the lining cells (endothelial cells) of blood vessels, causing the endothelial cells to round and cut off blood flow through the blood vessel. They cut off a

tumor's blood supply and lead to tumor cell death. Some other angiolytic agents are known to us to be in preclinical development, including antibodies to tumor blood vessel wall components and agents linked with liposomal cytotoxic agents, but little information about these agents is publicly available at this time. These competing angiolytics work in a very different manner than ADH-1 and, to our knowledge; we are the only company approaching tumor angiolysis from the perspective of peptide-based cadherin antagonism. Tumor angiolysis is an emerging field, and our competitors' tubulin depolymerizing agents, like our drug candidates, are still in clinical development. OXiGENE has initiated a Phase III study with its angiolytic agent in the United Kingdom. To our knowledge, no other angiolytic compounds have entered late-stage development. Accordingly, it is premature to speculate on the potential advantages and disadvantages of different angiolytic agents because the efficacy and tolerability profiles of these agents are not yet publicly available.

Anti-angiogenic compounds, which aim to prevent the growth of new tumor vessels, may compete with angiolytic compounds like ADH-1, but they may also be complementary. For instance, it may be useful to consider the use of an anti-angiogenic agent in sequential therapy with an angiolytic agent as a way to initially destroy existing tumor vessels and subsequently prevent new tumor blood vessel growth.

Programmed cell death, or apoptosis, has a critical role in the maintenance of healthy tissues. It has been increasingly recognized that defects in apoptotic mechanisms and pathways commonly occur to allow cancer cells to survive and flourish. In fact, the defects in the apoptotic pathways are fundamental properties of cancer biology. In recent years, the molecular underpinning of apoptosis pathways has received considerable attention and provides another opportunity for potential therapeutic intervention by inducing apoptosis in tumor cells. ADH-1 is thought to trigger apoptosis in cancer cells. Many other such apoptosis inducers are in preclinical and clinical development as oncology therapeutics candidates with companies that include Sanofi-Aventis, Abbott Laboratories, Novartis, Pfizer and Merck & Co.

There are several potential therapies that may be competitive to our eniluracil, including capecitabine (Xeloda®) which is an oral pro-drug of 5-FU marketed by Roche that is converted to 5-FU following absorption from the gastrointestinal tract. Capecitabine is approved by the FDA and many other regulatory agencies worldwide for use in breast and colorectal cancer but eniluracil/5-FU has a potential competitive advantage in having minimal hand foot syndrome compared to the up to 60% incidence with Xeloda®. Hand foot syndrome is a major complication of the use of Xeloda® and there is currently no adequate treatment, with most physicians resorting to reducing the starting dosage of Xeloda®.

5-FU is normally rapidly metabolized and broken down by the enzyme DPD. Eniluracil is an irreversible inhibitor of DPD and its use with 5-FU leads to prolonged and elevated levels of 5-FU. Uracil is a competitive inhibitor of DPD. Although not FDA approved as a therapeutic agent, uracil has been used with 5-FU and tegafur, a reversible DPD inhibitor (5-chloro-2, 4-dihydrozypyidine, or CDHP) for the treatment of certain cancers. UFT is an orally active combination of uracil and tegafur that is available in some international markets through Merck KGaA.

S-1, which is marketed by Taiho in Japan for gastric cancer, colorectal cancer, head and neck cancer, non-small cell lung cancer, and inoperable or recurrent breast cancer, is an orally active combination of tegafur and oxonic acid, an inhibitor of phosphoribosyl pyrophosphate transferase, an enzyme that reduces the incorporation of 5-FU into RNA. Both S-1 and UFT have been shown to have very low levels of hand foot syndrome but because they are reversible inhibitors of DPD, these products would not be expected to be as successful at targeting new product indications where DPD levels are intrinsically high, such as hepatocellular cancer, compared to an irreversible DPD inhibitor like eniluracil. Other reversible DPD inhibitors in development include a Roche molecule, Ro 09-4889, which has completed a Phase I clinical study. To our knowledge, no other irreversible DPD inhibitors are currently in development.

Potential competitors to topical eniluracil include topical uracil, a product that was under development by a company called VioQuest Pharma for the prevention of hand foot syndrome. To our knowledge, there are no active clinical studies of this approach currently being performed. Given eniluracil is an irreversible DPD inhibitor, the ability of eniluracil to be applied for a very short time to achieve DPD inhibition would be expected to have a significant advantage over a compound like uracil that would need a longer application with each and every dose of chemotherapy. Another topical approach includes high concentrations of DMSO (dimethyl sulfoxide) for the treatment of hand foot syndrome. This method is predominantly designed for the treatment of doxorubicin extravasation, but is contemplated for use in capecitabine-induced hand foot syndrome as well. The mechanism of action is uncertain and the practical application of this approach is highly questionable since the use of high concentrations of DMSO would likely be objectionable clinically.

We are not aware of any commercially available agents that reduce the incidence of hearing loss associated with the use of platinum-based anti-cancer agents, for which purpose we are developing STS. There are several potential competitive agents with activity in preclinical or limited clinical settings. These include: D-methionine, an amino acid that has been shown to protect against hearing loss in experimental settings but was demonstrated to be inferior to STS in comparative studies; SPI-3005, an oral agent primarily being developed by Sound Pharmaceuticals for noise and age-related hearing loss but in early Phase I trials for chemotherapy related hearing loss, which mimics glutathione peroxidase and induces the intracellular induction of glutathione; AHLi-11, an siRNA compound not yet in clinical trials being developed by Quark Pharmaceuticals aimed at silencing p53 following high dose cisplatin therapy; N-acetylcysteine and amifostine, which have shown effectiveness (but less than STS) in experimental systems; and Vitamin E, salicylate and tiopronin, which have all demonstrated moderate activity in rat models to protect against cisplatin-induced ototoxicity but no clinical trials have been performed. Cochlear implants, which are small electronic devices that are surgically placed in the inner ear to assist with certain types of deafness, are utilized to offer some relief but are often suboptimal.

Many chemotherapeutic agents are currently available and numerous others are being developed. Any chemotherapeutic products that we develop may not be able to compete effectively with existing or future chemotherapeutic agents. Our competitors might obtain regulatory approval for their drug candidates sooner than we do, or their drugs may prove to be more effective than ours are. However,

cancer as a disease is not currently controlled by any one anti-cancer agent, and there is typically a need for several agents at any one time and over time.

Many of our existing or potential competitors have substantially greater financial, technical and human resources than we do and may be better equipped to develop, manufacture and market products. In addition, many of these competitors have extensive experience with preclinical testing and human clinical trials and in obtaining regulatory approvals. In addition, many of the smaller companies that compete with us have formed collaborative relationships with large, established companies to support the research, development, clinical trials and commercialization of any products that they may develop**.** We may rely on third parties to commercialize the products we develop, and our success will depend in large part on the efforts and competitive merit of these collaborative partners. Academic institutions, government agencies and other public and private research organizations may also conduct research, seek patent protection and establish collaborative arrangements for research, clinical development and marketing of products similar to those we seek to develop. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel as well as in acquiring technologies complementary to our projects. The existence of competitive products, including products or treatments of which we are not aware, or products or treatments that may be developed in the future, may adversely affect the marketability of any products that we may develop.

Government Regulation

The production and manufacture of our product candidates and our research and development activities are subject to significant regulation for safety, efficacy and quality by various governmental authorities around the world.

In Canada, these activities are subject to regulation by Health Canada's Therapeutic Products Directorate, or TPD, and the rules and regulations promulgated under the Food and Drug Act. In the United States, drugs and biological products are subject to regulation by the FDA. The FDA requires licensing of manufacturing and contract research facilities, carefully controlled research and testing of products and governmental review and approval of results prior to marketing therapeutic products. Additionally, the FDA requires adherence to "Good Laboratory Practices" as well as "Good Clinical Practices" during clinical testing and "Good Manufacturing Practices" and adherence to labeling and supply controls. The systems of new drug approvals in Canada and the United States are substantially similar, and are generally considered to be among the most rigorous in the world.

Generally, the steps required for drug approval in Canada and the United States, specifically in cancer related therapies, include:

Preclinical Studies: Preclinical studies, also known as non-clinical studies, primarily involve evaluations of pharmacology, toxic effects, pharmacokinetics and metabolism of a drug in animals to provide evidence of the relative safety and bioavailability of the drug prior to its administration to humans in clinical studies. A typical program of preclinical studies takes 18 to 24 months to complete. The results of the preclinical studies as well as information related to the chemistry and comprehensive descriptions of proposed human clinical studies are then submitted as part of the Investigational New Drug, or IND, application to the FDA, a Clinical Trial Application to the TPD, or similar submission to other foreign regulatory bodies. This is necessary in Canada, the United States and most other countries prior to undertaking clinical studies. Additional preclinical studies are conducted during clinical development to further characterize the toxic effects of a drug prior to submitting a marketing application.

Phase I Clinical Trials: Most Phase I clinical trials take approximately one year to complete and are usually conducted on a small number of healthy human subjects to evaluate the drug's safety, tolerability and pharmacokinetics. In some cases, such as cancer indications, Phase I clinical trials are conducted in patients rather than healthy volunteers.

Phase II Clinical Trials: Phase II clinical trials typically take one to two years to complete and are generally carried out on a relatively small number of patients (generally between 15 and 50 patients) in a specific setting of targeted disease or medical condition, in order to provide an estimate of the drug's effectiveness in that specific setting. This phase also provides additional safety data and serves to identify possible common short-term side effects and risks in a somewhat larger group of patients. Phase II testing frequently relates to a specific disease, such as breast or lung cancer. Some contemporary methods of developing drugs, particularly molecularly targeted therapies, do not require broad testing in specific diseases, and instead permit testing in subsets of patients expressing the particular marker. In some cases, such as cancer indications, the company sponsoring the new drug may submit a marketing application to seek accelerated approval of the drug based on evidence of the drug's effect on a "surrogate endpoint" from Phase II clinical trials. A surrogate endpoint is a laboratory finding or physical sign that may not be a direct measurement of how a patient feels, functions or survives, but is still considered likely to predict therapeutic benefit for the patient. If accelerated approval is received, the company sponsoring the new drug must continue testing to demonstrate that the drug indeed provides therapeutic benefit to the patient.

Phase III Clinical Trials: Phase III clinical trials typically take two to four years to complete and involve tests on a much larger population of patients suffering from the targeted condition or disease. These studies involve conducting controlled testing and/or uncontrolled testing in an expanded patient population (several hundred to several thousand patients) at separate test sites (multi-center trials) to establish clinical safety and effectiveness. These trials also generate information from which the overall benefit-risk relationship relating to the drug can be determined and provide a basis for drug labeling. Phase III trials are generally the most time consuming and expensive part of a clinical trial program. In some instances, governmental authorities (such as the FDA) will allow a single Phase III clinical trial to serve as a pivotal efficacy trial to support a Marketing Application.

Marketing Application: Upon completion of Phase III clinical trials, the pharmaceutical company sponsoring the new drug assembles all the chemistry, preclinical and clinical data and submits it to the TPD or the FDA as part of a New Drug Submission in Canada or a New Drug Application, or NDA, in the United States. The marketing application is then reviewed by the regulatory body for approval to market the product. The review process generally takes twelve to eighteen months.

Any clinical trials that we conduct may not be successfully completed, either in a satisfactory time period or at all. The typical time periods described above may vary substantially and may be materially longer. In addition, the FDA and its counterparts in other countries have considerable discretion to discontinue trials if they become aware of any significant safety issues or convincing evidence that a therapy is not effective for the indication being tested. The FDA and its counterparts in other countries may not (i) allow clinical trials to proceed at any time after receiving an IND, (ii) allow further clinical development phases after authorizing a previous phase, or (iii) approve marketing of a drug after the completion of clinical trials.

While European, U.S. and Canadian regulatory systems require that medical products be safe, effective, and manufactured according to high quality standards, the drug approval process in Europe differs from that in the United States and Canada and may require us to perform additional preclinical or clinical testing regardless of whether FDA or TPD approval has been obtained. The amount of time required to obtain necessary approvals may be longer or shorter than that required for FDA or TPD approval. European Union Regulations and Directives generally classify health care products either as medicinal products, medical devices or in vitro diagnostics. For medicinal products, marketing approval may be sought using either the centralized procedure of the European Agency for the Evaluation of Medicinal Products, or EMEA, or the decentralized, mutual recognition process. The centralized procedure, which is mandatory for some biotechnology derived products, results in an approval recommendation from the EMEA to all member states, while the European Union mutual recognition process involves country by country approval.

Item 1A. Risk Factors.

An investment in our common stock involves a significant risk of loss. You should carefully read this entire report and should give particular attention to the following risk factors. You should recognize that other significant risks may arise in the future, which we cannot reasonably foresee at this time. Also, the risks that we now foresee might affect us to a greater or different degree than currently expected. There are a number of important factors that could cause our actual results to differ materially from those expressed or implied by any of our forward-looking statements in this report. These factors include, without limitation, the risk factors listed below and other factors presented throughout this report and any other documents filed by us with the Securities and Exchange Commission, or the SEC, and the Ontario Securities Commission, or the OSC.

Risks Related to Our Business

We will need to raise substantial additional funds in the very near future to continue our operations.

We believe that our current cash and cash equivalents will only be sufficient to satisfy our anticipated capital requirements into September 2009. As a result, the audit opinion contained in this Annual Report filed on Form 10-K includes a notation related to the uncertainty of our ability to continue as a going concern. The current conditions in worldwide financial markets make fund-raising for small biotechnology companies like us very difficult. We continue to pursue various strategic alternatives, including collaborations with other pharmaceutical and biotechnology companies however, if a strategic transaction is not completed or we do not otherwise obtain additional financial resources in the very near term, we might cease operations sooner than September 2009. Our projections of our capital requirements into September 2009 and beyond are subject to substantial uncertainty. Our current and future working capital requirements may change depending upon numerous factors, including: our ability to enter into collaborations that provide us with funding, up-front payments, milestones or other payments; results of our research and development activities; progress or lack of progress in our preclinical studies or clinical trials; our drug substance requirements to support clinical programs; changes in the focus, direction, or costs of our research and development programs; the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing our patent claims; competitive and technological advances; the potential need to develop, acquire or license new technologies and products; our business development activities; new regulatory requirements implemented by regulatory authorities; the timing and outcome of any regulatory review process; and our commercialization activities, if any. Any such change could mean additional capital may be required earlier than September 2009 or more capital than we had anticipated thereafter may be required. To finance our operations beyond September 2009, or earlier if necessary, we will need to raise substantial additional funds through either the sale of additional equity, the issuance of debt, the establishment of collaborations that provide us with funding, the out-license or sale of certain aspects of our intellectual property portfolio, or from other sources. Given current market conditions, there is a serious risk that we might not be able to raise the necessary capital or such funding may not be available on favorable terms or at all. If we cannot obtain adequate funding we might be required to delay, scale back or eliminate certain research and development studies, consider business combinations or shut down some, or all of our operations.

As a result of our recent corporate restructuring, we have very limited human resources remaining and the loss of any of the remaining personnel could lead to a significant deterioration in our strategic alternative or business prospects. If we lose any of our remaining key personnel, we may be unable to effectively manage our business or successfully develop our product candidates.

As a result of the recent corporate restructuring, our success depends upon the remaining key personnel, namely our four executives, the loss of any of whom might significantly delay or prevent the achievement of our near term business or scientific objectives. Although we have employment agreements with each of our executives, we cannot be certain that any individual will continue in such capacity for any period of time, particularly in light of our severely constrained financial resources. The loss of any key personnel, or the inability to hire and retain qualified employees to replace any of them, could negatively affect our ability to manage our business or secure a strategic transaction. We do not currently carry any key person life insurance.

We have a history of significant losses and have had no revenues to date through the sale of our products. If we do not generate significant revenues, we will not achieve profitability.

To date, we have been engaged primarily in research and development activities. We have had no revenues through the sale of our products, and we do not expect to have significant revenues until we are able to either sell our product candidates after obtaining applicable regulatory approvals or we establish collaborations that provide us with up-front payments, licensing fees, milestone payments, royalties or other revenue. We have incurred significant operating losses every year since our inception on September 3, 1996. We experienced net losses of approximately $13.6 million for the year ended December 31, 2008, $13.4 million for the fiscal year ended December 31, 2007, and $16.4 million for the fiscal year ended December 31, 2006. As of December 31, 2008, we had an accumulated deficit of approximately $98.0 million. We anticipate incurring substantial additional losses over the next several years due to the need to spend substantial amounts on our current clinical trials, anticipated research and development activities, and general and administrative expenses, among other factors. We have not commercially introduced any product and our product candidates are in varying stages of development and testing. Our ability to attain profitability will depend upon our ability to develop products that are safe, effective and commercially viable, to obtain regulatory approval for the manufacture and sale of our product candidates and to license or otherwise market our product candidates successfully. Any revenues generated from such products, assuming they are successfully developed, marketed and sold, may not be realized for a number of years. We may never achieve or sustain profitability on an ongoing basis.

If we do not maintain current or enter into new collaborations with other companies, we might not successfully develop our product candidates or generate sufficient revenues to expand our business.

We currently rely on scientific and research and development collaboration arrangements with academic institutions and other third party collaborators, including without limitation our Development and License Agreement for eniluracil with GSK, a general collaboration agreement with McGill for ADH-1 and other related compounds, and an exclusive worldwide license from OHSU for STS.

The agreements with McGill and OHSU are terminable by either party in the event of an uncured breach by the other party. We may also terminate our agreement with McGill and OHSU at any time upon prior written notice of specified durations to the licensor. Termination of any of our collaborative arrangements could materially adversely affect our business. In addition, our collaborators might not perform as agreed in the future.

In addition to the collaborative arrangements above, we have received approval from the Drug Development Group of the U.S. National Cancer Institute's Division of Cancer Treatment and Diagnosis, or NCI, for Level III collaboration for the clinical development of our lead biotechnology compound, ADH-1. The NCI has no obligation to sponsor future clinical trials of ADH-1 or perform any preclinical work for us and may terminate the collaboration at any time, as may we. To date, the NCI has not commenced any clinical studies using ADH-1. The success of our business strategy will be dependent on our ability to maintain current and enter into new collaborations with other industry participants that advance the development and clinical testing of, regulatory approval for and commercialization of our product candidates, as well as collaborations that provide us with funding, such as up-front payments, licensing fees, milestone payments, royalties or otherwise. We may not be successful in maintaining current collaborations or establishing any future collaborations and any collaborations we have or may establish may not lead to the successful development of our product candidates.

Since we conduct a significant portion of our research and development through collaborations, our success may depend significantly on the performance of such collaborators, as well as any future collaborators. Collaborators might not commit sufficient resources to the research and development or commercialization of our product candidates. Economic or technological advantages of products being developed by others, or other factors could lead our collaborators to pursue other product candidates or technologies in preference to those being developed in collaboration with us. The commercial potential of, development stage of and projected resources required to develop our drug candidates will affect our ability to maintain current collaborations or establish new collaborators. There is a risk of dispute with respect to ownership of technology developed under any collaboration. Our management of any collaboration will require significant time and effort as well as an effective allocation of resources. We may not be able to simultaneously manage a large number of collaborations.

Our product candidates are still in development. Due to the long, expensive and unpredictable drug development process, we might not ever successfully develop and commercialize any of our product candidates.

In order to achieve profitable operations, we, alone or in collaboration with others, must successfully develop, manufacture, introduce and market our product candidates. The time necessary to achieve market success for any individual product is long and uncertain. Our product candidates and research programs are in various stages of clinical development and require significant, time-consuming and costly research, testing and regulatory clearances. In developing our product candidates, we are subject to risks of failure that are inherent in the development of therapeutic products based on innovative technologies. For example, our product candidates might be ineffective, as eniluracil was shown to be in earlier clinical trials conducted by GSK, or may be overly toxic, or otherwise might fail to receive the necessary regulatory clearances. The results of preclinical and initial clinical trials are not necessarily predictive of future results. Our product candidates might not be economical to manufacture or market or might not achieve market acceptance. In addition, third parties might hold proprietary rights that preclude us from marketing our product candidates or others might market equivalent or superior products.

We must conduct human clinical trials to assess our product candidates. If these trials are delayed or are unsuccessful, our development costs will significantly increase and our business prospects may suffer.

Before obtaining regulatory approvals for the commercial sale of our product candidates, we must demonstrate, through preclinical studies with animals and clinical trials with humans, that our product candidates are safe and effective for use in each target indication. To date, we have performed only limited clinical trials, and we have only done so with some of our product candidates. Much of our testing

has been conducted on animals or on human cells in the laboratory, and the benefits of treatment seen in animals may not ultimately be obtained in human clinical trials. As a result, we will need to perform significant additional research and development and extensive preclinical and clinical testing prior to any application for commercial use. We may suffer significant setbacks in clinical trials, and the trials may demonstrate our product candidates to be unsafe or ineffective. We may also encounter problems in our clinical trials that will cause us to delay, suspend or terminate those clinical trials, which would increase our development costs and harm our financial results and commercial prospects. Identifying and qualifying patients to participate in clinical trials of our potential products is critically important to our success. The timing of our clinical trials depends on the speed at which we can recruit patients to participate in testing our product candidates. We have experienced delays in some of our clinical trials, including a significant delay in the initial activation of our STS Phase III study with COG and significant delay in the patient enrollment in the STS Phase III trials with COG and SIOPEL, and we may experience significant delays in the future. If patients are unwilling to participate in our trials because of competitive clinical trials for similar patient populations, perceived risk or any other reason, the timeline for recruiting patients, conducting trials and obtaining regulatory approval of potential products will be delayed. Other factors that may result in significant delays include obtaining regulatory or ethics review board approvals for proposed trials, reaching agreement on acceptable terms with prospective clinical trial sites, and obtaining sufficient quantities of drug for use in the clinical trials. Such delays could result in the termination of the clinical trials altogether.

Regulatory approval of our product candidates is time-consuming, expensive and uncertain, and could result in unexpectedly high expenses and delay our ability to sell our products.

Development, manufacture and marketing of our products are subject to extensive regulation by governmental authorities in the United States and other countries. This regulation could require us to incur significant unexpected expenses or delay or limit our ability to sell our product candidates, including eniluracil, ADH-1 and STS, our product candidates that are farthest along in development and the regulatory process.

Our clinical studies might be delayed or halted, or additional studies might be required, for various reasons, including:

- lack of funding;
- the drug is shown to be effective;
- patients experience severe side effects during treatment;
- appropriate patients do not enroll in the studies at the rate expected;
- drug supplies are not sufficient to treat the patients in the studies; or
- we decide to modify the drug during testing.

If regulatory approval of any product is granted, it will be limited to those indications for which the product has been shown to be safe and effective, as demonstrated to the FDA's satisfaction through clinical studies. Furthermore, approval might entail ongoing requirements for post-marketing studies. Even if regulatory approval is obtained, labeling and promotional activities are subject to continual scrutiny by the FDA and state regulatory agencies and, in some circumstances, the Federal Trade Commission. FDA enforcement policy prohibits the marketing of approved products for unapproved, or off-label, uses. These regulations and the FDA's interpretation of them might impair our ability to effectively market our products.

We and our third-party manufacturers are also required to comply with the applicable FDA current Good Manufacturing Practices, or GMP, regulations, which include requirements relating to quality control and quality assurance, as well as the corresponding maintenance of records and documentation. Further, manufacturing facilities must be approved by the FDA before they can be used to manufacture our products, and they are subject to additional FDA inspection. If we fail to comply with any of the FDA's continuing regulations, we could be subject to reputational harm and sanctions, including:

- delays, warning letters and fines;
- product recalls or seizures and injunctions on sales;
- refusal of the FDA to review pending applications;
- total or partial suspension of production;
- withdrawals of previously approved marketing applications; and
- civil penalties and criminal prosecutions.

In addition, identification of side effects after a drug is on the market or the occurrence of manufacturing problems could cause subsequent withdrawal of approval, reformulation of the drug, additional testing or changes in labeling of the product.

We do not presently have the financial or human resources to complete Phase III trials for our lead product candidates.

We do not presently have the financial or human resources internally to complete Phase III trials for any of our lead product candidates. We are currently developing STS in Phase III trials in collaboration with SIOPEL and COG. SIOPEL and COG may not conduct or complete the clinical trials with STS as currently planned. Such collaborators might not commit sufficient resources to the development of our product candidates, which may lead to significant delays. We have already experienced significant delays in the activation of the COG trial and subsequent accrual of patients into the COG and SIOPEL clinical trials. We may not be able to independently develop or conduct such trials ourselves. We continue to seek a licensing or funding partner for the further development of one or all of our product candidates. If a partner for one or all of these technologies is not found, we may not be able to further advance these products. If a partner is found, the financial terms that they propose may not be acceptable to us.

We may expand our business through new acquisitions that could disrupt our business, harm our financial condition and dilute current stockholders' ownership interests in our company.

Our business strategy includes expanding our products and capabilities, and we may seek mergers, acquisitions or other business arrangements to do so. Mergers and acquisitions 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 merged or acquired companies;
- diverting our management's attention away from other business concerns;
- the additional expense of the transaction;
- the generation of shareholder lawsuits;
- risks of entering markets in which we have limited or no direct experience; and
- the potential loss of our key employees or key employees of the acquired companies.

We cannot assure you that any merger or acquisition 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. In addition, our future success would depend in part on our ability to assimilate the companies and their personnel effectively. We might not be able to make the combination of our business with that of acquired businesses or companies work or be successful. Furthermore, the development or expansion of our business or any acquired business or companies may require a substantial capital investment by us. We may not have the necessary funds or they might not be available to us on acceptable terms or at all. We may also seek to raise the necessary funds by selling shares of our stock, which could dilute current stockholder's ownership interest in our company.

If our licenses to proprietary technology owned by others are terminated or expire, we may suffer increased development costs and delays, and we may not be able to successfully develop our product candidates.

The development of our drug candidates and the manufacture and sale of any products that we develop will involve the use of processes, products and information, some of the rights to which are owned by others. A number of our product candidates are licensed under agreements with GSK, McGill and OHSU. Although we have obtained licenses or rights with regard to the use of certain processes, products and information, the licenses or rights could be terminated or expire during critical periods and we may not be able to obtain, on favorable terms or at all, licenses or other rights that may be required. Some of these licenses provide for limited periods of exclusivity that may be extended only with the consent of the licensor, which may not be granted.

If we are unable to adequately protect or maintain our patents and licenses related to our product candidates, or we infringe upon the intellectual property rights of others, we may not be able to successfully develop and commercialize our product candidates.

The value of our technology will depend in part upon our ability, and those of our collaborators, to obtain patent protection or licenses to patents, maintain trade secret protection and operate without infringing on the rights of third parties. Although we have successfully pursued patent applications in the past, it is possible that:

- some or all of our pending patent applications, or those we have licensed, may not be allowed;
- proprietary products or processes that we develop in the future may not be patentable;
- any issued patents that we own or license may not provide us with any competitive advantages or may be successfully challenged by third parties; or
- the patents of others may have an adverse effect on our ability to do business.

It is not possible for us to be certain that we are the original and first creator of inventions encompassed by our pending patent applications or that we were the first to file patent applications for any such inventions. Further, any of our patents, once issued, may be declared by a court to be invalid or unenforceable.

ADH-1 is currently protected under issued composition of matter patents in the United States that we exclusively licensed from McGill that expire in 2017. Eniluracil is currently protected under issued composition of matter and method patents that we exclusively

licensed from GSK that expire in 2014 and 2015 (in combination with 5-FU). STS is currently protected by method of use patents that we exclusively licensed from OHSU that expire in Europe in 2021 and are currently pending in the United States. None of the above expiry dates take into consideration additional pending patent applications for ADH-1 and eniluracil that, if issued, could provide additional patent protection nor possible patent term extensions or periods of data exclusivity that may be available upon marketing approval in the various countries worldwide. In addition, periods of marketing exclusivity for ADH-1 and STS may also be possible in the United States under orphan drug status. We obtained Orphan Drug Designation in the United States for the use of STS in the prevention of platinum-induced ototoxicity in pediatric patients in 2004 and for the use of ADH-1 in conjunction with melphalan for the treatment of Stage IIb/c, III, and IV malignant melanoma in 2008, and as a result, if approved, will have seven years of exclusivity in the United States from the approval date.

We may be required to obtain licenses under patents or other proprietary rights of third parties but the extent to which we may wish or need to do so is unknown. Any such licenses may not be available on terms acceptable to us or at all. If such licenses are obtained, it is likely they would be royalty bearing, which would reduce any future income. If licenses cannot be obtained on an economical basis, we could suffer delays in market introduction of planned products or their introduction could be prevented, in some cases after the expenditure of substantial funds. If we do not obtain such licenses, we would have to design around patents of third parties, potentially causing increased costs and delays in product development and introduction or precluding us from developing, manufacturing or selling our planned products, or our ability to develop, manufacture or sell products requiring such licenses could be foreclosed.

Litigation may also be necessary to enforce or defend patents issued or licensed to us or our collaborators or to determine the scope and validity of a third party's proprietary rights. We could incur substantial costs if litigation is required to defend ourselves in patent suits brought by third parties, if we participate in patent suits brought against or initiated by our collaborators, or if we initiate such suits. We might not prevail in any such action. An adverse outcome in litigation or an interference to determine priority or other proceeding in a court or patent office could subject us to significant liabilities, require disputed rights to be licensed from other parties or require us or our collaborators to cease using certain technology or products. Any of these events would likely have a material adverse effect on our business, financial condition and results of operations.

Much of our technological know-how that is not patentable may constitute trade secrets. Our confidentiality agreements might not provide for meaningful protection of our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure of information. In addition, others may independently develop or obtain similar technology and may be able to market competing products and obtain regulatory approval through a showing of equivalency to our product that has obtained regulatory approvals, without being required to undertake the same lengthy and expensive clinical studies that we would have already completed.

The vulnerability to off-label use or sale of our product candidates that are covered only by "method of use" patents may cause downward pricing pressure on these product candidates if they are ever commercialized and may make it more difficult for us to enter into collaboration or partnering arrangements for the development of these product candidates.

Some of our product candidates, including STS, are currently only covered by "method of use" patents, which cover the use of certain compounds to treat specific conditions, and not by "composition of matter" patents, which would cover the chemical composition of the compound. Method of use patents provides less protection than composition of matter patents because of the possibility of off-label competition if other companies develop or market the compound for other uses. If another company markets a drug that we expect to market under the protection of a method of use patent, physicians may prescribe the other company's drug for use in the indication for which we obtain approval and have a patent, even if the other company's drug is not approved for such an indication. Off-label use and sales could limit our sales and exert pricing pressure on any products we develop covered only by method of use patents. Also, it may be more difficult to find a collaborator to license or support the development of our product candidates that are only covered by method of use patents.

If our third party manufacturers breach or terminate their agreements with us, or if we are unable to secure arrangements with third party manufacturers on acceptable terms as needed in the future, we may suffer significant delays and additional costs.

We have no experience manufacturing products and do not currently have the resources to manufacture any products that we may develop. We currently have agreements with contract manufacturers for clinical supplies of ADH-1, STS, eniluracil and 5-FU, including drug substance providers and drug product suppliers, but they might not perform as agreed in the future or may terminate our agreement with them before the end of the required term. Significant additional time and expense would be required to effect a transition to a new contract manufacturer.

We plan to continue to rely on contract manufacturers for the foreseeable future to produce quantities of products and substances necessary for research and development, preclinical trials, human clinical trials and product commercialization, and to perform their obligations in a timely manner and in accordance with applicable government regulations. If we develop any products with commercial potential, we will need to develop the facilities to independently manufacture such products or secure arrangements with third parties to manufacture them. We may not be able to independently develop manufacturing capabilities or obtain favorable terms for the manufacture of our products. While we intend to contract for the commercial manufacture of our product candidates, we may not be able to identify and qualify contractors or obtain favorable contracting terms. We or our contract manufacturers may also fail to meet required manufacturing standards, which could result in delays or failures in product delivery, increased costs, injury or death to patients, product recalls or withdrawals and other problems that could significantly hurt our business. We intend to maintain a second source for back-up commercial manufacturing, wherever feasible. However, if a replacement to our future internal or contract manufacturers were required, the ability to establish second-sourcing or find a replacement manufacturer may be difficult due to the lead times generally required to manufacture drugs and the need for FDA compliance inspections and approvals of any replacement manufacturer, all of which factors could result in production delays and additional commercialization costs. Such lead times would vary based on the situation, but might be twelve months or longer.

We lack the resources necessary to effectively market our product candidates, and we may need to rely on third parties over whom we have little or no control and who may not perform as expected.

We do not have the necessary resources to market our product candidates. If we develop any products with commercial potential, we will either have to develop a marketing capability, including a sales force, which is difficult and expensive to implement successfully, or attempt to enter into a collaboration, merger, joint venture, license or other arrangement with third parties to provide a substantial portion of the financial and other resources needed to market such products. We may not be able to do so on acceptable terms, if at all. If we rely extensively on third parties to market our products, the commercial success of such products may be largely outside of our control.

We conduct our business internationally and are subject to laws and regulations of several countries which may affect our ability to access regulatory agencies and may affect the enforceability and value of our licenses.

We have conducted clinical trials in the United States, Canada, Europe and the Pacific Rim and intend to, or may, conduct future clinical trials in these and other jurisdictions. There can be no assurance that any sovereign government will not establish laws or regulations that will be deleterious to our interests. There is no assurance that we, as a Canadian corporation, will continue to have access to the regulatory agencies in any jurisdiction where we might want to conduct clinical trials or obtain regulatory approval, and we might not be able to enforce our license or patent rights in foreign jurisdictions. Foreign exchange controls may have a material adverse effect on our business and financial condition, since such controls may limit our ability to flow funds into or out of a particular country to meet obligations under licenses, clinical trial agreements or other collaborations.

Our cash invested in money market fund might be subject to loss.

There has been significant deterioration and instability in the financial markets. Even though we believe we take a conservative approach to investing our funds, the volatility of the current financial markets exposes us to increased investment risk, including the risks that the value and liquidity of our money market investments could deteriorate significantly and the issuers of the investments we hold could be subject to credit rating downgrades. This might result in significant losses in our money market investments that could adversely impact our financial condition, which could be an immediate problem given our extremely limited financial resources. On September 19, 2008, the U.S. Treasury announced a Temporary Guarantee Program which insures money market investments on a temporary basis, including our money market funds. The program was in effect for an initial three month term and ensures that if a participating fund's share value declines to below one dollar and the fund is liquidated, the U.S. Treasury would cover any shortfall between the liquidated share price and one dollar. On November 24, 2008, the U.S. Treasury announced the program was extended until April 30, 2009. The Secretary of the Treasury has the option to extend the program until September 18, 2009. While we have not experienced any loss or write down of our money market investments in the past, we cannot guarantee that such losses will not occur in future periods.

Risks Related to Our Industry

If we are unable to obtain applicable U.S. and/or foreign regulatory approvals, we will be unable to develop and commercialize our drug candidates.

The preclinical studies and clinical trials of our product candidates, as well as the manufacturing, labeling, sale and distribution, export or import, marketing, advertising and promotion of our product candidates are subject to various regulatory frameworks in the United States, Canada and other countries. Any products that we develop must receive all relevant regulatory approvals and clearances before any marketing, sale or distribution. The regulatory process, which includes extensive preclinical studies and clinical testing to establish product safety and efficacy, can take many years and cost substantial amounts of money. As a result of the length of time, many challenges and costs associated with the drug development process, the historical rate of failures for drug candidates is extremely high. For example, prior development of our compound eniluracil by GSK was not successful. Varying interpretations of the data obtained from studies and tests could delay, limit or prevent regulatory approval or clearance. Changes in regulatory policy could also cause delays or affect regulatory approval. Any regulatory delays may increase our development costs and negatively impact our competitiveness and prospects. It is possible that we may not be able to obtain regulatory approval of any of our drug candidates or approvals may take longer and cost more to obtain than expected.

Regulatory approvals, if granted, may entail limitations on the uses for which any products we develop may be marketed, limiting the potential sales for any such products. The granting of product approvals can be withdrawn at any time, and manufacturers of approved products are subject to regular reviews, including for compliance with GMP. Failure to comply with any applicable regulatory requirement, which may change from time to time, can result in warning letters, fines, sanctions, penalties, recalling or seizing products, suspension of production, or even criminal prosecution.

Future sales of our product candidates may suffer if they fail to achieve market acceptance.

Even if our product candidates are successfully developed and achieve appropriate regulatory approval, they may not enjoy commercial acceptance or success. Product candidates may compete with a number of new and traditional drugs and therapies developed by major pharmaceutical and biotechnology companies. Market acceptance is dependent on product candidates demonstrating clinical efficacy and safety, as well as demonstrating advantages over alternative treatment methods. In addition, market acceptance is influenced by government reimbursement policies and the ability of third parties to pay for such products. Physicians, patients, the medical community or patients may not accept or utilize any products we may develop.

We face a strong competitive environment. Other companies may develop or commercialize more effective or cheaper products, which may reduce or eliminate the demand for our product candidates.

The biotechnology and pharmaceutical industry, and in particular the field of cancer therapeutics where we are focused, is very competitive. Many companies and research organizations are engaged in the research, development and testing of new cancer therapies or means of increasing the effectiveness of existing therapies, including, among many others, Abbott Laboratories, Amgen, Antisoma, Adventrix, AstraZeneca, Bayer, Bristol-Myers Squibb, EntreMed, Genentech, Johnson & Johnson, Merck & Co., NeoPharm, Novartis, Onyx, OSI Pharmaceuticals, OXiGENE, Peregrine Pharmaceuticals, Pfizer, Roche, Sanofi-Aventis, and Taiho. Many of these companies have marketed drugs or are developing targeted cancer therapeutics which, depending upon the mechanism of action of such agents could thus be competitors.

Many of our existing or potential competitors have substantially greater financial, technical and human resources than we do and may be better equipped to develop, manufacture and market products. In addition, many of these competitors have extensive experience with preclinical testing and human clinical trials and in obtaining regulatory approvals. Also, some of the smaller companies that compete with us have formed collaborative relationships with large, established companies to support the research, development, clinical trials and commercialization of any products that they may develop. Academic institutions, government agencies and other public and private research organizations may also conduct research, seek patent protection and establish collaborative arrangements for research, clinical development and marketing of products similar to those we seek to develop. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel as well as in acquiring technologies complementary to our projects.

We are likely to face competition in the areas of product efficacy and safety, ease of use and adaptability, as well as pricing, product acceptance, regulatory approvals and intellectual property. Competitors could develop more effective, safer and more affordable products than we do, and they may obtain patent protection or product commercialization before we do or even render our product candidates obsolete. The existence of competitive products, including products or treatments of which we are not aware, or products or treatments that may be developed in the future, may adversely affect the marketability of any products that we develop.

We may face product liability claims that could require us to defend costly lawsuits or incur substantial liabilities that could adversely impact our financial condition, receipt of regulatory approvals for our product candidates and our results of operation.

The use of our product candidates in clinical trials and for commercial applications, if any, may expose us to liability claims in the event that such product candidates cause injury or death or result in other adverse effects. These claims could be made by health care institutions, contract laboratories, and subjects participating in our clinical studies, patients or others using our product candidates. In addition to liability claims, certain serious adverse events could require interruption, delay and/or discontinuation of a clinical trial and potentially prevent further development of the product candidate. We carry clinical trial insurance with a policy limit of $5.0 million, but the coverage may not be sufficient to protect us from legal expenses and liabilities we might incur. Litigation is very expensive, even if we are successful. In addition, our existing coverage may not be adequate if we further develop products, and future coverage may not be available in sufficient amounts or at reasonable cost. Adverse liability claims may also harm our ability to obtain or maintain regulatory approvals.

We use hazardous material and chemicals in our research and development, and our failure to comply with laws related to hazardous materials could materially harm us.

Our research and development processes involve the controlled use of hazardous materials, such as flammable organic solvents, corrosive acids and corrosive bases. Accordingly, we are subject to federal, state, local and foreign laws and regulations governing the use, manufacture, storage, handling and disposal of such materials and certain waste products. The risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident, we could be held liable for any damages that result and any such liability could exceed our resources and may not be covered by our general liability insurance. We currently do not carry insurance specifically for hazardous materials claims. We may be required to incur significant costs to comply with environmental laws and regulations, which may change from time to time.

Efforts to reduce product pricing and health care reimbursement and changes to government policies could negatively affect the commercialization of our product candidates.

If any of our product candidates achieve regulatory approval, we may be materially adversely affected by the continuing efforts of governmental and third-party payors to contain or reduce health care costs. For example, if we succeed in bringing one or more products to market, such products may not be considered cost-effective and the availability of consumer reimbursement may not exist or be sufficient to allow the sale of such products on a competitive basis. The constraints on pricing and availability of competitive products may further limit our pricing and reimbursement policies as well as adversely impact market acceptance and commercialization for the products.

In some foreign markets, the pricing or profitability of healthcare products is subject to government control. In recent years, federal, state, provincial and local officials and legislators have proposed or are proposing a variety of price-based reforms to the healthcare systems in the United States, Canada and elsewhere. Some proposals include measures that would limit or eliminate payments from third-party payors to the consumer for certain medical procedures and treatments or allow government control of pharmaceutical pricing. The adoption of any such proposals or reforms could adversely affect the commercial viability of our product candidates.

Any significant changes in the healthcare system in the United States, Canada or abroad would likely have a substantial impact on the manner in which we conduct business and could have a material adverse effect on our ability to raise capital and the viability of product commercialization.

New accounting or regulatory pronouncements may impact our future financial position and results of operations.

There may be new accounting or regulatory pronouncements or rulings, which could have an impact on our future financial position and results of operations. Changing laws, regulations and standards relating to corporate governance and public disclosures can create uncertainty and such uncertainty may lead to increased expenses and exposure to liabilities.

Risks Related to Owning Our Common Shares

Our common shares have been delisted from NYSE Alternext US LLC (formerly the American Stock Exchange), which may make it more difficult to dispose of your shares.

In December 2008 we received notice from the NYSE Alternext US, LLC (formerly the American Stock Exchange), or AMEX that we were not in compliance with Section 1003(a)(ii) of its Company Guide, because our stockholders' equity was below $6 million and we had incurred losses from continued operations and net losses in the five most recent fiscal years. On January 20, 2009, we voluntarily filed to delist our common stock from the AMEX and effective January 30, 2009, our common stock no longer traded on the AMEX. As a result, any trading of our common stock in the U.S. will need to be conducted in the over-the-counter market, or on the pink sheets. In addition, our common stock is also subject to the SEC's penny stock rules, which impose additional requirements on broker-dealers who effect trades. As a result, shareholders might have difficulty selling our common stock, particularly in the U.S.

We may be unable to maintain the listing of our common stock on the Toronto Stock Exchange and that would make it more difficult for stockholders to dispose of their common stock.

Our common stock is currently listed on the Toronto Stock Exchange, or TSX. The TSX has rules for continued listing, including minimum market capitalization and other requirements, that we might not meet in the future, particularly if the price of our common stock does not increase or we are unable to raise additional capital to continue operations. Our common stock was delisted in January 2009 from the AMEX exchange as the Company did not meet the continued listing requirements of that exchange.

Delisting from the TSX would make it more difficult for stockholders to dispose of their common stock and more difficult to obtain accurate quotations on our common stock. This could have an adverse effect on the price of our common stock. There can be no assurances that a market maker will make a market in our common stock on the pink sheets or any other stock quotation system after delisting. Furthermore, securities quoted on the pink sheets generally have significantly less liquidity than securities traded on a national securities exchange, not only in the number of shares that can be bought and sold, but also through delays in the timing of transactions and lower market prices than might otherwise be obtained. As a result, stockholders might find it difficult to resell shares at prices quoted in the market or at all. Furthermore, because of the limited market and generally low volume of trading in our common stock, our common stock is more likely to be affected by broad market fluctuations, general market conditions, fluctuations in our operating results, changes in the market's perception of our business, and announcements made by us, our competitors or parties with whom we have business relationships. Our ability to issue additional securities for financing or other purposes, or to otherwise arrange for any financing we may need in the future, may also be materially and adversely affected by the fact that our securities are not traded on a national securities exchange.

The market price of our common shares is highly volatile and could cause the value of your investment to significantly decline.

Historically, the market price of our common shares has been highly volatile and the market for our common shares has from time to time experienced significant price and volume fluctuations, some of which are unrelated to our operating performance. From November 12, 2004 to March 16, 2009, the trading price of our stock fluctuated from a high closing price of CAD$2.09 per share to a low closing price of CAD$0.02 per share on the TSX. From November 12, 2004 until our delisting on January 30, 2009, the trading price of our stock fluctuated from a high closing price of $1.71 per share to a low closing price of $0.01 per share on the NYSE Alternext US, LLC (formerly, the American Stock Exchange). Historically, our common shares have had a low trading volume, and may continue to have a low trading volume in the future. This low volume may contribute to the volatility of the market price of our common shares. It is likely that the market price of our common shares will continue to fluctuate significantly in the future.

The market price of our stock may be significantly affected by many factors, including without limitation:

- our immediate need to raise additional capital and the terms of any transaction we are able to enter into;
- the economic crisis or other external factors generally or stock market trends in the pharmaceutical or biotechnology industries specifically;
- announcements of licensing agreements, joint ventures, collaborations or other strategic alliances that involve our products or those of our competitors;
- innovations related to our or our competitors' products;
- actual or potential clinical trial results related to our or our competitors' products;
- our financial results or those of our competitors;
- reports of securities analysts regarding us or our competitors;
- developments or disputes concerning our licensed or owned patents or those of our competitors;
- developments with respect to the efficacy or safety or our products or those of our competitors; and
- health care reforms and reimbursement policy changes nationally and internationally.

Our existing principal stockholders hold a substantial number of our common shares and may be able to exercise influence in matters requiring approval of stockholders.

At December 31, 2008, our current 5% stockholders beneficially own approximately 60% of our common shares. In particular, Southpoint Capital Advisors LP owns or exercises control over 41.5 million common shares, representing approximately 32% of the issued and outstanding common shares and 42% beneficially owned (assuming full exercise of the 20.8 million warrants issued to Southpoint Capital but no other outstanding warrants or options). In addition, Mr. Robert Butts, Co-Founder and Portfolio Manager of Southpoint Capital Advisors LP, serves as a member of our Board of Directors. Southpoint Capital, our other 5% stockholders, and other insiders, acting alone or together, might be able to influence the outcomes of matters that require the approval of our stockholders, including but not limited to certain equity transactions (such as a financing), an acquisition or merger with another company, a sale of substantially all of our assets, the election and removal of directors, or amendments to our incorporating documents. These stockholders might make decisions that are adverse to your interests. The concentration of ownership could have the effect of delaying, preventing or deterring a change of control of our company, which could adversely affect the market price of our common shares or deprive our other stockholders of an opportunity to receive a premium for their common shares as part of a sale of our company.

There are a large number of our common shares underlying outstanding warrants and options, and reserved for issuance under our stock option plan, that may be sold in the market, which could depress the market price of our stock and result in substantial dilution to the holders of our common shares.

Sale or issuance of a substantial number of our common shares in the future could cause the market price of our common stock to decline. It may also impair our ability to obtain additional financing. As of December 31, 2008, we had outstanding warrants to purchase approximately 45.9 million of our common shares at exercise prices ranging from $0.33 to $0.97. In addition, as of December 31, 2008, there were approximately 18.4 million common shares issuable upon the exercise of stock options granted by us of which approximately 2.8 million were denominated in Canadian dollars and had a weighted average exercise price of CAD$2.19 per common share and approximately 15.6 million were denominated in U.S. dollars and had a weighted average exercise price of $0.54 per common share. We may also issue further warrants as part of any future financings as well as the additional 2.3 million options to acquire our common shares currently remaining available for issuance under our stock option plan.

We are a passive foreign investment company under U.S. tax law, which has adverse tax consequences for our U.S. stockholders.

As further described in Item 5. “Market for the Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities” – “Material United States Federal and Canadian Income Tax Consequences” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2008, we have determined that we are currently a Passive Foreign Investment Company, or PFIC, under U.S. tax law and likely will continue to be a PFIC at least until we develop a source of significant operating revenues. As a result, there may be adverse tax consequences to U.S. holders of our common shares. A U.S. holder whose holding period for our shares includes a period during which we are classified as a PFIC generally may be required to treat certain excess distributions with respect to our shares and gains realized on the disposition of our shares as ordinary income earned ratably over the holder’s holding period and may be subject to a special tax and interest charge on amounts treated as earned in the periods in which we are a PFIC. In addition, the holder’s shares may not receive a “stepped-up” basis upon a transfer at death. These PFIC tax rules may not apply if a U.S. holder makes an election for the first taxable year of the holder’s holding period to be taxed currently on the holder’s pro rata share of our ordinary earnings and net capital gain for any year we are a PFIC. Alternatively, a U.S. holder may avoid the special tax and interest charge on excess distributions and gains by making an election to mark the shares to market annually during any period in which we are a PFIC and our shares are treated as marketable shares. If a mark-to-market election is made, amounts included in or deducted from income pursuant to the election and actual gains and losses realized upon disposition generally may be treated as ordinary gains or losses. Whether or not an applicable election is made, if we are classified as a PFIC for the taxable year in which a dividend is paid, or for the preceding taxable year, a dividend paid to a non-corporate U.S. holder may not qualify for the reduced long-term capital gains rates. These tax issues could make our stock less attractive to U.S. investors and therefore negatively affect our stock price and the ability to sell our shares.

We have not paid any dividends since incorporation and do not anticipate declaring any dividends in the foreseeable future. As a result, you will not be able to recoup your investment through the payment of dividends on your common shares and the lack of a dividend payable on our common shares might depress the value of your investment.

We will use all available funds to finance the development of our product candidates and operation of our business. Our directors will determine if and when dividends should be declared and paid in the future based on our financial position at the relevant time, but since we have no present plans to pay dividends, you should not expect receipt of dividends either for your cash needs or to enhance the value of your common shares.

There is no public market for our outstanding warrants.

We have not and do not intend to list any of our outstanding warrants on any securities exchange or to arrange for any quotation system to quote them. We cannot assure you that there will be a liquid trading market for our warrants or that a trading market for our warrants will develop.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We lease two facilities, one of which we sublease to another tenant. The facility we occupy has approximately 18,272 square feet of laboratory and office space in Research Triangle Park, North Carolina and the current monthly lease payments are approximately $32,000 and the lease expires in August 2012. The subleased space consists of approximately 7,636 square feet of laboratory and office space and the current monthly payments are approximately $10,500 and the lease expires in September 2010. We have subleased this space to a third party for approximately $7,000 per month through September 2010.

Item 3. Legal Proceedings

None.

Item 4. Submission of Matters to a Vote of Security Holders

None.

Executive Officers of the Registrant

The following table sets forth information concerning our executive officers as of March 26, 2009:

Name	Age	Position
Dr. William P. Peters	58	Chief Executive Officer and Chairman
Dr. Robin J. Norris	62	President and Chief Operating Officer
James A. Klein, Jr.	46	Chief Financial Officer
D. Scott Murray	39	Senior Vice President, Corporate Development, General Counsel and Secretary

William P. Peters, MD, PhD, MBA. Dr. Peters has been the Chief Executive Officer of Adherex since March 2003, the Chairman of our Board since February 2004, and a member of the Board since November 2002. From March 2003 to February 2004, Dr. Peters served as the Vice Chairman of the Board. Dr. Peters has served on the faculty at Harvard University, Duke University and Wayne State University. He originated the solid tumor high-dose chemotherapy and bone marrow transplant program at the Dana-Farber Cancer Institute, and was Director of Bone Marrow Transplantation and Professor of Medicine at Duke University from 1984 to 1995 and was an Associate Director of the Cancer Center. He then served as President, Director and CEO of the Karmanos Cancer Institute from 1995 to 2001. Simultaneously, he served as Associate Dean for Cancer at Wayne State University and Senior Vice President for Cancer Services at the Detroit Medical Center. In 2001, he organized the Institute for Strategic Analysis and Innovation at the Detroit Medical Center of which he served as President. Dr. Peters has three Bachelor degrees (Biochemistry, Biophysics and Philosophy) from Pennsylvania State University, received his MPhil, MD and PhD degrees from the Columbia University College of Physicians & Surgeons in New York and trained clinically at Harvard University Medical School's Brigham and Women's Hospital and Dana-Farber Cancer Institute. He is board certified in internal medicine and medical oncology. He earned his MBA at the Duke University Fuqua School of Business.

Robin J. Norris, MD. Dr. Norris has been the Chief Operating Officer of Adherex since January 2002, President of Adherex since June 2002 and a member of the Board since November 2002. Prior to joining Adherex, Dr. Norris was Chief Operating Officer and Chairman of the Scientific Advisors Committee of PowderJect plc from March 1998 to December 2001 and Chief Operating Officer of Noven Inc. from March 1995 to March 1998. Dr. Norris received his medical education and degree in the United Kingdom with postgraduate qualifications in obstetrics, general medicine and pharmaceutical medicine. Following eight years of clinical practice, Dr. Norris has spent over 25 years in the pharmaceutical industry, predominantly based in the United States, but with global drug development responsibilities. During his career, Dr. Norris has been responsible for the successful development of a wide range of pharmaceutical products and devices, moving and transitioning them from fundamental "bench-level" research and development through the regulatory process and into the global marketplace.

James A. Klein, Jr., CPA. Mr. Klein joined Adherex as Chief Financial Officer in April 2004. From 1999 to April 2004, Mr. Klein founded and served as Chief Executive Officer and Chairman of DataScout Software Inc., a company that develops and commercializes software for the pharmaceutical industry. From 1995 to 1999, Mr. Klein served as Chief Financial Officer and Treasurer of Triangle Pharmaceuticals Inc., a publicly traded pharmaceutical company. Prior to that, Mr. Klein was the International Research and Development Financial Controller for Burroughs Wellcome Co., an international pharmaceutical group. Mr. Klein is a Certified Public Accountant.

D. Scott Murray, BScPharm, LLB, MBA. Mr. Murray has been General Counsel and Corporate Secretary of Adherex since February 2003, a Vice President of the Company since September 2003 and Senior Vice President, Corporate Development since February 2007.

Prior to joining Adherex, Mr. Murray was an Associate at Osler, Hoskin & Harcourt LLP in Toronto specializing in private and public corporate finance, mergers and acquisitions as well as securities compliance and pharmaceutical regulatory matters. At Osler, Hoskin & Harcourt LLP, Mr. Murray worked with a number of international pharmaceutical corporations, some of the largest securities dealers in North America, various early-stage biotechnology clients and also spent a secondment in the legal department of General Motors of Canada. Prior to joining Osler, Hoskin & Harcourt LLP, Mr. Murray practiced as a pharmacist for over seven years, including several retail pharmacy management positions. Mr. Murray holds a Bachelor of Science in Pharmacy degree from Dalhousie University and LLB and MBA degrees from the University of Ottawa.

Part II

Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuers Purchases of Equity Securities

Our common stock traded on the NYSE Alternext US LLC, formerly the American Stock Exchange, or AMEX, under the trading symbol "ADH" since November 12, 2004 until January 29, 2009, and has traded on the Toronto Stock Exchange, or TSX, under the trading symbol "AHX" since June 5, 2001. In December 2008 we received notice from the AMEX that we were not in compliance with certain continued listing standards as set forth in Part 10 of the NYSE Alternext US, LLC Company Guide. On January 20, 2009, we voluntarily filed to delist our common stock from the AMEX and on January 30, 2009, we no longer traded on the AMEX. As a result, any trading of our common stock in the U.S. must be conducted in the over-the-counter market, on the pink sheets. In addition to trading over-the-counter in the U.S., our common stock continues to trade on the TSX. The following table sets forth the quarterly high and low market closing prices, and average daily trading volume on the AMEX and the TSX, for the two most recent full financial years:

	American Stock Exchange (in U.S. dollars)			Toronto Stock Exchange (in Canadian dollars)		
	High $	Low $	Volume	High $	Low $	Volume
Fiscal 2008:						
Quarter ended 12/31/08	$ 0.09	$ 0.02	309,656	$ 0.11	$ 0.02	91,302
Quarter ended 09/30/08	0.23	0.09	110,686	0.20	0.10	26,653
Quarter ended 06/30/08	0.37	0.21	109,689	0.35	0.21	30,382
Quarter ended 03/31/08	0.40	0.30	61,708	0.39	0.26	24,969
Fiscal 2007:						
Quarter ended 12/31/07	$ 0.43	$ 0.25	114,251	$ 0.43	$ 0.23	16,622
Quarter ended 09/30/07	0.57	0.26	177,938	0.59	0.27	75,130
Quarter ended 06/30/07	0.69	0.44	684,122	0.76	0.48	88,394
Quarter ended 03/31/07	0.54	0.28	481,203	0.65	0.32	100,693

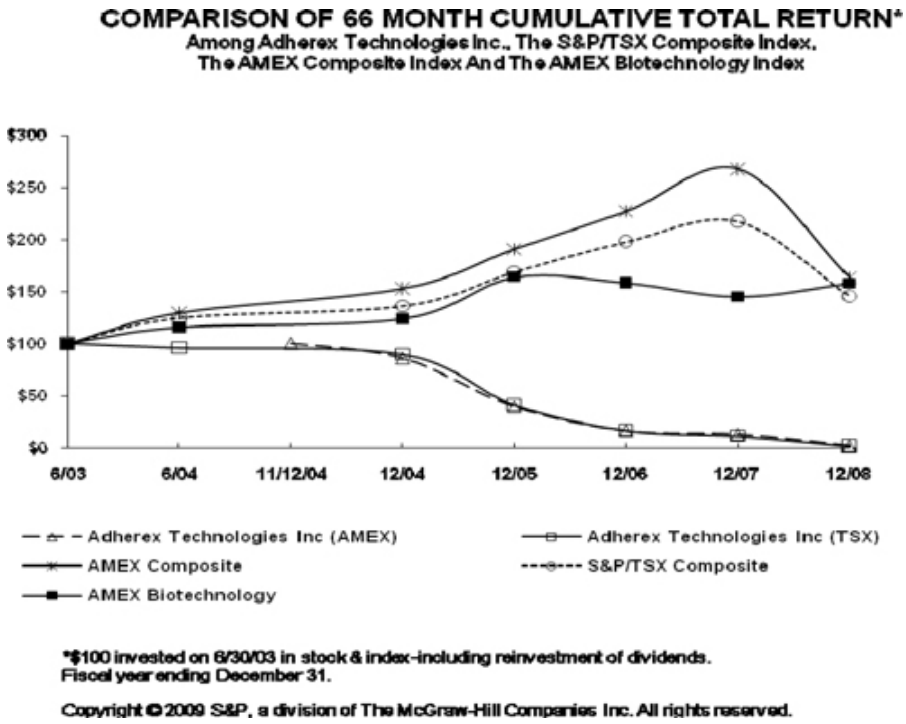
As of March 16, 2009, the last reported sale on the TSX was CAD$0.02 per share and the last reported sale on the over the counter markets in the U.S. was $0.01 per share.

Record Holders

As of March 16, 2009, there were approximately 91 shareholders of record of our common stock, one of which was Cede & Co., a nominee for Depository Trust Company, or DTC, and one of which was The Canadian Depository for Securities Limited, or CDS. All of our common shares held by brokerage firms, banks and other financial institutions in the U.S. or Canada as nominees for beneficial owners are considered to be held of record by Cede & Co. in respect of brokerage firms, banks and other financial institutions located in Canada. Cede & Co. and CDS are each considered to be one shareholder of record.

Relative Stock Performance

The following line graph compares the percentage change, from June 30, 2003 to December 31, 2008, in cumulative total shareholder return for $100 (CAD$ for TSX and US$ for AMEX) invested in our common stock with cumulative total return of the AMEX Composite, the AMEX Biotechnology Index and the S&P/TSX Composite Total Return Index. Note the line graph reflects our change in year end from June 30th to December 31st in June 2004. The line graph also reflects the November 12, 2004 commencement of trading on the NYSE Alternext US, LLC formerly the American Stock Exchange.



Dividend Policy

We have never declared or paid cash dividends on our common stock. We currently expect to retain future earnings, if any, for use in the operation and expansion of business and do not anticipate paying any cash dividends in the foreseeable future.

Material United States Federal and Canadian Income Tax Consequences

This section summarizes the material U.S. federal and Canadian federal income tax consequences of the ownership and disposition of the common stock. Nothing contained herein shall be construed as tax advice; you must rely only on the advice of your own tax advisor. We make no assurances as to the applicability of any tax laws with respect to any individual investment. In this section, we have calculated whether we meet certain thresholds related to our status under various U.S. tax rules. Any such calculations are dependent on many facts, not all of which may be known to us and any of which might change, which could change the results of any calculation.

This summary relating to the common stock applies to the beneficial owners who are individuals, corporations, trusts and estates that:

- at all relevant times are: (i) U.S. persons for purposes of the U.S. Internal Revenue Code of 1986, as amended through the date hereof, or the Code, (ii) nonresidents of Canada for purposes of the Income Tax Act (Canada), or the Income Tax Act, and (iii) residents of the United States for purposes of, and entitled to all the benefits under, the Canada-United States Income and Capital Tax Convention (1980), as amended through the date hereof, or the Tax Treaty;
- hold common stock as a capital asset for purposes of the Code and capital property for the purposes of the Income Tax Act;
- deal at arm's length with, and are not affiliated with, the Company for purposes of the Income Tax Act; and
- do not and will not use or hold the common stock in carrying on a business in Canada.

Persons who satisfy the above conditions are referred to as U.S. Shareholders.

The tax consequences of an investment in common stock by persons who are not U.S. Shareholders may differ materially from the tax consequences discussed in this section. The Income Tax Act contains rules relating to securities held by some financial institutions. This Annual Report does not discuss these rules, and holders that are financial institutions should consult their own tax advisors. This discussion is based upon the following, all as currently in effect:

- the Income Tax Act and regulations under the Income Tax Act;
- the Code and Treasury regulations under the Code;

- the Tax Treaty;
- the administrative policies and practices published by the Canada Revenue Agency, formerly Revenue Canada;
- all specific proposals to amend the Income Tax Act and the regulations under the Income Tax Act that have been publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date of this report;
- the administrative policies and rulings published by the U.S. Internal Revenue Service, or the IRS; and
- judicial decisions.

All of the foregoing are subject to change either prospectively or retroactively. This summary does not take into account estate or gift tax laws, the tax laws of the various provinces or territories of Canada or the tax laws of the various state and local jurisdictions of the United States or foreign jurisdictions.

This discussion summarizes the material U.S. federal and Canadian federal income tax considerations of the ownership and disposition of common stock. This discussion does not address all possible tax consequences relating to an investment in common stock. No account has been taken of your particular circumstances, and this summary does not address consequences peculiar to you if you are subject to special provisions of U.S. or Canadian income tax law (including, without limitation, dealers in securities or foreign currency, tax-exempt entities, banks, insurance companies or other financial institutions, persons that hold common stock as part of a “straddle,” “hedge” or “conversion transaction,” persons acquiring shares upon exercise of stock options or in other compensatory transactions, and U.S. Shareholders that have a “functional currency” other than the U.S. dollar or that own common stock through a partnership or other pass-through entity). Therefore, you should consult your own tax advisor regarding the tax consequences of purchasing and owning common stock.

Material U.S. Federal Income Tax Considerations

Subject to the discussion below regarding Passive Foreign Investment Company Rules and Controlled Foreign Corporation Rules, this section summarizes U.S. federal income tax consequences of ownership and disposition of the common stock.

U.S. Shareholders are generally required to include in income dividend distributions, if any, paid by a corporation to the extent of a corporation’s current or accumulated earnings and profits attributable to the distribution as computed based on U.S. income tax principles. The amount of any cash distribution paid in Canadian dollars will be equal to the U.S. dollar value of the Canadian dollars on the date of distribution based on the exchange rate on such date, regardless of whether the payment is in fact converted to U.S. dollars, and without reduction for Canadian withholding tax. For a discussion of Canadian withholding taxes applicable to dividends paid by the Company, see “Material Canadian Federal Income Tax Considerations.” You will generally be entitled to a foreign tax credit or deduction for U.S. federal income tax purposes in an amount equal to the Canadian tax withheld. To the extent distributions paid by the Company on the common stock exceed the Company’s current or accumulated earnings and profits, they will be treated first as a return of capital up to your adjusted tax basis in the shares and then as capital gain from the sale or exchange of the shares.

Under current law the maximum rate of U.S. federal income tax on dividends paid to noncorporate U.S. holders is reduced to 15% for tax years from 2003 through 2010. In order to qualify for the reduced tax rates on dividends, a noncorporate shareholder must satisfy certain holding period requirements and must not be under an obligation (whether pursuant to a short sale or otherwise) to make related payments with respect to positions in substantially similar or related property. In some circumstances, this holding period may be increased. Additionally, the reduced tax rates do not apply to dividends that a noncorporate shareholder elects to treat as investment income for purposes of Section 163(d)(4) of the Code.

Dividends received from a “qualified foreign corporation” are eligible for the reduced dividends tax rates for noncorporate shareholders. In general, a Canadian corporation entitled to all the benefits of the Tax Treaty will be treated as a qualified foreign corporation. In addition, a foreign corporation will be treated as a qualified foreign corporation with respect to any dividend paid by that corporation if the stock with respect to which the dividend is paid is readily tradable on an established securities market in the United States. Regardless of the above rules, however, a foreign corporation will not be treated as a qualified foreign corporation if, for the taxable year of the corporation in which the dividend was paid, or the preceding taxable year, the corporation is classified for U.S. tax purposes as a passive foreign investment company, or PFIC. Accordingly, any dividends paid by us in a year that we are a PFIC or in the next taxable year would not qualify for the reduced tax rates on dividends paid to noncorporate U.S. holders. As discussed below under “Passive Foreign Investment Company Rules,” we have determined that we are a PFIC for U.S. federal income tax purposes and likely will continue to be a PFIC at least until we develop a source of significant operating revenues.

Dividends paid by the Company generally will constitute foreign source dividend income and “passive income” for purposes of the foreign tax credit, which could affect the amount of foreign tax credits available to you. The Code applies various limitations on the amount of foreign tax credits that may be available to a U.S. taxpayer.

Because of the complexity of those limitations, you should consult your own tax advisor with respect to the availability of foreign tax credits.

Dividends paid by the Company on the common stock generally will not be eligible for the "dividends received" deduction available to corporate shareholders, because the Company is a foreign corporation. Note, however, that if a corporate shareholder owns at least 10 percent of our stock and we are not a PFIC (see "Passive Foreign Investment Company Rules" below) for a particular year, a dividends received deduction may be available under Section 245 of the Code for any dividends paid by the Company to that shareholder attributable to our U.S.-source earnings.

If you sell the common stock, you generally will recognize gain or loss in an amount equal to the difference between the amount realized on the sale and your adjusted tax basis in the shares. Any such gain or loss will be long-term or short-term capital gain or loss, depending on whether the shares have been held by you for more than one year, and will generally be U.S.-source gain or loss.

Dividends paid by the Company on the common stock generally will be subject to U.S. information reporting, and a backup withholding tax may apply unless you furnish the paying agent or middleman with a duly completed and signed Form W-9. You will be allowed a refund or a credit equal to any amount withheld under the U.S. backup withholding tax rules against your U.S. federal income tax liability, provided you furnish the required information to the IRS.

Passive Foreign Investment Company Rules

The passive foreign investment company, or PFIC, provisions of the Code can have significant tax effects on U.S. Shareholders. We will be classified as a PFIC for any taxable year if, after the application of certain "look through" rules, either:

- 75% or more of our gross income is "passive income," which includes interest, dividends and certain rents and royalties; or
- the average quarterly percentage, by fair market value, of our assets that produce or are held for the production of "passive income" is 50% or more of the fair market value of all of our assets.

Based upon our review of our financial data for the current and prior fiscal years, we have determined that we are currently a PFIC and likely will continue to be a PFIC at least until we develop a source of significant operating revenues.

Our classification as a PFIC for any period during a U.S. Shareholder's holding period for our shares, absent the holder's validly making one of the elections described below, would generally require the U.S. Shareholder to treat all "excess distributions" received during such holding period with respect to those shares as if those amounts were ordinary income earned ratably over such holding period. Excess distributions for this purpose would include all gain realized on the disposition of the shares as well as certain distributions made by us. Amounts treated under this analysis as earned in the year of the disposition or in any year before the first year in which we are a PFIC would be included in the holder's ordinary income for the year of the disposition. Additionally, amounts treated as earned in a year of distribution would be included in the holder's ordinary income for the year of the distribution. All remaining amounts would be subject to tax at the highest ordinary income tax rate that would have been applicable in the year in which such amounts were treated as earned, and interest would be charged on the tax payable with respect to such amounts. In addition, if we are classified as a PFIC, shares acquired from a decedent dying in a calendar year other than 2010 generally would not receive a "stepped-up" basis but would, instead, have a tax basis equal to the lower of the decedent's basis or the fair market value of those shares on the date of the decedent's death. In the case of decedents dying in 2010, if we are a PFIC, current law provides that shares acquired from the decedent would have a tax basis equal to the decedent's basis, except that if a QEF election (as described below) were in effect for the decedent, the shares could be included within the decedent's property that is subject to a limited basis increase under Section 1022 of the Code.

The special PFIC tax rules described above will not apply to a U.S. Shareholder if the holder makes a qualified electing fund, or QEF, election under Section 1295 of the Code to have us treated as a QEF for the first taxable year of the holder's holding period in which we are a PFIC and we provide certain information to the U.S. Shareholder. A U.S. Shareholder that makes a QEF election with respect to us will be currently taxable on its pro rata share of our ordinary earnings and net capital gain during any years we are a PFIC (at ordinary income and capital gains rates, respectively), regardless of whether or not distributions were received. An electing U.S. Shareholder's basis in the shares would be increased by the amounts included in income. Subsequent distributions by us of previously included earnings and profits generally would not be treated as a taxable dividend, and would result in a corresponding reduction in basis in the shares. A U.S. Shareholder making such a timely election will not be taxed on our undistributed earnings and profits for any year that we are not a PFIC. Upon request by a U.S. shareholder, we will provide the information necessary for such holder to make the QEF election.

Alternatively, subject to specific limitations, U.S. Shareholders who actually or constructively own marketable shares in a PFIC may make an election under Section 1296 of the Code to mark those shares to market annually, rather than being subject to the above-described rules. Amounts included in or deducted from income under this mark-to-market election and actual gains and losses realized upon disposition, subject to specific limitations, will be treated as ordinary gains or losses. For this purpose, we believe that our shares will be treated as "marketable stock" within the meaning of Section 1296(e)(1) of the Code.

As discussed above, dividends from a PFIC do not qualify for the reduced tax rates on dividends paid to noncorporate U.S. Shareholders currently in effect under the Code through 2010.

If we should ever qualify as a controlled foreign corporation (see "Controlled Foreign Corporation Rules" below), the Company would not be treated as a PFIC with respect to a U.S. Shareholder during any period in which (i) the holder holds at least 10% of our shares and (ii) we are a controlled foreign corporation.

You should consult your tax advisor with respect to how the PFIC rules affect your tax situation.

Controlled Foreign Corporation Rules

If more than 50% of the voting power or total value of all classes of our shares are owned, directly or indirectly, by U.S. shareholders, each of which owns at least 10% of the total combined voting power of all classes of our shares, we could be treated as a controlled foreign corporation, or CFC, under Section 957 of the Code. This classification would require such 10%-or-greater shareholders to include in income their pro rata shares of our "subpart F income," as defined in Section 951 of the Code. In addition, under Section 1248 of the Code, gain from the sale or exchange of shares by a U.S. Shareholder who is or was a 10%-or-greater shareholder while we were a CFC at any time during the five-year period ending with the sale or exchange could be taxable in whole or in part as dividend income. Such amount taxable as a dividend is generally the amount of our earnings and profits during the period we were a CFC that are attributable to the shares sold or exchanged, but for this purpose our earnings and profits will be reduced by certain amounts, including (i) earnings previously taxed to the shareholder as subpart F income, and (ii) income from a U.S. trade or business for which we were fully subject to U.S. corporate income taxation.

We believe that we are not a CFC. However, we cannot assure you that we will not become a CFC in the future.

Material Canadian Federal Income Tax Considerations

This section summarizes the material anticipated Canadian federal income tax considerations relevant to the ownership and disposition of the common stock.

Under the Income Tax Act, assuming you are a U.S. Shareholder, and provided the common stock is listed on a designated stock exchange, which includes the Toronto Stock Exchange and the American Stock Exchange, you will generally not be subject to Canadian tax on a capital gain realized on an actual or deemed disposition of the common stock unless you alone or together with persons with whom you did not deal at arm's length owned or had rights to acquire 25% or more of our issued shares of any class at any time during the sixty (60) month period before the actual or deemed disposition.

Dividends paid, credited or deemed to have been paid or credited on the common stock to U.S. Shareholders will be subject to a Canadian withholding tax under the Income Tax Act at a rate of 25% of the gross amount of the dividends. Under the Tax Treaty, the rate of withholding tax on dividends generally applicable to U.S. Shareholders who beneficially own the dividends is reduced to 15%. In the case of U.S. Shareholders that are corporations that beneficially own at least 10% of the Company's voting shares, the rate of withholding tax on dividends generally is reduced to 5%. So-called "fiscally transparent" entities, such as United States limited liability companies, or LLCs, are not entitled to rely on the terms of the Tax Treaty, and therefore do not benefit from these reduced rates. Under the terms of a protocol to the Tax Treaty signed in September 2007 and ratified December 15, 2008, however, reduced rates under the Tax Treaty apply to members of fiscally transparent entities, such as LLCs and partnerships, who would be entitled to rely on the Tax Treaty if they held the common stock directly. Members of such entities are regarded as holding their proportionate share of the common stock held by the entity for the purposes of the Tax Treaty. The reduced withholding rates will apply to members of fiscally transparent entities for dividends paid on or after February 1, 2009.

Canada does not currently impose any federal estate taxes or succession duties. However, if you die, there is a deemed disposition of the common stock held at that time for proceeds of disposition generally equal to the fair market value of the common stock immediately before your death. Capital gains realized on the deemed disposition, if any, will have the income tax consequences described above.

Item 6. Selected Financial Data.

The selected statement of operations data and balance sheet data with respect to the years ended December 31, 2008, 2007, 2006 and 2005 and the six months ended December 31, 2004 and the year ended June 30, 2004 as set forth below are derived from our consolidated financial statements as prepared in all material respects with generally accepted accounting principles in the United States and prepared in U.S. dollars. The selected financial data set forth below should be read in conjunction with our "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in Item 7 below and our consolidated financial statements and the notes thereto appended to this Annual Report filed on Form 10-K. These historical results are not necessarily indicative of our future results.

Statement of Operations Data: In thousands, except per share data	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006	Year Ended December 31, 2005	Six Months Ended December 31, 2004	Year Ended June 30, 2004
Revenue	$ —	$ —	$ —	$ —	$ —	$ —
Operating expenses:						
Research and development	10,366	10,912	14,003	11,678	3,448	3,691
General and administration	3,520	3,278	2,883	2,543	2,290	3,486
Loss from operations	(13,886)	(14,190)	(16,886)	(14,221)	(5,738)	(7,177)
Settlement of Cadherin Biomedical Inc. litigation	—	—	—	—	(1,283)	—
Interest expense	—	—	(3)	(11)	—	—
Interest income	286	833	449	361	171	162
Loss before income taxes	(13,600)	(13,357)	(16,440)	(13,871)	(6,850)	(7,015)
Recovery of income taxes	—	—	—	—	166	130
Net loss	$ (13,600)	$ (13,357)	$ (16,440)	$ (13,871)	$ (6,684)	$ (6,885)
Net loss per share of common stock, basic and diluted	$ (0.11)	$ (0.11)	$ (0.34)	$ (0.35)	$ (0.19)	$ (0.28)
Weighted average number of shares of common stock outstanding, basic and diluted	128,227	116,571	47,663	39,276	35,989	24,233

Balance Sheet Data: In thousands, except per share data	December 31, 2008	December 31, 2007	December 31, 2006	December 31, 2005	December 31, 2004	June 30, 2004
Cash, cash equivalents and short-term investments	$ 5,401	$ 16,217	$ 5,718	$ 13,144	$ 17,548	$ 20,701
Working capital	3,209	14,159	1,200	10,735	16,132	20,091
Total assets	6,060	17,209	6,628	14,291	18,573	22,014
Common stock	64,929	64,929	46,524	41,306	34,362	33,603
Additional paid-in capital	34,860	32,355	24,523	23,110	21,760	21,117
Accumulated deficit	(97,979)	(84,379)	(71,022)	(54,582)	(40,711)	(34,117)
Stockholders' equity	$ 3,053	$ 14,148	$ 1,268	$ 11,077	$ 16,654	$ 20,454
Number of shares of common stock outstanding	128,227	128,227	50,382	42,629	36,535	35,891

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

CAUTIONARY STATEMENT

The discussion below contains forward-looking statements regarding our financial condition and our results of operations that are based upon our annual consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles within the United States, or U.S. GAAP, and applicable U.S. Securities and Exchange Commission, or SEC, regulations for financial information. The preparation of these financial statements also conform in all material respects with generally accepted accounting principles in Canada, or Canadian GAAP, except as described in Note 15 in our annual consolidated financial statements contained in this Annual Report on Form 10-K for the year ended December 31, 2008. The preparation of these financial statements requires our management to make estimates and judgments that affect the reported amounts of assets, liabilities, income and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis. Our estimates are based on historical experience and on various other assumptions that we believe to be reasonable.

Overview

The recent turmoil in the worldwide financial markets has led to an overall tightening in the credit markets and a significant decline in the availability of capital, especially for small biotechnology companies, which are generally viewed as higher risk investments. As a result of our limited financial resources and the decline in the availability of further capital, we have implemented a prioritization initiative to focus our clinical development activities on our most attractive, nearer term value-generating opportunities. Accordingly, we have postponed or terminated some of our previously planned or ongoing clinical development programs as outlined below. We believe that our current cash and cash equivalents will be sufficient to satisfy our anticipated capital requirements into September 2009. In addition, we

have implemented a 75% headcount reduction effective April 30, 2009, representing all 13 of our non-executive positions. The members of the Board of Directors have agreed to continue to serve for the benefit of the shareholders without further compensation. We continue to pursue various strategic alternatives, including collaborations with other pharmaceutical and biotechnology companies and we believe that our current cash and cash equivalents will be sufficient to satisfy our anticipated capital requirements into September 2009. As a result, the audit opinion contained in this Annual Report filed on Form 10-K includes a notation related to the uncertainty of our ability to continue as a going concern. Our projections of our capital requirements into September 2009 and beyond are subject to substantial uncertainty. Additional capital may be required earlier than September 2009 or more capital than we had anticipated thereafter may be required. To finance our operations beyond September 2009, or earlier if necessary, we will need to raise substantial additional funds through either the sale of additional equity, the issuance of debt, the establishment of collaborations that provide us with funding, the out-license or sale of certain aspects of our intellectual property portfolio, or from other sources. Given current economic conditions, we might not be able to raise the necessary capital or such funding may not be available on acceptable terms. If we cannot obtain adequate funding, we might be required to further delay, scale back or eliminate certain research and development studies, consider business combinations or shut down some, or all, of our operations.

We are a biopharmaceutical company focused on cancer therapeutics with preclinical and clinical product candidates in development. We are in the business of solving problems for patients with cancer. We have multiple products in the clinical stage of development, including eniluracil, ADH-1 and sodium thiosulfate (STS).

Eniluracil, an oral dihydropyrimidine dehydrogenase, or DPD, inhibitor, is being developed to improve the tolerability and effectiveness of 5-fluorouracil, or 5-FU, one of the most widely used oncology drugs in the world. ADH-1 is a small peptide molecule that selectively targets N-cadherin, a protein present on certain tumor cells and the blood vessels of solid tumors. STS is a chemoprotectant being developed to reduce or prevent hearing loss that may result from treatment with platinum-based chemotherapy drugs.

- We are currently focusing our efforts on a topical formulation of eniluracil for the prevention of hand-foot syndrome induced by capecitabine or Xeloda® in an investigator-initiated Phase I randomized trial. We believe the topical formulation represents a quicker and a less expensive potential route to approval. As part of our prioritization initiative, we have closed patient enrollment in our Phase I/II trial studying oral eniluracil in liver cancer in Asia. We have also suspended patient enrollment in our oral Phase I clinical trial in the U.S. until we are able to secure adequate financial resources which was designed to determine the maximum tolerated dose, or MTD, of oral 5-FU in combination with eniluracil.
- We are currently focusing our development of ADH-1 in combination with regionally-infused melphalan for the treatment of melanoma. We have completed patient enrollment in a Phase IIb study and will follow the patients for the required three month period to assess their responses. We have postponed our planned Phase III clinical trial for ADH-1 in combination with melphalan until we are able to secure adequate financial resources.
- We continue to enroll patients in our Phase III trials of STS with the International Childhood Liver Tumour Strategy Group, known as SIOPEL and the Children’s Oncology Group, or COG. The SIOPEL trial is expected to enroll approximately 100 pediatric patients with liver (hepatoblastoma) cancer at participating SIOPEL centers worldwide and the COG study is expected to enroll up to 120 pediatric patients worldwide in five different disease indications.

Our current prioritization initiative focuses primarily on our clinical activities, and preclinical support will be limited only to those activities necessary to support the ongoing clinical programs. Our preclinical portfolio includes: (1) novel peptides and small chemical molecule successors to ADH-1; (2) peptides and small molecules targeting the cadherin-mediated metastatic spread of some cancers; and (3) peptides that combine both angiolytic and anti-angiogenic properties.

In addition to our current development efforts, we continue to pursue collaborations with other pharmaceutical and biotechnology companies, governmental agencies, academic or other corporate collaborators with respect to these molecules. A number of these preclinical molecules are currently being tested under agreements with third parties that may help to advance these products into future clinical development, either by us or under investigator-initiated studies. Our portfolio is supported by more than 50 issued patents and that we either own or have licensed exclusively.

In December 2008 we were notified by the NYSE Alternext US LLC, formerly the American Stock Exchange, or AMEX, that the Company did not meet the minimum stockholders’ equity requirement of at least $6 million with sustained net losses in the five most recent fiscal years. On January 20, 2009, we filed a notification to remove our common stock from the AMEX and effective January 30, 2009, our common stock no longer traded on the AMEX. Our common stock continues to trade the Toronto Stock Exchange, or TSX, and on the over the counter market, or pink sheets, in the U.S.

Given the continuing difficult market conditions and our limited financial resources, we have expanded our ongoing efforts to explore and review potential partnering opportunities for each of our three main product candidates as well as other strategic alternatives. In addition, we implemented a success-based incentive plan for the executive management for the completion of a partnership, asset sale, or merger transaction. Executives will be eligible for a success-based cash bonus ranging from 1% to 5% upon the completion of a transaction prior to July 31, 2009 provided the executive continues to be employed at the time of the transaction. The cash bonus paid under this incentive plan would be offset dollar for dollar from the value of any “in the money” stock options held by the executive.

We have not received and do not expect to have significant revenues from our product candidates until we are either able to sell our product candidates after obtaining applicable regulatory approvals or we establish collaborations that provide us with up-front payments, licensing fees, milestone payments, royalties or other revenue. We experienced net losses of approximately $13.6 million for the year

ended December 31, 2008, $13.4 million for the fiscal year ended December 31, 2007, and $16.4 million for the fiscal year ended December 31, 2006. As of December 31, 2008, our deficit accumulated during development stage was approximately $98.0 million.

Our operating expenses will depend on many factors, including the progress of our drug development efforts and the potential commercialization of our product candidates. Our research and development expenses, which include expenses associated with our clinical trials, drug manufacturing to support clinical programs, salaries for research and development personnel, stock-based compensation, consulting fees, sponsored research costs, toxicology studies, license fees, milestone payments, and other fees and costs related to the development of product candidates, will depend on the availability of financial resources, the results of our clinical trials and any directives from regulatory agencies, which are difficult to predict. Our general and administration expenses include expenses associated with the compensation of employees, stock-based compensation, professional fees, consulting fees, insurance and other administrative matters associated with our facilities in the Research Triangle Park, North Carolina in support of our drug development programs.

Results of Operations

Fiscal 2008 versus Fiscal 2007

In thousands of U.S. Dollars	Fiscal 2008	%	Fiscal 2007	%	Increase (Decrease)
Revenue	$ —		$ —		$ —
Operating expenses:					
Research and development	10,366	75%	10,912	77%	(546)
General and administration	3,520	25%	3,278	23%	242
Total operating expense	(13,886)	100%	(14,190)	100%	(304)
Interest income	286		833		(547)
Net loss	$(13,600)		$(13,357)		$ 243

- Research and development expenses were lower in fiscal 2008, as compared to fiscal 2007 primarily due to less clinical studies being conducted throughout 2008, as compared to 2007. As part of our prioritization initiative initiated in the third quarter of 2008 to reduce operating expense, we closed patient enrollment in our Phase I/II clinical trial studying oral eniluracil in liver cancer in Asia and suspended patient enrollment in our Phase I study to determine the maximum tolerated dose of oral 5-FU in combination with oral eniluracil. During fiscal 2008, we completed our ADH-1 trial in combination with docetaxel, carboplatin, and capecitabine and completed patient enrollment in our Phase IIb systemic ADH-1 trial with regionally-infused melphalan for the treatment of melanoma.
- General and administrative expenses increased primarily due to foreign currency losses on our Canadian denominated investments totaling $0.2 million. It was determined the losses were other than temporary and were therefore not included in other comprehensive income. General and administrative expense includes non-cash stock-based compensation expense of $1.3 million in fiscal 2008 and $1.2 million in fiscal 2007.
- Interest income decreased in fiscal 2008 as compared to 2007 due to less cash on hand as a result of funding our operations during fiscal 2008.

Fiscal 2007 versus Fiscal 2006

In thousands of U.S. Dollars	Fiscal 2007	%	Fiscal 2006	%	Increase (Decrease)
Revenue	$ —		$ —		$ —
Operating expenses:					
Research and development	10,912	77%	14,003	83%	(3,091)
General and administration	3,278	23%	2,883	17%	395
Total operating expense	(14,190)	100%	(16,886)	100%	(2,696)
Interest expense	—		(3)		3
Interest income	833		449		384
Total other income	833		446		387
Net loss	$(13,357)		$(16,440)		$ (3,083)

- Research and development expenses were lower in fiscal 2007 as compared to 2006, primarily due to lower drug manufacturing and clinical trial expense and a reduction in staff. In fiscal 2006, we incurred more drug manufacturing expense to source clinical studies, including the single-agent Phase Ib/II and Phase II studies for ADH-1 which completed enrollment in December 2006. During fiscal 2007, we transitioned the clinical trials of ADH-1 from single-agent clinical trials to combination studies with other chemotherapies, as is often customary in the development of drugs for the treatment of cancer. The combination studies with ADH-1 were less expensive compared to the single-agent ADH-1 studies. During fiscal 2007, we reduced our permanent preclinical and clinical personnel and adopted the use of external contractors for certain functions, thereby decreasing compensation expense. While we had a reduction in expenses for ADH-1 in fiscal 2007, we increased development expenses during fiscal 2007 due to the clinical advancement of eniluracil. In addition, on March 1, 2007, we purchased all of GlaxoSmithKline's, or GSK, remaining options to buy back eniluracil for a fee of $1.0 million, which is included in research and development expense.
- General and administrative expenses increased in fiscal 2007 as compared to fiscal 2006 primarily due to stock-based compensation expense. During fiscal 2007, we granted 11.1 million stock options as compared to 0.4 million in fiscal 2006 thereby increasing our fiscal 2007 stock-based compensation expense.
- Interest expense for fiscal 2006 relates to the financing of certain leasehold improvements which were not present in fiscal 2007.
- Interest income increased in fiscal 2007 due to the earnings on additional cash from our February 2007 financing, which resulted in net proceeds of $23.2 million.

Fiscal 2006 versus Fiscal 2005

In thousands of U.S. Dollars	Fiscal 2006	%	Fiscal 2005	%	Increase (Decrease)
Revenue	$ —		$ —		$ —
Operating expenses:					
Research and development	14,003	83%	11,678	82%	2,325
General and administration	2,883	17%	2,543	18%	340
Total operating expense	(16,886)	100%	(14,221)	100%	2,665
Interest expense	(3)		(11)		8
Interest income	449		361		88
Total other income	446		350		96
Net loss	$(16,440)		$(13,871)		$ 2,569

- Research and development expenses increased in fiscal 2006 as compared to 2005, primarily due to clinical trial expense in fiscal 2006 as compared to fiscal 2005. Fiscal 2006 included a full year of development of eniluracil as compared to only six months during fiscal 2005. In addition, we incurred more clinical trial expense in fiscal 2006 due to the advancement of our single-agent ADH-1 Phase Ib/II and Phase II studies. Increases in R&D expense in fiscal 2006 were offset by lower stock-based compensation expense in fiscal 2006 as compared to fiscal 2005.
- General and administrative increases in fiscal 2006 as compared to fiscal 2005 primarily relate to the adoption of Statement of Financial Accounting Standards, or SFAS No. 123 (revised 2004), Share-Based Payment", or SFAS123(R), on January 1, 2006. As a result of the adoption of SFAS123(R) in fiscal 2006, no stock-based compensation was recorded in fiscal 2005.
- Interest expense for fiscal 2006 and 2005 relate to the financing of certain leasehold improvements which was terminated in fiscal 2006.
- Interest income increased in fiscal 2006 due to the additional cash from our May 2006 equity offering and slightly higher interest rates achieved in fiscal 2006.

Quarterly Information

The following table presents selected consolidated financial data for each of the last eight quarters through December 31, 2008, as prepared under U.S. GAAP (dollars in thousands, except per share information):

Period	Net Loss for the Period	Basic and Diluted Net Loss per Common Share
December 31, 2006	$ (4,761)	$ (0.09)
March 31, 2007	$ (3,968)	$ (0.05)
June 30, 2007	$ (3,179)	$ (0.03)
September 30, 2007	$ (3,202)	$ (0.02)
December 31, 2007	$ (3,008)	$ (0.02)
March 31, 2008	$ (4,304)	$ (0.03)
June 30, 2008	$ (3,442)	$ (0.03)
September 30, 2008	$ (3,244)	$ (0.03)
December 31, 2008	$ (2,610)	$ (0.02)

Liquidity and Capital Resources

In thousands, except share data	December 31, 2008	December 31, 2007	December 31, 2006
Selected Asset and Liability Data:			
Cash and cash equivalents	$ 5,401	$ 16,217	$ 5,718
Working capital	3,209	14,159	1,200
Selected Asset and Liability Data:			
Common stock	$ 64,929	$ 64,929	$ 46,524
Accumulated deficit	(97,979)	(84,379)	(71,022)
Shareholders' equity	3,053	14,148	1,268
Selected Cash Flow Data:			
Net cash used in operating activities	$ (10,808)	$ (13,303)	$ (13,475)
Net cash provided from financing activities	7	23,875	6,054
Number of shares of common stock outstanding	128,227	128,227	50,382

We have financed our operations since inception on September 3, 1996 through the sale of equity and debt securities and have raised gross proceeds totaling approximately $86.0 million through December 31, 2008. We have incurred net losses and negative cash flow from operations each year, and we had an accumulated deficit of approximately $98.0 million as of December 31, 2008. We have not generated any revenues to date through the sale of products. We do not expect to have significant revenues or income, other than interest income, until we are able to sell our product candidates after obtaining applicable regulatory approvals or we establish collaborations that provide us with licensing fees, royalties, milestone payments or up-front payments.

The net cash flow used in operating activities for fiscal year 2008 was approximately $10.8 million, as compared to $13.3 million in fiscal 2007. During fiscal 2008 our average monthly cash burn was $0.9 million as compared to $1.1 million for fiscal 2007. The decrease in the current year is due to a decrease our overall clinical activities during fiscal 2008 and in fiscal 2007 we paid GSK a license fee of $1.0 million. In addition, we had increased cash payments to vendors during the first half of fiscal 2007 from our improved liquidity as a result of our $25.0 million offering completed in February 2007.

At December 31, 2008, our working capital decreased by approximately $11.0 million primarily due to funding research and development activities and general corporate operations.

In December 2008 we received notice from the NYSE Alternext US, LLC (formerly the American Stock Exchange), or AMEX that we were not in compliance with Section 1003(a)(ii) of its Company Guide, because our stockholders' equity was below $6 million and we incurred losses from continued operation and net losses in the five most recent fiscal years. On January 29, 2009, we voluntarily filed to delist our common stock from the AMEX and effective January 29, 2009 our common stock was no longer traded on the AMEX. As a result, any trading of our common stock in the U.S. must now be conducted in the over-the-counter markets, on the pink sheets. Our common stock continues to trade on the Toronto Stock Exchange, or TSX. The TSX also has continued listing standards, including minimum market capitalization and other requirements, that we might not meet in the future, particularly if the price of our common stock does not increase or we are unable to raise capital to continue our operations.

We believe that our current cash and cash equivalents of $5.3 million will be sufficient to satisfy our anticipated capital requirements into September 2009. In the third quarter of fiscal 2008, we implemented a prioritization initiative to focus our clinical development activities on the most attractive, nearer term value-generating opportunities. Accordingly, we have postponed or terminated some of our ongoing or previously planned clinical development programs. In addition, we have implemented a 75% headcount reduction effective April 30, 2009, representing all 13 of our current non-executive positions. The members of the Board of Directors have agreed to continue to serve for the benefit of the shareholders without further compensation. We continue to pursue various strategic alternatives, including, collaborations with other pharmaceutical and biotechnology companies and we believe that our current cash and cash equivalents will be sufficient to satisfy our anticipated capital requirements into September 2009. However, if a strategic transaction is not completed or we do not otherwise obtain additional financial resources in the very near term, we might cease operations sooner than September 2009. Our projections of further capital requirements are subject to substantial uncertainty. Our working capital requirements may fluctuate in future periods depending upon numerous factors, including: results of our research and development activities; progress or lack of progress in our preclinical studies or clinical trials; unfavorable toxicology in our clinical programs, our drug substance requirements to support clinical programs; our ability to enter into collaborations that provide us with funding, up-front payments, milestone or other payments; our ability to obtain additional financial resources, change in the focus, direction, or costs of our research and development programs; headcount expense; the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing our patent claims; competitive and technological advances; the potential need to develop, acquire or license new technologies and products; establishment of marketing and sales capabilities; our business development activities; new regulatory requirements implemented by regulatory authorities; the timing and outcome of any regulatory review process; and commercialization activities, if any.

In February 2007, we completed the sale of equity securities for gross proceeds of $25.0 million. We issued 75.8 million units at a price of $0.33 per unit providing net proceeds of $23.2 million after deducting broker fees and other offering expenses. Each unit sold consisted of one common share and one-half of a common share purchase warrant. This financing included an aggregate of 75.8 million shares of common stock, 37.9 million investor warrants and 6.6 million broker warrants to acquire additional shares of our common stock. Each whole investor warrant entitles the holder to acquire one additional share of our common stock at an exercise price of $0.40 per share for a period of three years. Each whole broker warrant entitles the holder to acquire one unit (the same as the units sold to investors) at an exercise price of $0.33 per unit for a period of two years. During fiscal 2007, we issued 2.1 million shares of common stock pursuant to the exercise of warrants resulting in additional proceeds of approximately $0.7 million.

To finance our operations beyond September 2009, we will need to raise substantial additional funds through either the sale of additional equity, the issuance of debt, the establishment of collaborations that provide us with funding, the out-license or sale of certain aspects of our intellectual property portfolio, or from other sources. The recent turmoil in the worldwide financial markets has led to an overall tightening in the credit markets and a significant decline in the availability of capital, especially for small biotechnology companies which are generally viewed as higher risk investments. Given the current economic conditions, there is serious risk that we might not be able to raise the necessary capital or such funding may not be available on acceptable terms. We can therefore make no assurance that we will be able to raise the necessary capital to continue our operations.

Financial Instruments

We invest cash and cash equivalents in high credit quality investments held by financial institutions in accordance with our investment policy designed to protect the principal investment. At December 31, 2008, we had $4.2 million in money market investments, $0.8 million in a guaranteed investment certificate and $0.4 million in cash accounts. Money market investments typically have minimal risk, however in recent months the financial markets have been volatile resulting in concerns regarding money market investments. In recent months however, the financial markets have been volatile resulting in concerns regarding money market investments. As a result, on September 19, 2008, the U.S. Treasury announced a Temporary Guarantee Program which insures money market investments on a temporary basis. The program was in effect for an initial three month term and ensures that if a participating fund’s share value declines to below one dollar and the fund is liquidated, the U.S. Treasury would cover any shortfall between the liquidated share price and one dollar. On November 24, 2008, the U.S. Treasury announced the program was extended until April 30, 2009. The Secretary of the Treasurer has the option to extend the program until September 18, 2009. We have not experienced any loss or write down of our money market investments for the years ended December 31, 2008 and 2007.

Our investment policy is to manage investments to achieve, in the order of importance, the financial objectives of preservation of principal, liquidity and return on investment. Investments may be made in U.S. or Canadian obligations and bank securities, commercial paper of U.S. or Canadian industrial companies, utilities, financial institutions and consumer loan companies, and securities of foreign banks provided the obligations are guaranteed or carry ratings appropriate to the policy. Securities must have a minimum Dun & Bradstreet rating of A for bonds or R1 low for commercial paper. The policy also provides for investment limits on concentrations of securities by issuer and maximum-weighted average time to maturity of twelve months. This policy applies to all of our financial resources.

The policy risks are primarily the opportunity cost of the conservative nature of the allowable investments. As our main purpose is research and development, we have chosen to avoid investments of a trading or speculative nature.

We classify investments with original maturities at the date of purchase greater than three months which mature at or less than twelve months as current. We carry investments at their fair value with unrealized gains and losses included in other comprehensive income (loss); however we have not held any instruments that were classified as short term investments during the periods presented in this Annual Report.

Off-Balance Sheet Arrangements

Since our inception, we have not had any material off-balance sheet arrangements.

Contractual Obligations and Commitments

Since our inception, inflation has not had a material effect on our operations. We had no material commitments for capital expenses as of December 31, 2008.

The following table represents our contractual obligations and commitments at December 31, 2008 (in thousands of U.S. dollars):

	Less than 1 year	1-3 years	4-5 years	More than 5 years	Total
Englert Lease (1)	$ 104	$ 80	$—	$ —	$ 184
Maplewood Lease (2)	372	1,046	—	—	1,418
Drug purchase commitments (3)	254	280	24	—	558
McGill License (4)	805	935	—	—	1,740
OHSU License (5)	—	—	—	—	—
GSK (6)	—	—	—	—	—
Netherlands Cancer Institute - Antoni van Leeuwenhoek Hospital License (7)	223	—	—	—	223
Total	$ 1,758	$2,341	$ 24	$ —	$4,123

(1) In April 2004, we entered into a lease for facilities in Durham, North Carolina. Amounts shown assume the maximum amounts due under the lease. In July 2008, we entered into an agreement with another company to sublease this facility until September 2010; however, in the event of their default, we would become responsible for the obligation. We are contractually obligated under the lease until September 2010.

(2) In August 2005, we entered into a lease for new office and laboratory facilities in Durham, North Carolina. Amounts shown assume the maximum amounts due under the lease.

(3) Commitments to our third party manufacturing vendors that supply drug substance primarily for our clinical studies.

(4) Amounts shown in the table assume the maximum amounts that will become payable for research obligations and additional research obligations for mutually agreed upon projects. Payments are for mutually agreed upon research projects conducted at McGill and may be deferred in certain circumstances. We have been working with McGill to implement a new request for funding system in which any McGill researcher may submit a proposal for consideration. However, due to our limited financial resources and the continuing financial markets turmoil, it is unlikely that we will be able to support further research at McGill in the amounts and timeframes represented in table shown above. Royalty payments, which are contingent on sales, are not included.

(5) Under the license agreement with OHSU for STS, we are required to pay specified amounts in the event that we complete certain Adherex-initiated clinical trials. For example, upon the completion of a Phase III clinical trial, we may become responsible for a payment to OHSU of up to $0.5 million.

(6) Royalty and milestone payments that we may be required to pay, which are contingent on sales or progress of clinical trials, are not included. Under the terms of the agreement with GSK, if we file an NDA with the FDA, we will be required to pay a development milestone of $5.0 million to GSK. Depending upon whether the NDA is approved by the FDA and whether eniluracil becomes a commercial success, we may be required to pay up to an additional $70.0 million in development and sales milestones for the initial approved indication, plus double-digit royalties based on annual net sales. We may also be required to pay up to $15.0 million to GSK for each FDA-approved indication.

(7) In May 2008, we completed a license agreement with the Netherlands Cancer Institute—Antoni van Leeuwenhoek Hospital for an option to the exclusive use of data from a completed Phase III trial with STS to prevent hearing loss in adults with head and neck cancer. The payment amounts shown in the table above are contingent upon a quality assurance audit of the data from the study. Once the quality assurance audit is completed, we will assess the benefit of the data and determine if we want to exercise our option to obtain exclusive use of the data.

Research and Development

Our research and development efforts have been focused on the development of cancer therapeutics and our cadherin technology platform and currently include ADH-1, eniluracil, STS and various cadherin-based preclinical programs.

We have established relationships with contract research organizations, universities and other institutions, which we utilize to perform many of the day-to-day activities associated with our drug development. Where possible, we have sought to include leading scientific investigators and advisors to enhance our internal capabilities. Research and development issues are reviewed internally by our executive

management and supporting scientific staff. Major development issues are presented to the members of our Scientific and Clinical Advisory Board for discussion and review.

Research and development expenses totaled $10.4 million and $10.9 million for the fiscal years ended December 31, 2008 and 2007, respectively.

Our product candidates are in various stages of development and still require significant, time-consuming and costly research and development, testing and regulatory clearances. In developing our product candidates, we are subject to risks of failure that are inherent in the development of products based on innovative technologies. For example, it is possible that any or all of these products will be ineffective or toxic, or will otherwise fail to receive the necessary regulatory clearances. There is a risk that our product candidates will be uneconomical to manufacture or market or will not achieve market acceptance. There is also a risk that third parties may hold proprietary rights that preclude us from marketing our product candidates or that others will market a superior or equivalent product. As a result of these factors, we are unable to accurately estimate the nature, timing and future costs necessary to complete the development of these product candidates. In addition, we are unable to reasonably estimate the period when material net cash inflows could commence from the sale, licensing or commercialization of such product candidates, if ever.

The following table provides our research and development expenses for each program for the years ending December 31, 2008, 2007 and 2006 and cumulatively from our inception on September 3, 1996 to December 31, 2008:

In thousands of U.S. dollars	Fiscal Year Ended December 31, 2008	Fiscal Year Ended December 31, 2007	Fiscal Year Ended December 31, 2006	Cumulative From September 3, 1996 to December 31, 2008
ADH-1	$ 5,531	$ 5,087	$ 9,792	$ 39,376
Eniluracil	3,703	5,004	2,910	14,523
Other anti-cancer	—	158	249	2,347
Total anti-cancer	9,234	10,249	12,951	56,246
STS	911	560	292	3,579
Eniluracil topical	221	—	—	221
Other supportive care	—	—	—	40
Total supportive care	1,132	560	292	3,840
Other discovery projects	—	103	760	2,553
Transdermal drug delivery	—	—	—	138
Total research and development expense	$ 10,366	$ 10,912	$ 14,003	$ 62,777

Critical Accounting Policies and Estimates

Effective January 1, 2007, we changed our primary basis of accounting to U.S. GAAP. We made the change to U.S. GAAP to comply with U.S. securities law as a result of our loss of foreign private issuer status with the Securities and Exchange Commission.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as at the date of the financial statements and the reported amounts of revenue and expense during the reporting period. These estimates are based on assumptions and judgments that may be affected by commercial, economic and other factors. Actual results could differ from these estimates.

An accounting policy is considered to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, and if different estimates reasonably could have been used, or changes in the accounting estimates that are reasonably likely to occur periodically, could materially impact the financial statements. The following description of critical accounting policies, judgments and estimates should be read in conjunction with our December 31, 2008 consolidated financial statements.

Stock-based Compensation

Effective January 1, 2006, we adopted the fair value recognition of Statement of Financial Accounting Standards, or SFAS, No. 123 (revised 2004), “Share-Based Payment”, or SFAS 123(R), using the modified prospective transition method and therefore have not restated results for prior periods. We use the Black-Scholes option-pricing model and recognize compensation expense on a straight-line basis over the vesting periods of our option awards. The estimation of stock awards that will ultimately vest requires judgment, and to the extent actual results or updated estimates differ from our current estimates, such amounts will be recorded as a cumulative adjustment in the period estimates are revised. Significant management judgment is required in determining estimates of future stock price volatility, forfeitures and expected life used in the valuation of the options. We consider many factors when estimating expected forfeitures, including

types of awards and historical experience. We estimate volatility based on peer group companies with similar operations and our own historical volatility. Actual results, and future changes in estimates, may differ substantially from our current estimates. For stock options granted to non-employees, we have recognized compensation expense in accordance with the requirements of SFAS 123(R). SFAS 123(R) requires that companies recognize compensation expense based on the estimated fair value of options granted to non-employees over their vesting period, which is generally the period during which services are rendered by such non-employees.

Common stock and warrants

Common stock is recorded as the net proceeds received on issuance after deducting all share issuance costs and the value of investor warrants. Warrants are recorded at fair value and are deducted from the proceeds of common stock and recorded on the consolidated statements of stockholders' equity as additional paid-in capital.

During fiscal 2008, we had warrants to purchase common stock that were denominated in both U.S. and Canadian dollars, which results in our having warrants outstanding that are denominated outside its U.S. dollar functional currency.

In November 2007, the FASB, Emerging Issues Task Force, or EITF, issued EITF No. 07-5, Issue Summary No.1 "Determining Whether an Instrument (or an Embedded Feature) is Indexed to an Entity's Own Stock," or EITF 07-5. In June 2008, one of the conclusions reached under EITF 07-05 was a consensus-for-exposure that an equity-linked financial instrument would not be considered indexed to the entity's own stock if the strike price is denominated in a currency other than the issuer's functional currency. The issues brought to the EITF for discussion related to how an entity should determine whether certain instruments or embedded features are indexed to its own stock. This discussion included equity-linked financial instruments where the exercise price is denominated in a currency other than the issuer's functional currency; such as our outstanding warrants to purchase common stock that are denominated in Canadian dollars. This conclusion reached under EITF 07-05 clarified the accounting treatment for these and certain other financial instruments as it related to FASB Statement No. 133, "Accounting for Derivative Instruments and Hedging Activities," or SFAS 133. SFAS 133 specifies that a contract that would otherwise meet the definition of a derivative under SFAS 133, issued or held by the reporting entity that is both (a) indexed to its own stock and (b) classified in stockholders' equity in its statement of financial position should not be considered a derivative financial instrument for purposes of applying SFAS 133. As a result, any outstanding warrants denominated in Canadian dollars are not considered to be indexed to our stock and would therefore be treated as derivative financial instruments and recorded at their fair value as a liability. EITF 07-05 will be effective for financial statements for fiscal years beginning after December 15, 2008 and earlier adoption is not permitted. Since the warrants to purchase common stock that are denominated in Canadian dollars expired on December 19, 2008, EITF 07-5 is not expected to have an effect on our financial statements unless we issue further equity instruments denominated outside our functional currency.

Outstanding Share Information

Our outstanding share data at December 31, 2008 follows (in thousands):

	December 31, 2008
Common shares	128,227
Warrants	45,938
Stock options	18,406
Total	192,571

Canadian Accounting Principles

We present our consolidated financial results in accordance with U.S. GAAP. Significant differences exist between U.S. and Canadian GAAP and are presented in Note 16 in the consolidated financial statements.

New Accounting Pronouncements Adopted

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements," or SFAS 157. SFAS 157 establishes a framework for measuring fair value, and expands disclosures about fair value measurements. The statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within that fiscal year. On February 12, 2008, the FASB approved the Financial Staff Position, or FSP, No. SFAS 157-2, "Effective Date of FASB Statement No. 157," or FSP FAS 157-2, which delays the effective date of SFAS 157 to fiscal years beginning after November 15, 2008, and interim periods within those fiscal years for non-financial assets and non-financial liabilities, except for those items that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). As of January 1, 2008, we adopted SFAS 157 for the fair value measurement of recurring items which did not have a material impact on our financial statements.

In June 2007, the EITF, issued EITF No. 07-3, "Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities," or EITF 07-3, which provides guidance for up-front payments related to goods and services of research and development costs. As of January 1, 2008, we adopted EITF 07-3 which did not have a material impact on the financial statements.

Recent Accounting Pronouncements

In December 2007, the EITF issued EITF No. 07-01, "Accounting for Collaborative Arrangement Related to the Development and Commercialization of Intellectual Property, or EITF 07-01. EITF 07-01 defines the accounting for collaborations between participants. EITF 07-01 requires certain transactions between collaborators to be recorded in the statement of operations on either a gross or net basis within expense when certain characteristics exist in the collaborative agreement. EITF 07-01 will be effective for collaborations entered into after January 1, 2008, and did not have a material impact on our financial statements.

In December 2007, the FASB issued SFAS No. 141(R), "Business Combinations," or SFAS 141(R), requires an acquiring company to measure all assets acquired and liabilities assumed, including contingent considerations and all contractual contingencies, at the fair value at the acquisition date. SFAS 141(R) establishes principles and requirements for how the acquirer: i) recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree; ii) recognizes and measures the goodwill acquired in the business combination or a gain from a bargain purchase; and iii) determines what information to disclose to enable users of the financial statements to evaluate the nature and financial effects of the business combination. We do not expect the adoption of SFAS 141 (R) to have an effect on our financial statements unless we enter into a business combination after January 1, 2009.

In May 2008, the FASB issued SFAS No. 162, "The Hierarchy of Generally Accepted Accounting," or SFAS No. 162. SFAS No. 162 indentifies the sources of accounting principles and the framework for selecting principles to be used in the preparation of financial statements of nongovernmental entities that are presented in conformity with generally accepted accounting principles in the U.S. SFAS No. 162 is effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, "The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles." We do not expect the adoption of SFAS 162 to have a material impact on our financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Money Market Investments

We are subject to increased risk associated with our cash, cash equivalents and investment portfolio due to the recent bank and financial institution failures in the U.S. We maintain an investment portfolio consisting of U.S. or Canadian obligations and bank securities and money market investments in compliance with our investment policy. We do not hold any mortgaged-backed investments in our investment portfolio. Securities must have a minimum Dun & Bradstreet rating of A for bonds or R1 low for commercial paper. The policy also provides for investment limits on concentrations of securities by issuer and maximum-weighted average time to maturity of twelve months. This policy applies to all of our financial resources.

At December 31, 2008, we had $4.2 million in money market investments which typically have minimal risk. In recent months however, the financial markets have been volatile resulting in concerns regarding money market investments. As a result, on September 19, 2008 the U.S. Treasury announced a Temporary Guarantee Program which insures money market investments on a temporary basis. The program was in effect for an initial three month term and ensures that if a participating fund's share value declines to below one dollar and the fund is liquidated, the U.S. Treasury would cover any shortfall between the liquidated share price and one dollar. On November 24, 2008, the U.S. Treasury announced the program was extended until April 30, 2009. The Secretary of the Treasury has the option to extend the program until September 18, 2009. We have not experienced any loss or write down of our money market investments for the years ended December 31, 2008 and 2007.

Our investment policy is to manage investments to achieve, in the order of importance, the financial objectives of preservation of principal, liquidity and return on investment. Investments may be made in U.S. or Canadian obligations and bank securities, commercial paper of U.S. or Canadian industrial companies, utilities, financial institutions and consumer loan companies, and securities of foreign banks provided the obligations are guaranteed or carry ratings appropriate to the policy. Securities must have a minimum Dun & Bradstreet rating of A for bonds or R1 low for commercial paper. The policy also provides for investment limits on concentrations of securities by issuer and maximum-weighted average time to maturity of twelve months. This policy applies to all of our financial resources.

Foreign Currency Exposure

We are subject to foreign currency risks as we conduct certain clinical development activities in Canada, the United Kingdom, Europe and the Pacific Rim. To date, we have not employed the use of derivative instruments; however, we do hold Canadian dollars which we use to pay certain clinical development activities conducted in Canada and research, license obligations payable to McGill and other corporate obligations. At December 31, 2008 we held approximately $1.1 million in Canadian dollars and had current liabilities totaling $0.2 million in Canadian dollars. We monitor our commitments in Euros, British pounds, and Pacific Rim currencies and may utilize derivatives in the future to minimize our foreign currency risks. At December 31, 2008, we had current liabilities totaling $0.1 million in Euros.

During the year ended December 31, 2008, we did experience a foreign currency translation loss of $0.2 million on our Canadian held currency. We hold this Canadian currency to pay our Canadian dominated liabilities as they come due. Given our limited financial resources we may need to convert this Canadian currency into U.S. dollars. As a result, we have determined the loss to be other than temporary and have recognized this loss in our statement of operations versus in other comprehensive income in the statement of stockholders' equity.

Current Equity Markets

The volatility and disruption of the capital and credit markets and adverse changes in the global economy may continue to adversely impact our business. Due to the significant uncertainty in the capital and credit markets, our access to capital may not be available on favorable terms, or at all. Furthermore, should the adverse global economic conditions persist or worsen; we could experience further decrease in our shareholders' equity, and have difficulty sustaining our operations. Our results of operations, financial condition, cash flows and capital position could be materially adversely affected by continued disruptions in the capital and credit markets.

Item 8. Financial Statements and Supplementary Data

The financial statements required to be filed pursuant to this Item 8 are appended to this Annual Report on Form 10-K. A list of the financial statements file herewith is found at "Index to Financial Statements" on Page F-1.

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

None.

Item 9A. Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)) are designed only to provide reasonable assurance that information to be disclosed in our Exchange Act Reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. As of the end of the period covered by this report, the Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures pursuant to Exchange Act Rule 13a-15(e). Based upon this evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures are effective to provide the reasonable assurance discussed above.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Our internal control over financial reporting is designed to provide reasonable assurance to our management and board of directors regarding the preparation and fair presentation of published financial statements. A control system, no matter how well designed and operated, can only provide reasonable, not absolute, assurance that the objectives of the control system are met and must reflect the fact that there are resource constraints that require management to consider the benefits of internal controls relative to their costs. Because of these inherent limitations, management does not expect that our internal controls over financial reporting can prevent all error and all fraud. Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework found in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework found in *Internal Control – Integrated Framework*, our management concluded that our internal control over financial reporting was effective as of December 31, 2008.

Changes in Internal Control over Financial Reporting

There was no change in our internal controls over financial reporting during the fourth quarter of the period covered by this Annual Report that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information required by this Item concerning our directors is incorporated by reference from the section captioned “Election of Directors” contained in our proxy statement related to the 2009 Annual General Meeting of Stockholders scheduled to be held on May 19, 2009, which we intend to file with the SEC within 120 days of the end of our fiscal year pursuant to General Instruction G(3) of Form 10-K.

The Board of Directors has determined that the members of the Audit Committee are independent as defined in Rule 4200(a)(15) of the National Association of Securities Dealers’ listing standards. The Board of Directors has also determined that Dr. Arthur T. Porter is an “audit committee financial expert” as defined in Item 401(h) of Regulation S-K.

Our Board of Directors adopted a code of business conduct and ethics that applies to all of our directors and employees, including our Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer and Controller, or persons performing similar functions. We will provide copies of our code of business conduct and ethics without charge upon request. To obtain a copy, please send your written request to Adherex Technologies Inc., 4620 Creekstone Drive, Suite 200, Durham, NC 27703, Attention: Corporate Secretary. In addition, you can find the code on our website under the Investors Relations section at www.adherex.com.

The information required by this Item concerning executive officers of the Registrant is set forth at the end of Part I of this report.

The information required by this Item concerning compliance with Section 16(a) of the United States Securities Exchange Act of 1934, as amended, is incorporated by reference from the section of the proxy statement captioned “Report on Corporate Governance—Section 16(a) Beneficial Ownership Reporting Compliance.”

Our Audit Committee operates under a written charter adopted by the Board of Directors and is incorporated by reference from Exhibit B contained in the 2009 proxy statement.

Item 11. Executive Compensation

The information required by this Item is incorporated by reference from the sections captioned “Executive Compensation” and “Compensation of Directors” contained in the 2009 proxy statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholders Matters

Equity Compensation Plan Information

The following table provides certain information with respect to securities authorized for issuance under equity incentive plans as of December 31, 2008:

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))
Equity compensation plans	15,632,892	$ 0.54	2,257,302
approved by security holders	2,773,206	CAD$ 2.19	
Equity compensation plans not approved by security holders	—	—	—
Total	18,406,098	—	2,257,302

* The Company’s current stock option plans allows for the issuance of stock options denominated in both United States, or U.S., dollars and Canadian, or CAD, dollars. This table presents the number and weighted-average exercise price of outstanding options by the currency associated with the original grants. The numbers presented include 700,000 options with an exercise price of CAD $2.25 that were specifically approved by the Company’s shareholders on December 16, 2003 and granted to the Company’s Chief Executive Officer outside of the Company’s stock option plan. At December 31, 2008 we had 15,632,892 stock options denominated in U.S. dollars with a weighted-average exercise price of $0.54 and 2,773,206 stock options denominated in CAD dollars with a weighted-average exercise price of CAD$2.19. At December 31, 2008, we had 2,257,302 stock options available for future issuance.

The other information required by this Item is incorporated by reference from the section captioned “Voting Securities and Principal Holders of Voting Securities” contained the 2009 proxy statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated by reference from the section captioned "Other Information Regarding Management – Interest of Informed Persons in Material Transactions" and "Report on Corporate Governance – Board of Directors" contained in the 2009 proxy statement.

Item 14. Principal Accounting Fees and Services

The information required by this Item is incorporated by reference from the section captioned "Report on Corporate Governance – Other Board Committees – Audit Committee Report" contained in the 2009 proxy statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules

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

1. Financial Statements – See Index to Financial Statements on page F-1.

2. All schedules are omitted as the information required is inapplicable or the information is presented in the financial statements.

3. Exhibits:

Exhibit No.	Description	Location
1.1	Underwriting and Agency Agreement dated January 19, 2007 between Adherex Technologies Inc. and Versant Partners Inc.	Exhibit 1.1 to Form 8-K of Adherex, filed February 22, 2007
3.1	Articles of Amalgamation dated June 29, 2004	Exhibit 1.7 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004
3.2	By-laws of the Company, as amended on November 2, 2004	Exhibit 1.9 to the Form 20-F/A Registration Statement (No. 001-32295) of Adherex, filed November 5, 2004
4.1	Registration Rights Agreement, dated as of December 19, 2003, by and between Adherex Technologies Inc. and HBM BioVentures (Cayman) Ltd.	Exhibit 4.9 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004
4.2	Warrant Indenture dated February 21, 2007 between Adherex Technologies Inc. and Computershare Trust Company of Canada	Exhibit 4.45 to Form 8-K of Adherex, filed February 22, 2007
4.3	Form of Common Stock Warrant dated February 21, 2007	Exhibit 4.43 to Form 8-K of Adherex, filed February 22, 2007
4.4	Form of Underwriter's Warrant dated February 21, 2007	Exhibit 4.44 to Form 8-K of Adherex, filed February 22, 2007
10.1	General Collaboration Agreement, dated as of February 26, 2001, by and between Adherex Technologies Inc. and McGill University	Exhibit 4.2 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004
10.2	Exclusive License Agreement, dated as of September 26, 2002, by and between Oregon Health & Science University and Oxiquant, Inc.	Exhibit 4.5 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004
10.3	Lease Agreement, dated as of March 8, 2004, by and between Realmark-Commercial, LLC and Adherex, Inc.	Exhibit 4.8 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004

Exhibit No.	Description	Location
*10.4	Executive Employment Agreement, dated as of December 12, 2001, by and between Adherex Technologies Inc. and Robin J. Norris	Exhibit 4.10 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004
*10.5	Executive Employment Agreement, dated as of February 19, 2003, by and between Adherex Technologies Inc. and William P. Peters	Exhibit 4.12 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004
*10.6	Executive Employment Agreement, dated April 21, 2004, by and between Adherex, Inc. and James A. Klein, Jr.	Exhibit 4.13 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004
10.7	Second Amendment to Lease Agreement dated September 14, 2004 between Realmark Commercial LLC and Adherex, Inc.	Exhibit 4.29 to the Form 20-F/A Registration Statement (No. 001-32295) of Adherex, filed November 5, 2004
10.8	Development and License Agreement dated July 14, 2005 between Adherex Technologies Inc. and Glaxo Group Limited**	Exhibit 4.30 to Form 6-K of Adherex, filed July 22, 2005
10.9	Sublease Agreement, dated as of August 31, 2005, by and between Biostratum, Inc. and Adherex, Inc. (Englert)	Exhibit 4.32 to the Form 20-F Annual Report (No. 001-32295) of Adherex filed for fiscal year ended December 31, 2005
10.10	Sublease Agreement, dated as of August 31, 2005, by and between Biostratum, Inc. and Adherex, Inc. (Creekstone)	Exhibit 4.33 to the Form 20-F Annual Report (No. 001-32295) of Adherex filed for fiscal year ended December 31, 2005
10.11	Amendment No. 1 to Development and License Agreement dated December 20, 2005 between Glaxo Group Limited and Adherex Technologies Inc.**	Exhibit 4.36 to the Form 20-F Annual Report (No. 001-32295) of Adherex filed for fiscal year ended December 31, 2005
10.12	Partial Assignment of Lease and Lease Amendment Number Two dated August 31, 2005	Exhibit 4.38 to the Form 20-F Annual Report (No. 001-32295) of Adherex filed for fiscal year ended December 31, 2005
10.13	Highwoods Realty Limited Partnership Office Master Lease (Creekstone)	Exhibit 4.39 to the Form 20-F Annual Report (No. 001-32295) of Adherex filed for fiscal year ended December 31, 2005
10.14	Consent to Sublease dated August 31, 2005 among Highwoods Realty Limited Partnership, BioStratum, Inc. and Adherex, Inc.	Exhibit 4.40 to the Form 20-F Annual Report (No. 001-32295) of Adherex filed for fiscal year ended December 31, 2005
10.15	Amendment No. 2 to Development and License Agreement dated June 23, 2006 between Glaxo Group Limited and Adherex Technologies Inc.**	Exhibit 4.41 to Form 6-K of Adherex, filed August 9, 2006
10.16	Sub-SubLease Agreement dated December 22, 2006 between Biostratum, Inc and NephroGenex, Inc	Exhibit 4.46 to the Form 20-F Annual Report (No. 001-32295) of Adherex filed for fiscal year ended December 31, 2006
*10.17	Executive Employment Agreement, dated as of February 28, 2007, by and between Adherex, Inc. and D. Scott Murray	Exhibit 4.47 to the Form 20-F Annual Report (No. 001-32295) of Adherex filed for fiscal year ended December 31, 2006
10.18	Amendment No. 3 to Development and License Agreement dated January 17, 2007 between Adherex Technologies Inc. and Glaxo Group Limited	Exhibit 4.42 to Form 6-K of Adherex, filed January 19, 2007
10.19	Amendment No. 4 to Development and License Agreement dated May 23, 2007 between Adherex Technologies Inc. and Glaxo Group Limited	Exhibit 10.1 to Form 8-K of Adherex, filed June 19, 2007

Exhibit No.	Description	Location
10.20	Amended and Restated Stock Option Plan	Exhibit 10.19 to Form 10-K of Adherex, filed March 28, 2008
10.21	License Agreement entered into on May 13, 2008 between Adherex Technologies Inc. and Stichting Antoni van Leeuwenhoek Ziekenhuis	Exhibit 10.21 to Form 10-Q of Adherex, filed August 13, 2008
10.22	Success-Based Incentive Program	Exhibit 10.22 to Form 8-K of Adherex, filed December 11, 2008
21	Subsidiaries	Exhibit 8 to the Form 20-F Registration Statement (No. 001-32295) of Adherex, filed September 17, 2004
23	Consent of PricewaterhouseCoopers LLP	Filed herewith
31.1	Certification of Chief Executive Officer of the Company in accordance with Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
31.2	Certification of Chief Financial Officer of the Company in accordance with Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
32.1	Certification of Chief Executive Officer and Chief Financial Officer of the Company in accordance with Section 906 of the Sarbanes-Oxley Act of 2002	Filed herewith

* Indicates a management contract or compensatory plan.

** The Company has received confidential treatment with respect to certain portions of this exhibit. Those portions have been omitted from this exhibit and are filed separately with the U.S. Securities and Exchange Commission.

Table of Contents

SIGNATURES

Pursuant to the requirements of Section 13 of 15(d) the Securities Exchange Act of 1934, the registrant has duly causes this report to be signed on its behalf by the undersigned, thereunto authorized.

Adherex Technologies Inc.

By: /s/ William P. Peters
William P. Peters
Chairman, Chief Executive Officer and Director
Date: March 30, 2009

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

Signatures	Title	Date
/s/ WILLIAM P. PETERS **William P. Peters**	Chairman, Chief Executive Officer (principal executive officer) and Director	March 30, 2009
/s/ JAMES A. KLEIN, JR. **James A. Klein, Jr.**	Chief Financial Officer (principal financial officer and principal accounting officer)	March 30, 2009
/s/ ROBIN J. NORRIS **Robin J. Norris**	President and Chief Operating Officer and Director	March 30, 2009
/s/ FRED H. MERMELSTEIN **Fred H. Mermelstein**	Director	March 30, 2009
/s/ WILLIAM G. BREEN **William G. Breen**	Director	March 30, 2009
/s/ CLAUDIO F. BUSSANDRI **Claudio F. Bussandri**	Director	March 30, 2009
/s/ ROBERT W. BUTTS **Robert W. Butts**	Director	March 30, 2009
/s/ DONALD W. KUFE **Donald W. Kufe**	Director	March 30, 2009
/s/ MICHAEL G. MARTIN **Michael G. Martin**	Director	March 30, 2009
/s/ PETER MORAND **Peter Morand**	Director	March 30, 2009
/s/ ARTHUR T. PORTER **Arthur T. Porter**	Director	March 30, 2009

ADHEREX TECHNOLOGIES INC.
INDEX TO FINANCIAL STATEMENTS

Independent Auditors' Report

To the Shareholders of Adherex Technologies Inc.

We have audited the accompanying consolidated balance sheets of Adherex Technologies Inc. (a development stage company) as of December 31, 2008 and December 31, 2007, and the related consolidated statements of operations, cash flows and stockholders' equity for the years ended December 31, 2008, December 31, 2007 and December 31, 2006, and, cumulatively, for the period from September 3, 1996 (date of inception) to December 31, 2008. 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 of the Company's financial statements as of December 31, 2008 and December 31, 2007 and for each of the three years in the period ended December 31, 2008, and cumulatively for the period from September 3, 1996 to December 31, 2008 in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform an audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements 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 and evaluating the overall financial statement presentation.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2008 and December 31, 2007 and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2008, and cumulatively, for the period from September 3, 1996 to December 31, 2008 in accordance with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has suffered recurring losses from operations and has an accumulated deficit that raise substantial doubt about its ability to continue as a going concern. Managements' plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ PricewaterhouseCoopers LLP
Chartered Accountants, Licensed Public Accountants
Ottawa, Canada
March 30, 2009

Adherex Technologies Inc.
(a development stage company)
Consolidated Balance Sheets
(U.S. Dollars and shares in thousands, except per share amounts)

	December 31, 2008	December 31, 2007
Assets		
Current assets		
Cash and cash equivalents	$ 5,349	$ 16,162
Cash pledged as collateral	52	55
Accounts receivable	6	21
Investment tax credits recoverable	133	164
Prepaid expense	71	130
Other current assets	28	29
Total current assets	5,639	16,561
Capital assets	136	285
Leasehold inducements	285	363
Total assets	**$ 6,060**	**$ 17,209**
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	$ 547	$ 532
Accrued liabilities	1,883	1,830
Other current liabilities	—	40
Total current liabilities	2,430	2,402
Other long-term liabilities	7	—
Deferred lease inducement	570	659
Total liabilities	**3,007**	**3,061**
Commitments and contingencies		
Stockholders' equity		
Common stock, no par value; unlimited shares authorized; 128,227 shares issued and outstanding	64,929	64,929
Additional paid-in capital	34,860	32,355
Deficit accumulated during development stage	(97,979)	(84,379)
Accumulated other comprehensive income	1,243	1,243
Total stockholders' equity	**3,053**	**14,148**
Total liabilities and stockholders' equity	**$ 6,060**	**$ 17,209**

Signed on behalf of the Board of Directors

/s/ Arthur T. Porter
Director

/s/ William G. Breen
Director

(The accompanying notes are an integral part of these consolidated financial statements)

Adherex Technologies Inc.
(a development stage company)
Consolidated Statements of Operations
(U.S. dollars and shares in thousands, except per share information)

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006	Cumulative From September 3, 1996 to December 31, 2008
Revenue	$ -	$ -	$ -	$ -
Operating expenses:				
Research and development	10,366	10,912	14,003	62,777
Acquired in-process research and development	—	—	—	13,094
General and administration	3,520	3,278	2,883	23,496
Loss from operations	(13,886)	(14,190)	(16,886)	(99,367)
Other income (expense):				
Settlement of Cadherin Biomedical Inc. litigation	—	—	—	(1,283)
Interest expense	—	—	(3)	(19)
Other income	—	—	—	98
Interest income	286	833	449	2,750
Total other income	286	833	446	1,546
Net loss and total comprehensive loss	$ (13,600)	$ (13,357)	$ (16,440)	$ (97,821)
Net loss per share of common stock, basic and diluted	**$ ($0.11)**	**$ ($0.11)**	**$ ($0.34)**	
Weighted-average number of shares of common stock outstanding, basic and diluted	**128,227**	**116,571**	**47,663**	

(The accompanying notes are an integral part of these consolidated financial statements)

Adherex Technologies Inc.
(a development stage company)
Consolidated Statements of Cash Flows
(U.S. Dollars and shares in thousands, except per share amounts)

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006	Cumulative From September 3, 1996 to December 31, 2008
Cash flows from (used in):				
Operating activities:				
Net loss	$ (13,600)	$ (13,357)	$ (16,440)	$ (97,821)
Adjustments for non-cash items:				
Depreciation and amortization	164	81	86	1,404
Non-cash Cadherin Biomedical Inc. litigation expense	—	—	—	1,187
Unrealized foreign exchange loss	—	—	—	9
Amortization of leasehold inducements	(11)	111	165	126
Non-cash severance expense	—	—	—	168
Stock options issued to consultants	88	59	101	712
Stock options issued to employees	2,417	2,263	490	7,171
Acquired in-process research and development	—	—	—	13,094
Changes in operating assets and liabilities	134	(2,460)	2,123	1,749
Net cash used in operating activities	(10,808)	(13,303)	(13,475)	(72,201)
Investing activities:				
Purchase of capital assets	(15)	(73)	(5)	(1,440)
Disposal of capital assets	—	—	—	115
Release of restricted cash	—	—	—	190
Restricted cash	—	(2)	—	(209)
Purchase of short-term investments	—	—	—	(22,148)
Redemption of short-term investments	—	—	1,175	22,791
Investment in Cadherin Biomedical Inc.	—	—	—	(166)
Acquired intellectual property rights	—	—	—	(640)
Net cash provided (used) in investing activities	(15)	(75)	1,170	(1,507)
Financing activities:				
Conversion of long-term debt to equity	—	—	—	68
Long-term debt repayments	—	—	—	(65)
Capital lease repayments	—	—	—	(8)
Issuance of common stock	—	23,915	6,096	76,687
Registration expense	—	—	—	(465)
Financing expenses	—	—	(57)	(544)
Proceeds from convertible note	—	—	—	3,017
Other liability repayments	—	(40)	(13)	(87)
Security deposits received	7	—	28	35
Proceeds from exercise of stock options	—	—	—	51
Net cash provided in financing activities	7	23,875	6,054	78,689
Effect of exchange rate changes on cash and cash equivalents	3	—	—	368
Net change in cash and cash equivalents	(10,813)	10,497	(6,251)	5,349
Cash and cash equivalents - Beginning of period	16,162	5,665	11,916	—
Cash and cash equivalents - End of period	$ 5,349	$ 16,162	$ 5,665	5,349

(The accompanying notes are an integral part of these consolidated financial statements)

Adherex Technologies Inc.
(a development stage company)
Consolidated Statements of Stockholders' Equity
(U.S. dollars and shares in thousands, except per share information)

	Common Stock		Non-redeemable Preferred Stock of Subsidiary	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Deficit Accumulated During Development Stage	Total Shareholders' Equity
	Number	Amount					
Balance at June 30, 1996	—	$ —	$ —	$ —	$ —	$ —	$ —
Issuance of common stock	1,600	—	—	—	—	—	—
Net loss	—	—	—	—	—	(37)	(37)
Balance at June 30, 1997	1,600	—	—	—	—	(37)	(37)
Net loss	—	—	—	—	—	(398)	(398)
Balance at June 30, 1998	1,600	—	—	—	—	(435)	(435)
Exchange of Adherex Inc. shares for Adherex Technologies Inc. shares	(1,600)	—	—	—	—	—	—
Issuance of common stock	4,311	1,615	—	—	—	—	1,615
Cumulative translation adjustment	—	—	—	—	20	—	20
Net loss	—	—	—	—	—	(958)	(958)
Balance at June 30, 1999	4,311	1,615	—	—	20	(1,393)	242
Issuance of common stock	283	793	—	—	—	—	793
Issuance of equity rights	—	—	—	171	—	—	171
Issuance of special warrants	—	—	—	255	—	—	255
Settlement of advances:							
Issuance of common stock	280	175	—	—	—	—	175
Cancellation of common stock	(120)	—	—	—	—	—	—
Cumulative translation adjustment	—	—	—	—	16	—	16
Net loss	—	—	—	—	—	(1,605)	(1,605)
Balance at June 30, 2000	4,754	2,583	—	426	36	(2,998)	47
Issuance of common stock:							
Initial Public Offering ("IPO")	1,333	5,727	—	—	—	(38)	5,689
Other	88	341	—	—	—	—	341
Issuance of special warrants	—	—	—	1,722	—	—	1,722
Conversion of special warrants	547	1,977	—	(1,977)	—	—	—
Issuance of Series A special warrants	—	—	—	4,335	—	—	4,335
Conversion of Series A special warrants	1,248	4,335	—	(4,335)	—	—	—
Conversion of equity rights	62	171	—	(171)	—	—	—
Cumulative translation adjustment	—	—	—	—	182	—	182
Net loss	—	—	—	—	—	(2,524)	(2,524)
Balance at June 30, 2001	8,032	15,134	—	—	218	(5,560)	9,792
Cumulative translation adjustment	—	—	—	—	11	—	11
Net loss	—	—	—	—		(3,732)	(3,732)
Balance at June 30, 2002	8,032	15,134	—	—	229	(9,292)	6,071

(The accompanying notes are an integral part of these consolidated financial statements)
(continued on next page)

Adherex Technologies Inc.
(a development stage company)
Consolidated Statements of Stockholders' Equity (continued)
(U.S. dollars and shares in thousands, except per share information)

	Common Stock		Non-redeemable Preferred Stock of Subsidiary	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Deficit Accumulated During Development Stage	Total Shareholders' Equity
	Number	Amount					
Balance at June 30, 2002	8,032	15,134	—	—	229	(9,292)	6,071
Common stock issued for Oxiquant acquisition	8,032	11,077	—	543	—	—	11,620
Exercise of stock options	5	4	—	—	—	—	4
Distribution to shareholders	—	—	—	—	—	(158)	(158)
Stated capital reduction	—	(9,489)	—	9,489	—	—	—
Stock options issued to consultants	—	—	—	4	—	—	4
Equity component of June convertible notes	—	—	—	1,058	—	—	1,058
Financing warrants	—	—	—	53	—	—	53
Cumulative translation adjustment	—	—	—	—	(159)	—	(159)
Net loss	—	—	—	—	—	(17,795)	(17,795)
Balance at June 30, 2003	16,069	16,726	—	11,147	70	(27,245)	698
Stock options issued to consultants	—	—	—	148	—	—	148
Repricing of warrants related to financing	—	—	—	18	—	—	18
Equity component of December convertible notes	—	—	—	1,983	—	—	1,983
Financing warrants	—	—	—	54	—	—	54
Conversion of June convertible notes	1,728	1,216	—	(93)	—	—	1,123
Conversion of December convertible notes	1,085	569	—	(398)	—	—	171
Non-redeemable preferred stock	—	—	1,045	—	—	—	1,045
December private placement	11,522	8,053	—	5,777	—	—	13,830
May private placement	4,669	6,356	—	2,118	—	—	8,474
Exercise of stock options	18	23	—	—	—	—	23
Amalgamation of 2037357 Ontario Inc.	800	660	(1,045)	363	—	—	(22)
Cumulative translation adjustment	—	—	—	—	(219)	—	(219)
Net loss	—	—	—	—	—	(6,872)	(6,872)
Balance at June 30, 2004	35,891	33,603	—	21,117	(149)	(34,117)	20,454
Stock options issued to consultants	—	—	—	39	—	—	39
Stock options issued to employees	—	—	—	604	—	—	604
Cost related to SEC registration	—	(493)	—	—	—	—	(493)
Acquisition of Cadherin Biomedical Inc.	644	1,252	—	—	—	—	1,252
Cumulative translation adjustment	—	—	—	—	1,392	—	1,392
Net loss – six months ended December 31, 2004	—	—	—	—	—	(6,594)	(6,594)
Balance at December 31, 2004	36,535	34,362	—	21,760	1,243	(40,711)	16,654

(The accompanying notes are an integral part of these consolidated financial statements)
(continued on next page)

Adherex Technologies Inc.
(a development stage company)
Consolidated Statements of Stockholders' Equity (continued)
(U.S. dollars and shares in thousands, except per share information)

	Common Stock		Non-redeemable Preferred Stock of Subsidiary	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Deficit Accumulated During Development Stage	Total Shareholders' Equity
	Number	Amount					
Balance at December 31, 2004	36,535	34,362	—	21,760	1,243	(40,711)	16,654
Financing costs	—	(141)	—	—	—	—	(141)
Exercise of stock options	15	25	—	—	—	—	25
Stock options issued to consultants	—	—	—	276	—	—	276
July private placement	6,079	7,060	—	1,074	—	—	8,134
Net loss	—	—	—	—	—	(13,871)	(13,871)
Balance at December 31, 2005	42,629	41,306	—	23,110	1,243	(54,582)	11,077
Stock options issued to consultants	—	—	—	100	—	—	100
Stock options issued to employees	—	—	—	491	—	—	491
May private placement	7,753	5,218	—	822	—	—	6,040
Net loss	—	—	—	—	—	(16,440)	(16,440)
Balance at December 31, 2006	50,382	46,524	—	24,523	1,243	(71,022)	1,268
Stock options issued to consultants	—	—	—	59	—	—	59
Stock options issued to employees	—	—	—	2,263	—	—	2,263
February financing	75,759	17,842	—	5,379	—	—	23,221
Exercise of warrants	2,086	563	—	131	—	—	694
Net loss	—	—	—	—	—	(13,357)	(13,357)
Balance at December 31, 2007	128,227	64,929	—	32,355	1,243	(84,379)	14,148
Stock options issued to consultants	—	—	—	88	—	—	88
Stock options issued to employees	—	—	—	2,417	—	—	2,417
Net loss	—	—	—	—	—	(13,600)	(13,600)
Balance at December 31, 2008	128,227	$64,929	$ —	$ 34,860	$ 1,243	$ (97,979)	$ 3,053

(The accompanying notes are an integral part of these consolidated financial statements)

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

1. Going Concern

Adherex Technologies Inc. ("Adherex"), together with its wholly owned subsidiaries Oxiquant, Inc. ("Oxiquant") and Adherex, Inc., both Delaware corporations, and Cadherin Biomedical Inc. ("CBI"), a Canadian corporation, collectively referred to herein as the "Company," is a development stage biopharmaceutical company with a portfolio of product candidates under development for use in the treatment of cancer.

These consolidated financial statements have been prepared using generally accepted accounting principles ("GAAP") in the United States ("U.S.") of America that are applicable to a going concern which contemplates that Adherex Technologies Inc. will continue in operation for the foreseeable future and will be able to realize its assets and discharge its liabilities in the normal course of business.

The Company is a development stage company and during the year ended December 31, 2008, incurred a net loss of $13,600. At December 31, 2008, it had an accumulated deficit of $97,979 and had experienced negative cash flows from operations since inception in the amount of $72,201. Also, at December 31, 2008, the Company has cash and cash equivalents of $5,439, which based on management's current plans, will only be able to fund operations into September 2009. On March 30, 2009, the Company announced a 75% headcount reduction effective April 30, 2009, representing all 13 of the current non-executive positions of the Company. The members of the Board of Directors have agreed to continue to serve for the benefit of the shareholders without further compensation. The Company continues to pursue various strategic alternatives, including, collaborations with other pharmaceutical and biotechnology companies and believes that the current cash and cash equivalents will be sufficient to satisfy the anticipated capital requirements into September 2009. However, if a strategic transaction is not completed or the Company does not otherwise obtain additional financial resources in the very near term, the Company might cease operations sooner than September 2009. The Company has also not been successful in obtaining additional financing since February 2007. These circumstances lend substantial doubt as to the ability of the Company to meet its obligations as they come due and, accordingly, the use of accounting principles applicable to a going concern may not be appropriate.

The Company's ability to continue as a going concern is dependent on the raising of additional financial resources in the very near term. If the Company is unable to obtain adequate financial resources, it could be forced to cease operations. The Company's management is considering all financial alternatives and seeking to raise additional funds for operations from current stockholders, other potential investors, corporate partners, or other sources. This disclosure is not an offer to sell, nor a solicitation of an offer to buy the Company's securities. While the Company is striving to achieve these plans, there is no assurance that such funding will be obtainable on favorable terms or at all.

These financial statements do not reflect the potentially material adjustments in the carrying values of assets and liabilities, the reported expenses, and the balance sheet classifications used, that would be necessary if the going concern assumption were not appropriate.

2. Significant Accounting Policies

Basis of presentation

Effective January 1, 2007, the Company changed its primary basis of accounting to United States ("U.S.") generally accepted accounting principles ("U.S. GAAP"). We made this change to comply with U.S. securities law as a result of the loss of the Company's foreign private issuer status with the Securities and Exchange Commission ("SEC"). The consolidated financial statements have been prepared in U.S. dollars. The consolidated financial statements include the accounts of Adherex and of all its wholly-owned subsidiaries and all material inter-company transactions and balances have been eliminated upon consolidation.

The preparation of these consolidated financial statements also conform in all material respects with generally accepted accounting principles in Canada ("Canadian GAAP") except as described in Note 16 in the consolidated financial statements.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

Use of estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that impact the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as at the date of the financial statements and the reported amounts of revenue and expense during the reporting period. Actual results could differ from those estimates.

Cash, Cash Equivalents and Investments

Cash equivalents consist of highly liquid investments with original maturities at the date of purchase of three months or less. Short-term investments mature in less than one year from the balance sheet date.

The Company classifies certain of its cash equivalents and investments that meet the definition of the Financial Accounting Standards Board ("FASB") Statement No. 115 "Accounting for Certain Investments in Debt and Equity Securities" ("SFAS 115") as "available-for-sale." Such investments are recorded at fair value, determined based on quoted market prices, and unrealized gains and losses, which are considered to be temporary, are recorded as other comprehensive income (loss) in a separate component of stockholders' equity until realized. The cost of securities sold is based on the specific identification method. During the year ended December 31, 2008, the Company included in net loss, $237 of unrealized losses on certain cash equivalents related to foreign currency translation. It was determined that these losses were other-than-temporary and were therefore not included in other comprehensive income.

The Company places its cash and cash equivalents in investments held by financial institutions in accordance with its investment policy designed to protect the principal investment. At December 31, 2008, the Company had $4,160 in money market investments, $817 in a guaranteed investment certificate and $372 in cash accounts. Money market investments typically have minimal risk, however in recent months the financial markets have been volatile resulting in concerns regarding money market investments. As a result, on September 19, 2008 the U.S. Treasury announced a Temporary Guarantee Program, which insures money market investments on a temporary basis. The Company's money market manager has submitted the necessary documentation and paid the required fee to participate in the U.S. Treasury's Temporary Guarantee Program funds for the Company's money market investments. The program will be in effect for an initial three month term and ensures that if a participating fund's share value declines to below one dollar and the fund is liquidated, the U.S. Treasury would cover any shortfall between the liquidated share price and one dollar. The Secretary of the U.S. Treasury has the option to extend the program until September 18, 2009. The Company did not experience any loss or write down of its money market investments for the years ended December 31, 2008 and 2007.

Cash pledged as collateral

The Company has pledged cash as collateral on corporate credit accounts in the form of interest-bearing term deposits.

Capital assets

Capital assets are initially recorded at cost and are then amortized using the declining balance method at the following annual rates:

Furniture, fixtures and office equipment	20%
Computer equipment	30%
Computer software	100%
Laboratory equipment	20%

Leasehold improvements are amortized on a straight-line basis over the lease term.

Deferred leasehold inducements

Leasehold inducements consist of periods of reduced rent and other capital inducements provided by the lessor. The leasehold inducements relating to the reduced rent periods are deferred and allocated over the term of the lease. The Company received lease inducements in the form of leasehold improvements and rent-free periods.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

Impairment of long-lived assets

The Company tests the recoverability of long-lived assets whenever events or changes in circumstances indicate that its carrying amount may not be recoverable. The Company records an impairment loss in the period when it is determined that the carrying amount of the asset may not be recoverable. The impairment loss is calculated as the amount by which the carrying amount of the assets exceeds the discounted cash flows from the asset.

Convertible notes

The Company splits convertible notes into their debt and detachable warrant components based on the relative fair value of each component.

Common stock and warrants

At December 31, 2007, the Company had warrants outstanding to purchase common stock that were denominated in both U.S. and Canadian dollars, which results in the Company having warrants outstanding that are denominated outside the Company's U.S. dollar functional currency.

In November 2007, the Emerging Issues Task Force ("EITF") of the FASB issued EITF No. 07-5, Issue Summary No.1 "Determining Whether an Instrument (or an Embedded Feature) is Indexed to an Entity's Own Stock" ("EITF 07-5"). In June 2008, one of the conclusions reached under EITF 07-05 was a consensus-for-exposure that an equity-linked financial instrument would not be considered indexed to the entity's own stock if the strike price is denominated in a currency other than the issuer's functional currency. The issues brought to the EITF for discussion related to how an entity should determine whether certain instruments or embedded features are indexed to its own stock. This discussion included equity-linked financial instruments where the exercise price is denominated in a currency other than the issuer's functional currency; such as the Company's outstanding warrants to purchase common stock that are denominated in Canadian dollars. This conclusion reached under EITF 07-05 clarified the accounting treatment for these and certain other financial instruments as it related to FASB Statement No. 133, "Accounting for Derivative Instruments and Hedging Activities" ("SFAS 133"). SFAS 133 specifies that a contract that would otherwise meet the definition of a derivative under SFAS 133, issued or held by the reporting entity that is both (a) indexed to its own stock and (b) classified in stockholders' equity in its statement of financial position should not be considered a derivative financial instrument for purposes of applying SFAS 133. As a result, the Company's outstanding warrants denominated in Canadian dollars were not considered to be indexed to its own stock and should therefore be treated as derivative financial instruments and recorded at their fair value as a liability. EITF 07-05 is effective for financial statements for fiscal years beginning after December 15, 2008 and earlier adoption is not permitted. Since the warrants to purchase common stock that are denominated in Canadian dollars expired on December 19, 2008, EITF 07-5 is not expected to have a material impact on the Company's financial statements unless the Company issues further equity instruments denominated outside its functional currency.

Revenue recognition

The Company recognizes revenue from multiple element arrangements under development and license agreement, which include license payments, milestones and royalties. Revenue arrangements with multiple deliverables are accounted for in accordance with EITF No. 00-21, "Revenue Arrangements with Multiple Deliverables" and Staff Accounting Bulletin No. 101 "Revenue Recognition in Financial Statements" and are divided into separate units of accounting if certain criteria are met. The consideration the Company receives is allocated among the separate units of accounting based on their respective fair values, and the applicable revenue recognition criteria are considered separately for each of the separate units.

Non-refundable up-front payments received in conjunction with the development and license agreement, including license fees and milestones, are deferred and recognized on a straight-line basis over the relevant periods.

The Company records royalty revenue in accordance with the contract terms once it can be reliably measured and the collection is reasonably assured.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

Research and development costs and investment tax credits

Research costs, including employee compensation, laboratory fees, lab supplies, and research and testing performed under contract by third parties, are expensed as incurred. Development costs, including drug substance costs, clinical study expenses and regulatory expenses are expensed as incurred.

Investment tax credits, which are earned as a result of qualifying research and development expenditures, are recognized when the expenditures are made and their realization is reasonably assured. They are applied to reduce related capital costs and research and development expenses in the year recognized.

Income taxes

The Company accounts for income taxes under the asset and liability method that requires the recognition of deferred tax assets or liabilities for the expected future tax consequences of temporary differences between the financial statement carrying amounts and tax basis of assets and liabilities. The Company provides a valuation allowance to reduce its deferred tax assets when it is more likely than not that such assets will not be realized.

The Company accounts for uncertainty in income taxes by following the Financial Accounting Standards Board issued Interpretation No. 48 (“FIN 48”), “Accounting for Uncertainty in Income Taxes – an Interpretation of SFAS No. 109.” FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise’s financial statements in accordance with Statement of Financial Accounting Standards No. 109, “Accounting for Income Taxes.” FIN 48 provides guidance for how uncertain tax positions should be recognized, measured, presented and disclosed in the financial statements. FIN 48 requires the evaluation of tax positions taken or expected to be taken in the course of preparing tax returns to determine whether the tax positions have met a “more-likely-than-not” threshold of being sustained by the applicable tax authority. Tax benefits related to tax positions not deemed to meet the “more-likely-than-not” threshold are not permitted to be recognized in the financial statements. Upon adoption of FIN 48, the Company has elected an accounting policy that continues to classify accrued interest and penalties related to liabilities for income taxes in income tax expense.

Foreign currency translation

All of the Company’s foreign operations are integrated. Financial statements of integrated foreign operations are translated as follows:

Monetary assets and liabilities denominated in foreign currencies are translated into U.S. dollars at exchange rates prevailing at the balance sheet date. Non-monetary items and any related amortization of such items are translated at the rates of exchange in effect when the assets were acquired or the obligations incurred. Expenses denominated in foreign currencies are translated at the relevant exchange rates prevailing during the year and exchange gains and losses are included in net loss for the year.

Stock-Based compensation plan

Effective January 1, 2006, the Company adopted the fair value recognition requirements of Statement of Financial Accounting Standards (“SFAS”) No. 123 (revised 2004), “Share-based Payment” (“SFAS No. 123(R)”), using the modified prospective transition method and therefore has not restated results for prior periods. The Company recognizes these compensation costs net of an estimated forfeiture rate on a straight-line basis over the requisite service period of the award, which is generally three years.

Loss per share

Basic net loss per share is computed by dividing net loss by the weighted average number of shares of common stock outstanding during the period. Diluted net loss per share is computed using the same method, except the weighted average number shares of common stock outstanding include, convertible debentures, stock options and warrants, if dilutive.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

New accounting pronouncements adopted in the year

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements," or SFAS 157. SFAS 157 establishes a framework for measuring fair value, and expands disclosures about fair value measurements. The statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within that fiscal year. On February 12, 2008, the FASB approved the FASB Staff Position, or FSP, No. SFAS 157-2, "Effective Date of FASB Statement No. 157," or FSP FAS 157-2, which delays the effective date of SFAS 157 to fiscal years beginning after November 15, 2008, and interim periods within those fiscal years for non-financial assets and non-financial liabilities, except for those items that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). As of January 1, 2008, the Company has adopted SFAS 157 for the fair value measurement of recurring items, which did not have a material impact on the financial statements.

In June 2007, the EITF, issued EITF No. 07-3, "Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities," or EITF 07-3, which provides guidance for up-front payments related to goods and services of research and development costs. As of January 1, 2008, the Company adopted EITF 07-3 which did not have a material impact on the financial statements.

Recent accounting pronouncements

In December 2007, the EITF issued EITF No. 07-01, "Accounting for Collaborative Arrangement Related to the Development and Commercialization of Intellectual Property, or EITF 07-01. EITF 07-01 defines the accounting for collaborations between participants. EITF 07-01 requires certain transactions between collaborators to be recorded in the statement of operations on either a gross or net basis within expense when certain characteristics exist in the collaborative agreement. EITF 07-01 will be effective for collaborations entered into after January 1, 2009, and is not expected to have a material impact on the financial statements.

In December 2007, the FASB issued SFAS No. 141(R), "Business Combinations," or SFAS 141(R), requires an acquiring company to measure all assets acquired and liabilities assumed, including contingent considerations and all contractual contingencies, at the fair value at the acquisition date. SFAS 141(R) establishes principles and requirements for how the acquirer: i) recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree; ii) recognizes and measures the goodwill acquired in the business combination or a gain from a bargain purchase; and iii) determines what information to disclose to enable users of the financial statements to evaluate the nature and financial effects of the business combination. The Company does not expect the adoption of SFAS 141 (R) to have a material impact on the financial statements unless it enters into a business combination after January 1, 2009.

In May 2008, the FASB issued SFAS No. 162, "The Hierarchy of Generally Accepted Accounting," or SFAS No. 162. SFAS No. 162 indentifies the sources of accounting principles and the framework for selecting principles to be used in the preparation of financial statements of nongovernmental entities that are presented in conformity with generally accepted accounting principles in the U.S. SFAS No. 162 is effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, "The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles." The Company does not expect the adoption of SFAS 162 to have a material impact on the financial statements.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

3. Capital Assets

The components of our capital assets are presented below:

	December 31, 2008		December 31, 2007	
	Cost	Accumulated Amortization	Cost	Accumulated Amortization
Furniture, fixtures and office equipment	$ 92	$ 78	$ 92	$ 54
Computer equipment	149	115	151	95
Computer software	162	162	146	134
Laboratory equipment	623	537	622	446
Leasehold improvements	4	2	4	1
	1,030	$ 894	1,015	$ 730
Accumulated amortization	(894)		(730)	
Net book value	$ 136		$ 285	

Depreciation and amortization expense for capital assets was $164 and $81 for the years ended December 31, 2008 and 2007, respectively.

4. Leasehold Inducements

On August 31, 2005, the Company entered into agreements to lease a new office and laboratory facility (“Maplewood Facility”) and sublease the Company’s existing facility (“Englert Facility”) on similar terms as in the original lease. As an incentive to enter into the Maplewood Facility lease, the Company received free rent and capital inducements. The Company only paid half rent for the Maplewood Facility over the first 24 months of the 84-month lease term and received additional inducements in the form of furniture, equipment and leasehold improvements with a fair market value of approximately $544.

The Company records rent expense by charging the total rental payments plus the value of the capital inducements received against earnings on a straight-line basis over the 84-month term of the lease, which expires on August 31, 2012.

5. Shareholders’ Equity

Authorized capital stock

The Company’s authorized capital stock consists of an unlimited number of shares of no par common stock.

Equity financings

On June 5, 2001, the Company completed an IPO issuing 1,333 shares of common stock at a price of CAD$7.50 per share. Net proceeds of this offering credited to common stock amounted to $5,727 after deducting the underwriting fee of $501 and expenses of $354. As additional compensation in connection with the offering, the Company granted the underwriters non-assignable support options representing ten percent of the offered shares. Each support option entitled the holder to purchase one share of common stock on or before June 5, 2003 at CAD$7.50. The Company also granted the underwriters an option (“Over-allotment Option”) to purchase up to 200 shares of common stock at the offering price for a period ending 30 days from the close of the offering. On July 5, 2001, the Over-allotment Option expired unexercised.

On December 19, 2003, the Company completed a private placement of equity securities totaling $16,095, comprised of (i) $15,050 for 11,522 units, at a price of CAD$1.75 per unit, comprised of an aggregate of 11,522 shares of common stock and warrants to acquire 5,761 shares of common stock of Adherex with an exercise price of CAD$2.15 per share which expired unexercised on December 19, 2008, and (ii) $1,045 for 800 Series 1 Preferred Shares and warrants to purchase 400 Series 1 Preferred Shares of 2037357 Ontario Inc. The $5,777 estimated fair value of the warrants has been allocated to

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

additional paid-in capital and the balance of $8,053 has been credited to common stock. The non-redeemable Series 1 Preferred Shares of 2037357 Ontario Inc. ("Preferred Shares") were exchangeable into 800 shares of common stock of Adherex. Upon such an exchange, all of the then outstanding warrants to purchase the Preferred Shares would be exchanged for an equal number of warrants to purchase Adherex common stock, which would have an exercise price of CAD$2.15 per share and expire on December 19, 2008. The $1,045 was to be spent on specific research and development projects in Ontario, Canada as designated by Adherex. Adherex could compel the exchange of the Preferred Shares into common stock and warrants for common stock of Adherex at any time after January 3, 2005. The Company also issued broker warrants to purchase 1,226 shares of common stock exercisable at a price of CAD$2.15 per share.

2037357 Ontario Inc. has been accounted for in accordance with the substance of the transaction. The $1,045 has been recorded as non-redeemable Preferred Shares and the amounts expended were recorded as expenses in the relevant periods. On June 14, 2004, the preferred shares and warrants were exchanged for 800 shares of Adherex common stock and warrants to purchase 400 shares of Adherex common stock, all of which expired on December 19, 2008. In June 2004, 2037357 Ontario Inc. became a wholly owned subsidiary of the Company and was amalgamated with Adherex Technologies Inc. The investment has been split between the estimated fair value of the warrants of $363, which has been included in additional paid-in capital, and the remainder of $660, which has been recorded in common stock.

On May 20, 2004, the Company completed equity financings with total gross proceeds of $9,029 less $555 of issuance costs. The Company issued 4,669 units at a purchase price of CAD$2.65 per unit with each unit consisting of one share of common stock and one-half of a common stock purchase warrant. Each whole warrant entitled the holder to acquire one additional share of common stock at an exercise price of CAD$3.50, all of which expired unexercised on May 19, 2007. The $2,118 value of the warrants has been allocated to additional paid-in capital and the balance of $6,356 has been credited to common stock.

On July 20, 2005, the Company completed a private placement of equity securities for gross proceeds of $8,510 for 6,079 units at a price of $1.40 per unit, providing net proceeds of $8,134 after deducting broker fees and other expenses of $376. Each unit consisted of one common share and 0.30 of a common share purchase warrant. The private placement comprised an aggregate of 6,079 shares of common stock, along with 1,824 investor warrants and 57 broker warrants to acquire additional shares of Adherex common stock. Each whole investor warrant entitled the holder to acquire one additional share of common stock of Adherex at an exercise price of $1.75 per share for a period of three years and each whole broker warrant entitled the holder to acquire one share of Adherex common stock at an exercise price of $1.75 for a period of two years, all of which expired unexercised on July 20, 2007 and 2008, respectively. The warrants, with a value of $1,074 based on the Black-Scholes option pricing model, have been allocated to additional paid-in capital and the remaining balance of $7,060 has been credited to common stock.

On May 8, 2006, the Company completed a private placement of equity securities for gross proceeds of $6,512 for 7,753 units at a price of $0.84 per unit providing net proceeds of $6,040 after deducting broker fees and certain other expenses. Each unit consisted of one common share and 0.30 of a common share purchase warrant. The private placement comprised an aggregate of 7,753 shares of common stock, along with 2,326 investor warrants and 465 broker warrants to acquire additional shares of Adherex common stock. Each whole investor warrant entitled the holder to acquire one additional share of Adherex common stock at an exercise price of $0.97 per share for a period of four years. Each whole broker warrant entitles the holder to acquire one share of Adherex common stock at an exercise price of $0.97 per share for a period of two years, all of which expired unexercised on May 7, 2008. The warrants, with a value of $822 based on the Black-Scholes option pricing model, have been allocated to additional paid-in capital and the remaining balance of $5,218 has been credited to common stock.

On February 21, 2007, the Company completed the sale of equity securities providing gross proceeds of $25,000 for 75,759 units at a price of $0.33 per unit providing net proceeds of $23,221 after deducting broker fees and other expenses. Each unit consisted of one common share and one-half of a common share purchase warrant. The offering comprised an aggregate of 75,759 shares of common stock, 37,879 investor warrants and 6,618 broker warrants to acquire additional shares of Adherex common stock. Each whole investor warrant entitled the holder to acquire one additional share of Adherex common stock at an exercise price of $0.40 per share for a period of three years. Each whole broker warrant entitles the holder to acquire one additional unit at an exercise price of $0.33 per unit for a period of two years, the unexercised portion of which expired on February 21, 2009. The warrants, with a value of $6,503 based on the Black-Scholes option pricing model, have been allocated to additional paid-in-capital and the remaining balance of $16,718 has been included in common stock.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

During the second quarter of fiscal 2007, the Company received gross proceeds of $694 related to the exercise of warrants and issued 2,086 shares of common stock and 1,000 additional investor warrants, which entitle the holder to acquire one additional share of Adherex common stock at an exercise price of $0.40 per share and which expire on February 21, 2010. The warrants exercised during the period included 86 investor warrants with an exercise price of $0.40 per share and 2,000 broker warrants with an exercise price of $0.33 per unit. The warrants, with a value of $131 based on the Black-Scholes option pricing model, have been allocated to additional paid-in capital and the remaining balance of $563 has been included in common stock.

Special warrants

From May 2000 through November 2000, the Company issued special warrants. Each special warrant was sold for CAD$25.00 and entitled the holder thereof to acquire, for no additional consideration, four shares of common stock of the Company. The special warrants also included a price protection adjustment determined by dividing CAD$32.50 by the initial public offering (“IPO”) price of CAD$7.50.

During the year ended June 30, 2000, 16 of 126 special warrants were issued, with the balance of 110 issued in the year ended June 30, 2001. Upon completion of the IPO, on June 5, 2001, these special warrants were converted to 547 shares of common stock, which included 42 shares of common stock issued under the price protection adjustment.

Special A warrants

During October 2000, the Company issued Series A special warrants. Each Series A special warrant was sold at CAD$6.25 and entitled the holder to acquire, for no additional consideration, one share of common stock of the Company. The Series A special warrants also included a price protection adjustment determined by dividing CAD$8.125 by the IPO price.

Upon completion of the IPO on June 5, 2001, these Series A special warrants were converted to 1,248 shares of common stock, which included 96 shares of common stock issued under the price protection adjustment.

In addition, each Series A special warrant included a share purchase warrant entitling the holder to purchase an additional share of common stock at the IPO price, which was also subject to the price protection adjustment, so that 1,248 additional common stock could have been sold at the IPO price. These share purchase warrants expired unexercised on September 3, 2001.

Equity rights

On September 28, 1999, University Medical Discoveries Inc. (“UMDI”) invested $171 for equity of the Company. The form of this equity was to be the same as the first class of securities to raise greater than $683 subsequent to the date of the investment. The date of conversion was dependent on certain milestones being met under a specific research project. On August 24, 2000, the Company and UMDI agreed to convert UMDI’s $171 investment into 62 shares of common stock of the Company.

Triathlon settlement

During fiscal 2000, other advances totaling $175 were settled by the issuance to Triathlon Limited of 280 shares of common stock of the Company. The number of shares issued was determined with reference to the fair value at the time the advances were made.

Shire BioChem Inc. agreement

On August 17, 2000, the Company entered into a subscription agreement and a license agreement with Shire BioChem Inc. (“BioChem”). Under the subscription agreement, BioChem purchased 80 shares of common stock of the Company for $341. Pursuant to a price protection clause in the agreement, an additional eight shares of common stock were issued on completion of the Company’s IPO on June 5, 2001.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

Acquisitions

On November 20, 2002, the Company issued 8,032 shares of commons stock to acquire all of the issued and outstanding securities of Oxiquant, a holding company which held certain intellectual property rights, including rights to sodium thiosulfate.

In connection with the acquisition of the intellectual property of Oxiquant in November 2002, the Company issued 461 warrants with an exercise price of CAD$3.585 that expired unexercised on May 20, 2007 and 170 introduction warrants with an exercise price of CAD$2.05 that expired unexercised on November 20, 2007.

As a prerequisite of the Oxiquant transaction, Adherex licensed all of its cadherin-related intellectual property for non-cancer applications and transferred $158 in cash to Cadherin Biomedical Inc. or CBI, a wholly-owned subsidiary of Adherex at the time, in return for Class A Preferred Shares of CBI. These CBI Class A Preferred Shares were then distributed to all of the Adherex shareholders of record by way of special dividend, effecting a “spin out” of CBI and the non-cancer assets from Adherex.

In order to effect such a distribution under Section 42 of the Canada Business Corporations Act (“CBCA”), the Company was legally required to reduce its stated capital so that the aggregate amount of its liabilities and stated capital did not exceed the realizable value of Adherex’s assets. Management determined that the stated capital needed to be reduced by $9,489, in order to comply with the requirements of Section 42 of the CBCA. The Company decreased common stock and increased additional paid-in capital by $9,489.

In February 2004, the Company and CBI became involved in litigation. On December 3, 2004, the Company and CBI settled the litigation and the Company agreed to acquire all of the issued and outstanding shares of CBI and reacquire the non-cancer rights to the cadherin-based intellectual property. As part of the agreement, the Company issued 644 common shares valued at $1,252, net of transaction costs.

Convertible note warrants

On June 23, 2003, the Company issued senior secured convertible notes with a face value totaling $2,219. These notes were convertible into common stock and warrants to acquire common stock of the Company upon completion of an equity fund raising round. Investors also received warrants to purchase an aggregate of 345 shares of common stock of the Company with an exercise price of CAD$2.75 per share that expired unexercised on June 23, 2007. The notes bore interest at an annual rate of eight percent compounded semi-annually, and matured one year from issue but were renewable for one additional year at the option of the Company. In connection with this issuance, the Company issued broker warrants to purchase 101 shares of common stock exercisable at a price of CAD$2.35 per share which expired unexercised on June 23, 2005. As an inducement to consent to the issuance of the December 2003 convertible notes, the exercise price of these warrants was changed from CAD$2.75 per share to CAD$2.05 per share on December 3, 2003.

On December 3, 2003, the Company issued additional senior secured convertible notes with a face value totaling CAD$1,458. These notes were convertible into common stock and warrants to acquire common stock of the Company upon completion of an equity fund raising round. Also, investors received warrants for 271 shares of common stock exercisable at a price of CAD$2.15 per share which expired unexercised on December 3, 2007. The notes bore interest at an annual rate of eight percent compounded semi-annually, and matured one year from issue but were renewable for one additional year at the option of the Company. The Company also issued broker warrants to purchase 94 shares of common stock exercisable at a price of CAD$2.15 per share which expired unexercised on December 3, 2005.

On December 19, 2003, the Company completed an equity financing resulting in the conversion of the June and the December notes into 2,813 shares of common stock with a carrying value of $1,785 credited to common stock. In addition, the Company issued 1,407 warrants to purchase common stock with an exercise price of CAD$2.15 per share which expired unexercised on December 19, 2008.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

Warrants to Purchase Common Stock

At December 31, 2008, the Company had the following warrants to purchase common stock outstanding priced in U.S. dollars with a weighted average exercise price of $0.41 and a weighted average remaining life of 1.058 years:

Warrant Description	Number Outstanding at December 31, 2008	Exercise Price In U.S. Dollars	Expiration Date
Broker warrants	4,818	$ 0.33	February 21, 2009
Investor warrants	38,794	$ 0.40	February 21, 2010
Investor warrants	2,326	$ 0.97	May 7, 2010
	45,938		

Stock options

The Compensation Committee of the Board of Directors administers the Company's stock option plan. The Compensation Committee designates eligible participants to be included under the plan and approves the number of options to be granted from time to time under the plan. A maximum of 20,000 options, not including the 700 options issued to the Chief Executive Officer and specifically approved by the shareholders, are authorized for issuance under the plan. The option exercise price for all options issued under the plan is based on the fair value of the underlying shares on the date of grant. All options vest within three years or less and are exercisable for a period of seven years from the date of grant. The stock option plan, as amended, allows the issuance of Canadian and U.S. dollar grants. A summary of the stock option transactions, for both the Canadian and U.S. dollar grants, through the year ended December 31, 2008 is below.

The following options granted under the stock option plan are exercisable in Canadian dollars:

		Exercise Price in Canadian Dollars	
	Number of Options	Range	Weighted-average
Outstanding at December 31, 2004	3,763	$ 1.64 - 7.50	$ 2.40
Granted	—	—	—
Exercised	(15)	1.64 - 1.70	1.66
Cancelled	(84)	1.64 - 6.25	2.93
Outstanding at December 31, 2005	3,664	1.64 - 7.50	2.39
Granted	—	—	—
Exercised	—	—	—
Cancelled	(262)	1.64 - 6.25	2.00
Outstanding at December 31, 2006	3,402	1.64 - 7.50	2.42
Granted	—	—	—
Exercised	—	—	—
Cancelled	(463)	1.64 - 7.50	3.93
Outstanding at December 31, 2007	2,939	1.65 - 3.25	2.18
Granted	—	—	—
Exercised	—	—	—
Cancelled	(166)	1.65 - 3.25	1.99
Outstanding at December 31, 2008	2,773	$ 1.65 -3.25	$ 2.19

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

Range of Exercise Price in Canadian Dollars	Options Outstanding: Number Outstanding at December 31, 2008	Options Outstanding: Weighted-average Exercise Price in Canadian Dollars	Options Outstanding: Weighted-average Remaining Contractual Life (years)	Options Exercisable: Number Outstanding at December 31, 2008	Options Exercisable: Weighted-average Exercise Price	Options Exercisable: Weighted-average Remaining Contractual Life (years)
$1.63 - $1.75	881	$ 1.66	1.16	881	$ 1.66	
$1.76 - $2.00	220	1.98	1.96	220	1.98	
$2.01 - $2.25	996	2.25	2.03	996	2.25	
$2.26 - $3.00	563	2.79	2.28	563	2.79	
$3.01 - $3.25	113	3.25	2.01	113	3.25	
	2,773	$ 2.19	1.80	2,773	$ 2.19	1.80

The following options granted under the stock option plan are exercisable in U.S. dollars:

	Number of Options	Exercise Price in U.S. Dollars: Range	Exercise Price in U.S. Dollars: Weighted-average
Outstanding at December 31, 2004	—	—	—
Granted	1,603	$0.88 - 1.35	$ 1.14
Exercised	—	—	—
Cancelled	(20)	1.20	1.20
Outstanding at December 31, 2005	1,583	0.88 - 1.35	1.14
Granted	375	0.34 - 0.36	0.35
Exercised	—	—	—
Cancelled	(80)	0.88 - 1.20	0.97
Outstanding at December 31, 2006	1,878	0.34 - 1.35	0.99
Granted	11,109	0.28 - 0.63	0.51
Exercised	—	—	—
Cancelled	(263)	0.34 - 1.20	0.55
Outstanding at December 31, 2007	12,724	0.28 - 1.35	0.58
Granted	3,318	0.10 - 0.38	0.37
Exercised	—	—	—
Cancelled	(409)	0.28 - 1.20	0.50
Outstanding at December 31, 2008	15,633	$0.10 - 1.35	$ 0.54

Range of Exercise Price in U.S. Dollars	Options Outstanding: Number Outstanding at December 31, 2008	Options Outstanding: Weighted-average Exercise Price	Options Outstanding: Weighted-average Remaining Contractual Life (years)	Options Exercisable: Number Outstanding at December 31, 2008	Options Exercisable: Weighted-average Exercise Price	Options Exercisable: Weighted-average Remaining Contractual Life (years)
$0.10 - $0.30	3,613	$ 0.28	5.73	2,554	$ 0.27	
$0.31 - $0.50	3,390	0.38	6.09	3,339	0.38	
$0.51 - $0.75	7,268	0.63	5.33	4,712	0.63	
$0.76 - $1.35	1,362	1.15	3.44	1,342	1.15	
	15,633	$ 0.54	5.43	11,947	$ 0.54	5.4

Stock compensation expense for the fiscal year ended December 31, 2008, 2007 and 2006 was $2,505, $2,322 and $591, respectively. The weighted average fair value per share of options granted during the fiscal year ended December 31, 2008, 2007 and 2006 was $0.29, $0.43 and $0.35, respectively. There was no intrinsic value in stock options outstanding at December 31, 2008.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

The fair value of options granted in fiscal year ended December 31, 2008, 2007 and 2006 were estimated on the date the options were granted based on the Black-Scholes option-pricing model, using the following weighted average assumptions:

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006
Expected dividend	0%	0%	0%
Risk-free interest rate	3.16%	4.58%	4.60%
Expected volatility	85.6%	77.7%	84.0%
Expected life	7 years	7 years	7 years

The Company uses the historical volatility and adjusts for available relevant market information pertaining to the Company's share price. As of December 31, 2008, the Company had unrecognized fair value relating to unvested stock options totaling approximately $546 which is expected to be recognized over a weighted average period of 1 year.

6. Research and Development

Investment tax credits earned as a result of qualifying research and development expenditures and government grants have been applied to reduce research and development expenses as follows:

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006	Cumulative From September 3, 1996 to December 31, 2008
Research and development	$ 10,366	$ 10,912	$ 14,003	$ 62,938
Investment tax credits	—	—	—	(1,632)
National Research Council grants	—	—	—	(197)
	$ 10,366	$ 10,912	$ 14,003	$ 61,109

The Company's claim for any Scientific Research and Experimental Development ("SR&ED") deductions and related investment tax credits for income tax purposes are based upon management's interpretation of the applicable legislation in the Canadian Income Tax Act. These amounts are subject to review and acceptance by the Canada Revenue Agency prior to collection.

7. Capital and Operating Lease Commitments

The Company has entered into operating lease agreements for the office and laboratory facilities located in the United States. As of December 31, 2008, the minimum cash payments per the lease agreements are as follows:

Year Ending	Amount
December 31, 2009	$ 477
December 31, 2010	463
December 31, 2011	395
December 31, 2012 and thereafter	268
Total minimum rent payments	$1,603

The table above includes a lease agreement for the Englert Facility which has been subleased to a third party until September 30, 2010. Under the terms of the operating lease for the facilities, the Company financed $80 of leasehold improvements through the building's owner. The amount is being financed over the term of the lease which expires in

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

September 2010 and bears an annual interest rate of six percent. This obligation was assumed by the sublessee when the Company subleased the facility to a third party; however, should the sublessee default, the Company would become liable.

Rental payments on operating leases are summarized in the table below:

Year Ending	Rent Amount	Interest
December 31, 2008	$ 464	$ —
December 21, 2007	327	—
December 31, 2006	264	—

8. Commitments and Contingencies

McGill Agreement

On February 26, 2001, the Company entered into a general collaboration agreement with McGill that grants the Company a 27-year exclusive, worldwide license to develop, use and market certain cell adhesion technology and compounds. The license agreement provides for the Company to pay future royalties of two percent of gross revenues from the use of the technology and compounds. The agreement also provided for the Company to make payments as follows:

- CAD$100 if the Company has not filed an investigational new drug (“IND”) application, or similar application with Canadian, US, European or a recognized agency, relating to the licensed product prior to September 23, 2002. On August 1, 2002, McGill acknowledged that work completed on the clinical development of ADH-1 was sufficient to meet the requirements of the September 23, 2002 milestone and thus no payment was required.
- CAD$100 if the Company has not commenced Phase II clinical trials in a recognized jurisdiction on any licensed product prior to September 23, 2004. On September 20, 2004, McGill acknowledged that the Company had met obligations with respect to the September 23, 2004 milestone and thus no payment was required.
- CAD$200 if the Company has not commenced Phase III clinical trials in a recognized jurisdiction on any licensed product prior to September 23, 2006, which was paid in fiscal year 2007.

In addition, the Company is required to fund mutually agreed upon research at McGill over a period of ten years totaling CAD$3,300. Annual funding commenced in 2001 with a total payment of CAD$200 and increases annually by 10 percent through to the tenth year of the agreement when annual funding reaches CAD$500. The additional research commitment can be deferred in any year if it exceeds five percent of the Company’s cash and cash equivalents and at December 31, 2008, there have been no deferrals with respect to this provision. The Company receives certain intellectual property rights resulting from this research.

Oregon Health & Science University agreement

The Company has an exclusive license agreement with Oregon Health & Science University (“OHSU”) for exclusive worldwide license rights to intellectual property directed to thiol-based compounds, including STS and their use in oncology. OHSU will receive certain milestone payments, a 2.5 percent royalty on net sales for licensed products and a 15 percent royalty on any consideration received from sublicensing of the licensed technology. Milestone payment fees payable to OHSU include: $50 upon completion of Phase I clinical trials; $200 upon completion of Phase II clinical trials; $500 upon completion of Phase III clinical trials; and $250 upon first commercial sale for any licensed product. To date, no milestone payments have been accrued or paid.

GlaxoSmithKline

On July 14, 2005, the Company entered into a development and license agreement with GSK. The agreement included the in-license by Adherex of GSK’s oncology product, eniluracil, and an option for GSK to license ADH-1. As part of

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

the transaction, GSK invested $3,000 in the Company's common stock. On October 11, 2006, the GSK option to license ADH-1 expired unexercised. Under the terms of the agreement relating to eniluracil, Adherex received an exclusive license to develop eniluracil for all indications and GSK retained options to buy-back and assume development of the compound at various points in time. On March 1, 2007, the GSK agreement was amended and the Company purchased all of GSK's remaining buy-back options for a fee of $1,000. The Company is now required to pay GSK development and sales milestones and double-digit royalties. Specifically, if the Company files a New Drug Application ("NDA") with the Food and Drug Administration ("FDA"), the Company may be required to pay development milestones of $5,000 to GSK. Depending upon whether the NDA is approved by the FDA and whether eniluracil becomes a commercial success, the Company may be required to pay up to an additional $70,000 in development and sales milestones for the initially approved indication, plus double digit royalties based on annual net sales. If the Company pursues other indications, it may be required to pay up to an additional $15,000 to GSK per FDA-approved indication.

9. Income Taxes

The Company operates in several tax jurisdictions. Its income is subject to varying rates of tax and losses incurred in one jurisdiction cannot be used to offset income taxes payable in another. A reconciliation of the combined Canadian federal and provincial income tax rate with the Company's effective tax rate is as follows:

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006
Domestic loss	$ (9,432)	$ (9,104)	$ (10,931)
Foreign loss	(4,168)	(4,253)	(5,509)
Loss before income taxes	(13,600)	(13,357)	(16,440)
Expected statutory rate (recovery)	30.90%	32.02%	32.01%
Expected provision for (recovery of) income tax	(4,203)	(4,277)	(5,262)
Permanent differences	779	746	194
Change in valuation allowance	3,171	3,813	3,247
Non-refundable investment tax credits	(22)	(22)	(50)
Share issue costs and effect of change of carryforwards	(90)	(352)	(48)
Effect of foreign exchange rate differences	(143)	(637)	705
Effect of change in future enacted tax rates	886	916	804
Effect of tax rate changes and other	(378)	(187)	410
Provision for income taxes	$ —	$ —	$ —

The Canadian statutory income tax rate of 30.9 percent is comprised of federal income tax at approximately 19.5 percent and provincial income tax at approximately 11.4 percent.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

The primary temporary differences which gave rise to future income taxes (recovery) at December 31, 2008, December 31, 2007 and December 31, 2006 are as follows:

	December 31, 2008	December 31, 2007	December 31, 2006
Future tax assets:			
SR&ED expenditures	$ 2,062	$ 1,931	$ 2,209
Income tax loss carryforwards	21,307	19,243	16,300
Non-refundable investment tax credits	1,116	1,090	1,029
Share issue costs	298	425	150
Accrued expenses	137	153	—
Fixed and intangible assets	818	1,058	942
	25,738	23,900	20,630
Less: valuation allowance	(25,738)	(23,900)	(20,630)
Net future tax assets	$ —	$ —	$ —

There are no current income taxes owed, nor are any income taxes expected to be owed in the near term.

At December 31, 2008, the Company has unclaimed Scientific Research and Experimental Development (“SR&ED”) expenditures, income tax loss carry forwards and investments tax credits. The unclaimed amounts and their expiry dates are as listed below:

	Federal	Province/ State
SR&ED expenditures (no expiry)	$ 7,656	$ 7,656
Income tax loss carryforwards (expiry date):		
2009	3,449	5,566
2010	4,126	5,700
2014	5,852	6,535
2015	6,295	6,976
2021	26	—
2022	233	—
2023	1,588	1,455
2024	4,849	4,768
2025	10,861	10,793
2026	13,735	13,572
2027	8,091	8,916
2028	7,227	7,207
Investment tax credits (expiry date):		
2009	90	—
2010	52	—
2011	515	—
2012	374	—
2013	167	—
2014	134	—
2015	52	—
2026	81	—
2027	22	—
2027	29	—

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

10. Net Loss Per Share

The outstanding number and type of securities that could potentially dilute basic earnings per share in the future and which were not included in the computation of diluted earnings per share, because to do so would have reduced the loss per share (anti-dilutive) for the years presented, are as follows:

	December 31, 2008	December 31, 2007	December 31, 2006
Stock options	18,406	15,663	5,280
Convertible note warrants	—	—	615
Acquisition warrants	—	—	461
Broker warrants	4,818	6,283	692
Investor warrants	41,120	49,511	14,052
Totals	64,344	71,457	21,100

11. Segment Information

The Company operates in one business segment, which is the development of pharmaceutical products based on its licensed and proprietary technologies, with substantially all of its capital assets and operations, which were previously located in Canada, now located in the United States in Research Triangle Park, North Carolina.

12. Research and Development Projects

The Company is in the development stage and conducts research and development in the areas of anti-cancer and chemoprotection:

Anti-Cancer:

- ADH-1 is a molecularly-targeted anti-cancer compound in clinical development that selectively targets N-cadherin, a protein present on certain tumor cells and the established blood vessels that supply the tumors.
- Eniluracil is a compound in clinical development that was previously under development by GSK for oncology indications. Eniluracil is a DPD inhibitor being developed to enhance the therapeutic value and effectiveness of an approved anti-cancer compound called 5-fluorouracil, or 5-FU.

Supportive Cancer Care:

- STS is a compound in clinical development that has been shown to protect against the disabling loss of hearing in patients being treated with platinum-based anti-cancer agents.
- Eniluracil in a topical formulation for the prevention of hand-foot syndrome induced by capecitabine or Xeloda® in cancer patients.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

The following summarizes our research and development expenses, net of any investment tax credits or grants, through December 31, 2008:

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006	Cumulative From September 3, 1996 to December 31, 2008
ADH-1	$ 5,531	$ 5,087	$ 9,792	$ 39,376
Eniluracil oral	3,703	5,004	2,910	14,523
Other anti-cancer	—	158	249	2,347
Total anti-cancer	9,234	10,249	12,951	56,246
STS	911	560	292	3,579
Eniluracil topical	221	—	—	221
Other supportive cancer care	—	—	—	40
Total supportive cancer care	1,132	560	292	3,840
Other discovery projects	—	103	760	2,553
Transdermal drug delivery	—	—	—	138
Total research and development expense	$ 10,366	$ 10,912	$ 14,003	$ 62,777

On March 1, 2007, the Company paid GSK a license fee of $1,000. The Company has made no upfront cash payments for research and development projects and is not obligated to repay research and development amounts to any third parties.

13. Financial Instruments

Financial instruments recognized on the balance sheets at December 31, 2008 and December 31, 2007 consist of cash and cash equivalents, cash pledged as collateral, accounts receivable, accounts payable and other current liabilities, which approximates fair value due to their relatively short time to maturity. The Company does not hold or issue financial instruments for trading purposes and does not hold any derivative financial instruments.

The Company's investment policy is to manage investments to achieve, in the order of importance, the financial objectives of preservation of principal, liquidity and return on investment. Investments are made in U.S. or Canadian obligations and bank securities, commercial paper of U.S. or Canadian industrial companies, utilities, financial institutions and consumer loan companies, and securities of foreign banks provided the obligations are guaranteed or carry ratings appropriate to the policy. Securities must have a minimum Dun & Bradstreet rating of A for bonds or R1 low for commercial paper.

The policy risks are primarily the opportunity cost of the conservative nature of the allowable investments. As the main purpose of the Company is research and development, the Company has chosen to avoid investments of a trade or speculative nature.

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

14. Changes in Operating Assets and Liabilities

The following table details the changes in operating assets and liabilities as per the Statements of Cash Flows:

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006
Accounts receivable	$ 15	$ 11	$ (17)
Investment tax credits receivable	31	(93)	58
Prepaid expenses	59	(89)	31
Other current assets	1	4	19
Accounts payable, accrued liabilities and other current liabilities	28	(2,293)	2,032
Net changes in operating assets and liabilities	$ 134	$ (2,460)	$ 2,123

15. Canadian Accounting Principles

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States in U.S. dollars. These principles differ, as they affect the Company, at December 31, 2008 and December 31, 2007 and for the fiscal years ended December 31, 2008, December 31, 2007, and December 31, 2006 in the following material respects from Canadian generally accepted accounting principles. There are no differences in reported cash flow for the periods presented.

Consolidated Balance Sheets - Canadian GAAP:

	December 31, 2008	December 31, 2007
Assets		
Current assets	$ 5,639	$ 16,561
Leasehold inducements	285	363
Capital assets	136	285
Acquired intellectual property rights	—	9,028
Total assets	$ 6,060	$ 26,237
Liabilities		
Current liabilities	$ 2,430	$ 2,402
Other long-term liabilities	7	—
Deferred lease inducement	570	659
Future income taxes	—	2,474
Total liabilities	3,007	5,535
Stockholders' equity		
Common stock	64,891	64,891
Contributed surplus	37,088	34,583
Accumulated other comprehensive income	5,850	5,850
Deficit accumulated during development stage	(104,776)	(84,622)
Total stockholders' equity	3,053	20,702
Total liabilities and stockholders' equity	$ 6,060	$ 26,237

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

Consolidated Statements of Operations – Canadian GAAP:

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006
Net loss in accordance with U.S. GAAP	$ (13,600)	$ (13,357)	$ (16,440)
Adjustments to reconcile to Canadian GAAP:			
Acquired intellectual property rights amortization (2)	(1,664)	(1,808)	(2,177)
Loss on impairment of intellectual property (2)	(7,220)	—	(2,021)
Future income taxes (2)	2,474	1,165	1,535
License fee paid (2)	—	1,000	—
License fee amortization (2)	(144)	(120)	—
Net loss and total comprehensive loss	$ (20,154)	$ (13,120)	$ (19,103)
Net loss per share of common stock, basic and diluted	$ (0.16)	$ (0.11)	$ (0.40)
Weighted-average number of shares of common stock outstanding, basic and diluted	128,227	116,571	47,663

Notes to the Consolidated Financial Statements - Canadian GAAP:

1. Summary of significant accounting policies

Current accounting pronouncements

Effective January 1, 2008, the Company adopted the following Canadian Institute of Chartered Accountants (“CICA”) accounting pronouncements:

Section 1400, General Standards of Financial Statement Presentation, or Section 1400, requires the Company to assess and disclose the Company’s ability to continue as a going concern. The Company adopted Section 1400 on January 1, 2008.

Section 1535, Capital Disclosures, or Section 1535, establishes the standards for disclosing information about the entity’s capital and how it is managed to enable users of financial statements to evaluate the entity’s objectives, policies and procedures for managing capital. The Company adopted Section 1535 on January 1, 2008 and it did not have a material impact on the financial statements.

Section 3862, Financial Instruments, or Section 3862 describes the required disclosures related to the significance of financial instruments on the entity’s financial position and performance, and the nature and extent of risks arising from financial instruments to which the entity is exposed and how the entity manages those risks. This section replaces the disclosure standards of Section 3861, Financial Instruments—Disclosure and Presentation. The Company adopted Section 3862 on January 1, 2008 and did not have a material impact on the financial statements.

Section 3863, Financial Instruments – Presentation, or Section 3863 establishes standards for presentation of financial instruments and non-financial derivatives. It replaces the presentation standards of Section 3861, Financial Instruments – Disclosure and Presentation. The Company adopted Section 3862 on January 1, 2008 and it did not have a material impact on the financial statements.

2. Acquired intellectual property rights

Under U.S. GAAP, the cost of acquired technology is charged to expense as in-process research and development (“IPRD”) when acquired if the feasibility of such technology has not been established and no future alternative use exists. Canadian GAAP requires the capitalization and amortization of the costs of acquired technology. This

Adherex Technologies Inc.
(a development stage company)
Notes to the Consolidated Financial Statements
(U.S. dollars and shares in thousands, except per share information)

difference decreases the net loss from operations under Canadian GAAP in the year the IPRD is acquired and increases the net loss under Canadian GAAP in subsequent periods as a result of amortization expense.

Under Canadian GAAP, a future tax liability is also recorded upon acquisition of the technology to reflect the tax effect of the difference between the carrying amount of the technology in the financial statements and the tax basis of these assets, which is nil. As the intellectual property is amortized, the future tax liability is also reduced to reflect the change in this temporary difference between the tax and accounting values of the assets. Under U.S. GAAP, because the technology is expensed immediately as IPRD, there is no difference between the tax basis and the financial statement carrying value of the assets and therefore no future tax liability exists.

On November 20, 2002 Adherex acquired certain intellectual property through the acquisition of Oxiquant, a holding company with no active business. The intellectual property was valued at CAD$31,162 reflecting net liabilities assumed of CAD$401 and provision for future income tax liability of CAD$11,390, resulting in a total consideration of CAD$19,371. The assets consisted primarily of three product candidates including; mesna, N-Acetylcysteine (“NAC”) and Sodium Thiosulfate (“STS”). The acquired intellectual property was deemed to have a ten year useful life, amortized on a straight-line basis.

At December 31, 2005, the Company determined the carrying value of the intellectual property relating to mesna, which had a book value of $3,539, and a related future income tax liability of $1,294, was fully impaired and written off based on the Company’s lack of any further developmental plans. This decision was based on the addition of eniluracil to the Company’s product portfolio, along with the financial resources additionally devoted to the development of ADH-1. The loss on impairment is calculated as the amount by which the carrying amount of the asset exceeded its discounted cash flows.

At December 31, 2006, the Company determined the carrying value of the intellectual property relating to NAC, which had a book value of $2,021, and a related future income tax benefit of $739, was fully impaired and written off because the Company had no plans for further development of NAC. The loss on impairment is calculated as the amount by which the carrying amount of the asset exceeded its undiscounted cash flows.

On March 1, 2007, the Company purchased all of GSK’s remaining options to buy back eniluracil under our development and license agreement for a cash fee of $1,000. Under U.S. GAAP, the cost of the license fee paid to GSK was charged to expense as the feasibility of such technology had not been established and no future alternative use existed. Canadian GAAP requires the capitalization and amortization of the costs of such license fees. The license fee was being amortized over the estimated life of seven years on a straight-line basis.

During the year ended December 31, 2007, the Company reduced the future tax liability by $660 which was the amortization expense for the intellectual property. In addition, at December 31, 2007, the Company reduced the future tax liability by $505 to adjust for lower tax rates projected over the remaining estimated life of the intellectual property.

At December 31, 2008, given the current disruption and uncertainty in the global economy, the significant decrease in the Company’s stock price, current lack of financial resources, and the continued projection of negative cash flows, all of which make the Company’s ability to attract future capital difficult, it was determined that the appropriate triggers had been reached for an impairment test of all intangible assets. The Company performed asset recoverability tests, using undiscounted cash flows based on internal projections for revenues and expenses. The Company determined the carrying value of the intellectual property relating to both STS and eniluracil, which had a combined book value of $7,220, and a related future income tax liability of $1,970, exceeded the fair value of nil, and the entire carrying value was written off. Despite the impairment of the intellectual property the Company plans to continue the current ongoing studies relating to STS and topical eniluracil.

Exhibit 23

CONSENT OF INDEPENDENT AUDITORS

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-122334, 333-126648 and 333-144241) and the Registration Statement on Form F-3 (No. 333-134732) of our report dated March 30, 2009 relating to the consolidated financial statements of Adherex Technologies Inc. which appear in this Annual Report on Form 10-K.

/s/ PricewaterhouseCoopers LLP
Chartered Accountants, Licensed Public Accountants
Ottawa, Canada
March 30, 2009

Exhibit 31.1

ADHEREX TECHNOLOGIES INC.
CERTIFICATION

I, William P. Peters, certify that:

1. I have reviewed this annual report on Form 10-K of Adherex Technologies Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal controls over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an Annual Report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 30, 2009

By: /s/ William P. Peters
William P. Peters
Chairman and Chief Executive Officer

Exhibit 31.2

ADHEREX TECHNOLOGIES INC.
CERTIFICATION

I, James A. Klein, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of Adherex Technologies Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal controls over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an Annual Report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 30, 2009

By: /s/ James A. Klein, Jr.
James A. Klein, Jr.
Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. §1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Adherex Technologies Inc. (the "Company") on Form 10-K for the period ended December 31, 2008 (the "Report"), each of the undersigned, William P. Peters, Chairman and Chief Executive Officer of the Company, and James A. Klein, Jr., Chief Financial Officer of the Company, hereby certifies pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 30, 2009

By: /s/ William P. Peters
William P. Peters
Chairman and Chief Executive Officer

Date: March 30, 2009

By: /s/ James A. Klein, Jr.
James A. Klein, Jr.
Chief Financial Officer