IDERA PHARMACEUTICALS, INC.
Form 10-K
March 30, 2007

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

FORM 10-K

(Mark One)

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the Fiscal Year Ended December 31, 2006
OR
o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number: 001-31918

IDERA PHARMACEUTICALS, INC.
(Exact name of Registrant as specified in its certificate of incorporation)

Delaware	**04-3072298**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
345 Vassar Street Cambridge, Massachusetts	**02139**
(Address of principal executive offices)	**(Zip Code)**

(617) 679-5500
(Registrant s telephone number, including area code)

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

Common Stock, $.001 par value
(Including Associated Preferred Stock Purchase Rights)
(Title of Class)

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 o No þ

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

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 the filing requirements for the past 90 days. Yes þ No o

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 the 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. o

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

Large accelerated filer o Accelerated filer o Non-accelerated filer þ

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

The approximate aggregate market value of the voting stock held by non-affiliates of the registrant was $53,962,564 based on the last sale price of the registrant s common stock on the American Stock Exchange on June 30, 2006. As of March 13, 2007, the registrant had 21,204,797 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant s Proxy Statement with respect to the Annual Meeting of Stockholders to be held on June 13, 2007 are incorporated by reference into Items 10, 11, 12, 13 and 14 of Part III of this Form 10-K.

IDERA PHARMACEUTICALS, INC.

FORM 10-K

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FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical facts, included or incorporated in this report regarding our strategy, future operations, collaborations, intellectual property, financial position, future revenues, projected costs, prospects, plans, and objectives of management are forward-looking statements. The words believes, anticipates, estimates, plans, expects, intends, may, pro and would and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. There are a number of important factors that could cause our actual results to differ materially from those indicated or implied by forward-looking statements. These important factors include those set forth below under Item 1A Risk Factors. These factors and the other cautionary statements made in this annual report should be read as being applicable to all related forward-looking statements whenever they appear in this annual report. In addition, any forward-looking statements represent our estimates only as of the date that this annual report is filed with the SEC and should not be relied upon as representing our estimates as of any subsequent date. We do not assume any obligation to update any forward-looking statements. We disclaim any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

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PART I.

Item 1. *Business*

Overview

We are engaged in the discovery and development of synthetic DNA- and RNA-based compounds for the treatment of cancer, infectious diseases, autoimmune diseases, and asthma/allergies, and for use as vaccine adjuvants. We have designed proprietary product candidates to modulate immune responses through Toll-like Receptors, or TLRs. TLRs are specific receptors present in immune system cells that direct the immune system to respond to potential disease threats. Relying on our expertise in DNA and RNA chemistry, we are identifying product candidates targeted to TLRs 7, 8 or 9 for our internal development programs and for collaborative alliances. We are developing both agonists and antagonists of TLRs 7, 8 and 9. A TLR agonist is a compound that stimulates immune response through the targeted TLR. A TLR antagonist is a compound that blocks activation of an immune response through the targeted TLR. We have three internal programs, in oncology, infectious diseases, and autoimmune diseases, and two collaborative alliances relating to the development of treatments for asthma and allergies and the development of adjuvants for vaccines.

Our most advanced product candidate, IMO-2055, is an agonist of TLR9. We are currently conducting a Phase 2 trial of IMO-2055 in oncology and a Phase 1/2 trial of IMO-2055 in combination with chemotherapy in oncology. We have selected a second TLR9 agonist, IMO-2125, as a lead product candidate for treating infectious diseases and plan to submit an Investigational New Drug application, or IND, to the U.S. Food and Drug Administration, or FDA, for IMO-2125 in the second quarter of 2007. In our autoimmune disease program, which is in an earlier stage of research, we are evaluating TLR antagonists in preclinical models. We are collaborating with Novartis International Pharmaceutical, Ltd., or Novartis, for the discovery, development, and potential commercialization of TLR9 agonists for the treatment of asthma/allergy indications. We also are collaborating with Merck & Co., Inc., or Merck, for the use of our TLR7, 8 and 9 agonists in combination with Merck s therapeutic and prophylactic vaccines in the areas of oncology, infectious diseases, and Alzheimer s disease.

In October 2004, we commenced patient recruitment for an open label, multi-center Phase 2 clinical trial of IMO-2055 as a monotherapy in patients with metastatic or recurrent clear cell renal cancer. Under the protocol for the trial, we are seeking to enroll a total of up to 92 patients in the first stage of the trial, 46 who have failed one prior therapy and 46 who have not received any prior therapy. As of March 1, 2007, we had enrolled 43 patients who have failed one prior therapy and 45 patients who have not received any prior therapy. In October 2005, we initiated an open-label, single center Phase 1/2 clinical trial of IMO-2055 in combination with the chemotherapy agents gemcitabine and carboplatin in patients with refractory solid tumors. Under the protocol, we are seeking to enroll up to 26 patients in the Phase 1 portion of the trial to evaluate the safety of the combination. As of March 1, 2007, we had enrolled 18 patients in this trial. In July 2006, we formed an Oncology Clinical Advisory Board to advise us on the clinical development of IMO-2055 in oncology. We expect that we will commence additional clinical trials in 2007 to evaluate IMO-2055 in combinations with approved anticancer agents.

IMO-2125 is our second product candidate and also is an agonist of TLR9. In preclinical models, including cultures of human immune cells and nonhuman primates, IMO-2125 has induced high levels of interferon-alpha and other cytokines. In cell-based assays, these cytokines have shown potent activity in blocking replication of hepatitis C virus. Cytokines are proteins that initiate and modify immune responses. Interferon-alpha is a particularly important type of cytokine in that it controls the production of many factors that act directly on the immune system. We have carried out preclinical evaluations of IMO-2125 to support the submission of an IND, with the first targeted clinical indication

being hepatitis C. We expect to submit the IND to the FDA in the second quarter of 2007.

We have also identified DNA-based compounds that act as antagonists of TLRs 7, 8 and 9. We have carried out evaluations of these compounds in various preclinical studies, including in strains of mice that are genetically predisposed to develop autoimmune disease similar to the human autoimmune disease lupus. We are conducting further preclinical studies to explore the potential of these novel compounds in autoimmune diseases.

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In May 2005, we entered into a research collaboration and option agreement and a license, development, and commercialization agreement with Novartis to discover, develop, and potentially commercialize TLR9 agonists that are identified as potential treatments for asthma and allergies. In February 2007, Novartis extended the initial two-year research collaboration by an additional year until May 2008.

In December 2006, we entered into an exclusive license and research collaboration agreement with Merck to research, develop and commercialize vaccine products containing our TLR7, 8 or 9 agonists in the fields of oncology, infectious diseases and Alzheimer s disease. Under the agreement, we have agreed to engage in a two-year research collaboration to generate novel agonists targeting TLR7 and TLR8, which may incorporate both Merck and Idera chemistry, for use in Merck s vaccines for oncology, infectious diseases and Alzheimer s disease.

At the close of business on June 29, 2006, we effected a one-for-eight reverse stock split of our issued and outstanding common stock. As a result of the reverse stock split, each share of common stock outstanding at the close of business on June 29, 2006 automatically converted into one-eighth of one share of common stock. All share and per share information in this annual report on Form 10-K reflects this reverse stock split.

Our Business Strategy

We believe that our compounds targeted to TLRs have broad potential applications in oncology, infectious diseases, autoimmune diseases, and asthma/allergies, and as vaccine adjuvants. To develop the potential of our discoveries in multiple areas simultaneously, we are advancing some of these applications through internal programs and seek to advance other applications through collaborations with pharmaceutical companies.

We have entered into collaborative relationships for application of our technology in two therapeutic areas. We believe that our collaborations with Novartis for asthma/allergies and Merck for vaccines provide the necessary resources and expertise to advance these complex research programs. These collaborations have also brought us upfront payments that have helped to finance our internal pipeline. These collaborations could also result in our receiving additional payments if agreed upon milestones are achieved. We may also receive royalties if any commercial products result from our collaborations. To obtain additional development resources and expertise, we may seek additional collaborations. As our internal program with IMO-2055 progresses in oncology, IMO-2125 advances in infectious disease, and the preclinical program moves forward in autoimmune diseases, we may continue to seek additional collaborations that will enable us to apply the resources needed to advance our internal programs.

We plan to stay at the forefront of TLR-based research and discovery by continuing to develop novel and proprietary DNA-and RNA-based compounds targeted to TLRs. We use these compounds, which are synthetic chemical structures, to populate our growing internal pipeline and to support our collaborative programs.

Overview of the Human Immune System

The immune system protects the body by working through various mechanisms to recognize and eliminate viruses, bacteria and other infectious agents, referred to as pathogens, and abnormal cells, such as cancer cells. These mechanisms initiate a series of interactions resulting in stimulation of specific genes in response to the pathogens or abnormal cells. The activities of the immune system are undertaken by its two components: the innate immune system and the adaptive immune system.

The role of the innate immune system is to provide a rapid, non-specific response to a pathogenic invasion or to the presence of abnormal cells in the body and to activate the adaptive immune system. The innate immune system consists of cells such as macrophages, dendritic cells and monocytes. When the body is presented with a pathogen,

cells of the innate immune system are activated, resulting in a cascade of signaling events that cause the production of proteins such as cytokines, to fight the infection caused by the pathogen. Unlike the antibodies and cellular responses produced by the adaptive immune system as described below, the proteins produced by the innate immune system are not pathogen-specific. Moreover, once the pathogen is eliminated and the infection is resolved, the innate immune system will not remember the pathogen.

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In contrast to the innate immune system, the adaptive immune system provides a pathogen-specific response to a pathogenic invasion. The adaptive immune system does this through the recognition by certain immune cells of specific proteins, called antigens, which are part of the pathogen or abnormal cell. This process is initiated through signals produced by the innate immune system. Upon recognition of a foreign antigen, which could come from pathogens or from cancer cells, the adaptive immune system produces antibodies and antigen-specific immune cells that specifically detect and destroy infected cells. This response is referred to as an antigen-specific immune response. An antigen-specific immune response normally takes several weeks to develop the first time. However, once activated by a specific antigen, the adaptive immune system remembers the antigen. In this manner, if the pathogen again invades the body, the presence of the memory immunity will allow the adaptive immune system to respond once more, this time in a matter of days.

TLR-based Drug Discovery Technology

The human immune reaction is initiated by activation of the innate immune system. One way the activation of the immune system occurs is through recognition of a pathogen-associated molecular pattern, referred to as a PAMP. TLRs are a family of receptors that are known to recognize PAMPs. The different members of the TLR family of receptors are expressed in various immune system cells and recognize different PAMPs. Of the TLR receptors, TLR9 is a receptor that specifically recognizes bacterial DNA or compounds that mimic bacterial DNA. TLR7 and TLR8 are receptors that recognize viral RNA and compounds that mimic viral RNA.

Based on our extensive experience in DNA and RNA chemistry, we are designing synthetic DNA- and RNA-based compounds, which as a chemical class are called oligonucleotides. Our compounds are developed to mimic the bacterial DNA and viral RNA that are recognized by TLR7, 8 or 9. We have designed some of our compounds to act as agonists of TLR7, 8 or 9 and other of our compounds to act as antagonists of TLR7, 8 and 9.

Our most advanced programs are directed at compounds that are agonists of TLR9. These compounds mimic bacterial DNA and induce immune responses through TLR9 that may be applicable to the treatment of cancer, infectious diseases and asthma and allergies, and to use as vaccine adjuvants. We have designed our TLR9 agonist candidates to stimulate the innate immune system to produce cytokines and other immune response activators. These cytokines and other activators lead to activation of the adaptive immune system. Furthermore, in preclinical cell culture and animal model studies, we have determined that the immunological activity of our compounds can differ depending on the structure of our compounds. The ability to change immunological activity through variations in chemical structure allows us to create a growing portfolio of compounds potentially useful for treating or preventing different diseases.

We are also designing synthetic RNA-based compounds that are agonists of TLRs 7 and 8. These RNA compounds are designed to mimic viral RNA. In preclinical studies in cell culture and animal models, these compounds induced immune responses. We believe that these responses may be applicable to the treatment of cancer and infectious diseases, as well as to use as vaccine adjuvants.

We also are developing new classes of compounds that are antagonists of TLRs 7, 8 and 9. In cell-based experiments and animal models, these antagonists have blocked immune reactions to specific agonists of TLR9 and specific agonists of TLRs 7 and 8. Recent preclinical studies from third-party researchers have suggested TLRs 7 and 9 play a role in certain autoimmune diseases, including lupus. We have evaluated some of our antagonist compounds in preclinical mouse models of lupus and have seen improvement in a number of disease parameters.

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Research and Development Programs

We and our collaborators are engaged in the evaluation of TLR-targeted compounds in several therapeutic areas. The following table summarizes the disease areas for which we and our collaborators are developing compounds and the status of these efforts.

Disease Area	Product candidate	Therapeutic Use	Development Status
		INTERNAL PROGRAMS	
Oncology	IMO-2055 IMO-2055 (in combination with chemotherapy agents)	Renal Cell Cancer Cancer solid tumors	Phase 2 Phase 1/2
Infectious Diseases	IMO-2125	Hepatitis C	Plan to Submit IND 2nd Quarter of 2007
Autoimmune Diseases	TLR Antagonist Candidates	Lupus	Research
		PROGRAMS UNDER COLLABORATION	
Respiratory Diseases	TLR9 Agonist Candidates	Asthma/Allergies	Being developed with Novartis
Vaccines for Cancer, Infectious Diseases, Alzheimer s Disease	TLR7, 8, 9 Agonist Candidates	Vaccine Adjuvants	Being developed with Merck

Our Development Programs

Oncology

Overview

The immune system is capable of recognizing cancer cells as abnormal cells, leading to an immune response. However, the body s immune response to cancer cells is notoriously weak or absent. Various mechanisms to increase immune response to cancer cells have been evaluated by others, including bacterial extracts, *ex vivo* or *in vivo* stimulation of immune cells, and administration of recombinant cytokines such as interferons.

We believe that TLR9 agonists can enhance the body s immune response to cancer cells. We and others have conducted preclinical studies in human cell-based assays in which TLR9 agonists have activated cells of the immune system and induced these cells to secrete cytokines. In mouse models of cancer, we have shown that our TLR9 agonists induced an immune response that resulted in antitumor activity. The cascade of immune responses initiated by TLR9 agonists in these studies in mouse models also activated the adaptive immune system functions, and enhanced the recognition of antigens unique to the tumor, which are referred to as tumor-associated antigens.

In preclinical studies of some of our TLR9 agonists, enhanced recognition of tumor-associated antigens promoted production of specific antibodies and sensitized immune cells, both of which contribute to a memory immune response. When our TLR9 agonists were combined in preclinical mouse models with approved anticancer agents, including chemotherapies, antibodies, and newer biologically targeted agents such as inhibitors of proteins involved in

cancer cell growth and blood vessel formation, the observed anticancer activity was enhanced beyond that of the anticancer agents alone. We believe that TLR9 agonists also can be combined with tumor-associated antigens to enhance the immune responses to potential cancer vaccine candidates.

IMO-2055

IMO-2055, a synthetic DNA-based compound that is a TLR9 agonist, is our most advanced clinical product candidate. We selected IMO-2055 for clinical development because of the potency it demonstrated as an immune modulator in preclinical models, both *in vitro* and *in vivo*, and its activity in mouse models of cancer, both as a monotherapy and when combined with chemotherapies, antibodies, and newer biologically targeted agents, such as inhibitors of proteins involved in cancer cell growth and blood vessel formation. We filed an IND application for

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IMO-2055 with the FDA that became effective in March 2003. We have completed two Phase 1 clinical trials, have two ongoing clinical trials of IMO-2055 and plan to commence additional trials in 2007.

Healthy Volunteer Phase 1. In March 2004, we completed a Phase 1 clinical trial of IMO-2055 in 28 healthy volunteers over a range of dosing levels from 0.005 to 0.16 mg/kg/week for 3 weeks, by subcutaneous injection or intravenous infusion. In this single- center trial, IMO-2055 was well tolerated by the volunteers, who did not experience any significant treatment-related adverse effects. In addition, IMO-2055 demonstrated biological activity in the volunteers.

Refractory Solid Tumors Phase 1. In February 2006, we completed a Phase 1 clinical trial of IMO-2055 in 23 patients with refractory solid tumor cancers at the Lombardi Comprehensive Cancer Center at Georgetown University Medical Center in Washington, D.C. In the trial, we administered IMO-2055 to the patients by subcutaneous injection in weekly doses that ranged from 0.04 mg/kg/week to 0.64 mg/kg/week. IMO-2055 was administered to the patients weekly for a period of up to 104 weeks. IMO-2055 treatment exhibited evidence of immunological activity as measured by several laboratory tests of immune system function. IMO-2055 was well tolerated at all dosage levels. Adverse events experienced by patients were consistent with the expected immune stimulation activity of IMO-2055, and primarily were mild to moderate injection site reactions and flu-like symptoms including rigors/chills, fever, nausea, myalgia, headache, malaise and fatigue. Serious adverse events possibly related to IMO-2055 treatment included one patient with transient shortness of breath, one patient with rigors/chills, one patient with abdominal pain with nausea/vomiting, and two patients with anemia requiring transfusion. One patient received IMO-2055 therapy in the trial for 104 weeks and exhibited no serious adverse effects during the treatment period. The Phase 1 trial was conducted in patients with a variety of cancer types, including renal cell cancer, melanoma, colorectal cancer, sarcoma, breast cancer, non-small cell lung cancer, and others. Results from this trial were presented at the TOLL2004 meeting in Taormina, Italy in May 2004 and the American Society of Clinical Oncology, or ASCO, annual meeting in May 2005.

Renal Cell Cancer Phase 2. We are currently conducting a Phase 2 clinical trial of IMO-2055 in patients with metastatic or recurrent clear cell renal cancer. The trial, for which we began patient recruitment in October 2004, is a two-stage, multi-center, open label study of IMO-2055 as a monotherapy. In the trial, patients receive one of two dose levels, 0.16 or 0.64 mg/kg, by subcutaneous injection once a week for a period of up to 24 weeks if there continues to be an absence of disease progression. Patients can continue to receive IMO-2055 treatment beyond this 24-week period based on investigator recommendations and independent medical monitor concurrence. The primary objective of the study is to determine tumor response by Response Evaluation Criteria in Solid Tumors, or RECIST. Secondary study objectives include safety, duration of response, time to progression, survival one year after the last dose and the treatment effect on quality of life.

In this Phase 2 trial, we originally planned to recruit a minimum of 46 patients who had failed one prior therapy, which we refer to as second-line patients. The protocol also allowed for the enrollment of treatment-naïve patients, without specifying a target enrollment for treatment-naïve patients. In October 2005, in response to a higher than expected enrollment rate of treatment-naïve patients in the Phase 2 trial, we submitted to the FDA a protocol amendment that provided for enrollment of up to 46 treatment-naïve patients in the trial, in addition to the 46 second-line patients provided for by the original study design. As a result, we are now seeking to enroll a total of up to 92 patients in the trial. As of March 1, 2007, we had enrolled 88 patients in the trial, including 43 second-line patients and 45 treatment-naïve patients. In November 2006, we further amended the protocol to allow us to study additional immune system parameters in the trial.

Since this trial began in October 2004, two new drugs developed by other companies received FDA approval for the treatment of renal cell cancer. Nexavar® was approved in December 2005 and Sutent® was approved in January 2006. These drugs are now used extensively for the treatment of renal cell cancer, largely replacing the cytokine therapies,

interleukin-2 and interferon-alpha, which therapies were the standard of care for the treatment of renal cell cancer at the time we designed this trial. Our protocol excludes patients who have received more than one prior therapy, and the widespread use of these two new drugs has significantly slowed the enrollment rate in our phase 2 trial. As a result, we may not be able to complete enrollment of this trial. We will not be able to obtain a complete set of data from the trial until such time as no patients are continuing to receive treatment in the trial.

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This trial was initially designed as the first stage of a two-stage trial. Once we review the final data from the first stage, we will determine our next steps in the development of IMO-2055 for renal cell cancer, including whether to conduct the second stage of the trial or conduct a new trial. Because our phase 2 trial was designed on the basis of a potential alternative to interleukin 2 and interferon-alpha, we may determine not to continue development of IMO-2055 as monotherapy for renal cell cancer and instead may consider combination therapy trials with the approved drugs.

Refractory Solid Tumor Phase 1/2. We are currently conducting a Phase 1/2 clinical trial of IMO-2055 in combination with the chemotherapy agents gemcitabine and carboplatin in patients with refractory solid tumors. The trial, for which we began patient recruitment in October 2005, is a single center, open label safety study. We are seeking to enroll up to 26 refractory solid tumor patients in the Phase 1 portion of the trial to evaluate the safety of the combination. As of March 1, 2007, we had enrolled 18 patients in the trial and we expect to complete enrollment in the second quarter of 2007. In May 2006, we amended the protocol to investigate two additional treatment schedules of IMO-2055 administration in order to evaluate patient response to the 3-way combination.

Once we review the final data from Phase 1 of the trial, we plan to determine whether to conduct Phase 2 of the trial or conduct a new trial. We expect to announce the results of Phase 1 of this study by the end of 2007.

Future Clinical Development. In July 2006, we formed an Oncology Clinical Advisory Board, or OCAB, of ten internationally prominent physicians and scientists with broad expertise in oncology drug development and clinical practice to advise us on the clinical development of IMO-2055 in oncology, including which indications to pursue and trial design. Based on preclinical data, our clinical experience, and input from members of the OCAB, we plan to initiate new oncology clinical trials in 2007 to evaluate IMO-2055 in combination with standard approved oncology therapies in indications to be determined.

Infectious Diseases

Hepatitis C

Products composed of a single interferon protein, manufactured from a single gene, currently are part of the standard of care for the treatment of hepatitis C chronic infection. Natural interferon produced by the body as part of an immune response is a family of many proteins derived from multiple genes. We and others have shown in preclinical studies and in clinical trials that agonists of TLR9 stimulate the production of various cytokines, including the natural forms of interferon and other antiviral cytokines. The immune responses induced by TLRs also lead to development of adaptive immune responses, due to activation of antigen-presenting cells and generation of sensitized immune cells. Because of the activity generated by natural interferons induced through TLR9, we believe TLR agonists could provide potential advantages over manufactured interferon for the treatment of hepatitis C virus infection.

IMO-2125

We have selected IMO-2125, a TLR9 agonist, as our lead candidate for the treatment of hepatitis C virus infection. In preclinical models, including cultures of human immune cells and in nonhuman primates, IMO-2125 has been shown to induce high levels of natural interferons and other cytokines. The cytokines induced by IMO-2125 in human immune cell cultures and plasma from nonhuman primates dosed with IMO-2125 have shown potent activity in inhibition of hepatitis C virus RNA production in cell-based assays. We have completed various preclinical assessments of IMO-2125 with the plan to submit an IND in the second quarter of 2007 with an initial indication of treatment of hepatitis C virus infection.

Autoimmune Diseases

In autoimmune diseases such as lupus, the immune system mistakenly forms antibodies to a molecule that is correctly part of the body, also known as a self-antigen. An immune complex is then formed between the self-antigen and the antibody to the self-antigen. Recently, third-party researchers have reported that TLRs 7 and 9 may recognize these immune complexes and induce further immune response to them. In such a disease state, blocking

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immune responses that are mediated through TLR7 or TLR9 may interfere with the pathogenesis of the disease by reducing recognition of the immune complex.

We have identified DNA-based compounds that act as antagonists of TLRs 7, 8, and 9 and block immune responses mediated through these TLRs. We believe that such antagonists may have potential application in autoimmune diseases. We have conducted evaluations of these compounds in various preclinical studies, including in strains of mice that are genetically predisposed to develop autoimmune disease similar to the human autoimmune disease lupus. Data from evaluation of our antagonist candidates in the mouse models showed improvement in a number of lupus disease parameters, including protection from the development of skin rash, decreases in the self-antigen antibodies, and reduced disease-related changes in the kidneys. We plan to conduct further preclinical studies to explore the potential of these novel DNA-based compounds for the treatment of autoimmune diseases.

Asthma and Allergies

Asthma and allergy conditions are characterized by an imbalance of the immune system. Currently approved agents for the treatment of asthma and allergy conditions, including steroids and antibodies, are designed to suppress symptoms of allergic or asthmatic response. TLR9 agonists, on the other hand, are designed to induce immune responses that could be useful in restoring immune system balance. In preclinical studies, our TLR9 agonists have shown improvements in multiple indices of allergic conditions. For example, in animal models of allergy, our TLR9 agonists were shown to restore the balance of immunological activity, produce a higher ratio of specific versus non-specific antibodies, reduce the number of pulmonary immune cells that produce allergic inflammation, and improve lung function.

We have entered into a research collaboration and option agreement and a separate license, development, and commercialization agreement with Novartis to discover, optimize, develop, and potentially commercialize TLR9 agonists that are identified as potential treatments for asthma and allergies.

Vaccine Adjuvants

Vaccines are composed of one or more antigens and one or more adjuvants in an appropriate formulation. The function of the adjuvants is to enhance immune recognition of the antigens and increase the ability of the immune system to make antigen-specific antibodies.

In preclinical animal models, our TLR agonists have acted as potential adjuvants with various types of antigens. Preclinical studies that we have conducted with our TLR9 agonists and various antigens have shown improvements in several measures of antigen recognition, such as achievement of higher antibody titers, higher ratios of specific to nonspecific antibodies, and a reduction in the number of doses required to achieve effective antibody titers. As a result, we believe that TLR agonists have the potential to be used as adjuvants in vaccines.

We have entered into a research collaboration with Merck and have granted Merck a worldwide, exclusive license to develop and commercialize our TLR7, 8, and 9 agonists by incorporating them in therapeutic and prophylactic vaccines being developed by Merck for oncology, infectious diseases, and Alzheimer s disease.

We have granted a non-exclusive license for a TLR9 agonist to The Immune Response Corporation to research, develop, and commercialize the potential application of IMO-2055 for use in its development of one specific potential therapeutic and prophylactic HIV vaccine. The Immune Response Corporation is currently conducting Phase 1 clinical trials of this product.

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Corporate Alliances

An important part of our business strategy is to enter into research and development collaborations, licensing agreements and other strategic alliances with biotechnology and pharmaceutical corporations that bring expertise and resources to the potential development and commercialization of drugs based on our technology.

Novartis International Pharmaceutical, Ltd.

In May 2005, we entered into a research collaboration and option agreement and a separate license, development and commercialization agreement with Novartis to discover, develop and potentially commercialize TLR9 agonists that are identified as potential treatments for asthma and allergies. In addition, beginning on May 31, 2007, if specified conditions are satisfied, Novartis may expand the collaboration to include additional human disease areas, other than oncology and infectious diseases.

The agreements with Novartis are structured in two phases. During the research collaboration phase, we and Novartis have agreed to work together to evaluate novel TLR9 agonists from which Novartis may select one or more product candidates for further development through human clinical proof of concept trials. Based on the results of the research collaboration, Novartis may then elect to implement the commercialization agreement, and, under the license, development and commercialization agreement, complete the development, and commercialize one or more of the product candidates.

Under the terms of the agreements:

- Upon execution of the agreements, Novartis paid us a $4.0 million upfront license fee;
- Novartis agreed to fund substantially all research activities during the research collaboration phase;
- If Novartis elects to exercise its option to develop and commercialize licensed TLR9 agonists in the initial collaboration disease areas, Novartis is potentially obligated to pay us up to $131.0 million based on the achievement of clinical development, regulatory approval, and annual net sales milestones;
- Novartis is potentially obligated to pay us additional milestone payments if Novartis elects to expand the collaboration to include additional disease areas and then develops and commercializes licensed TLR9 agonists in the additional disease areas based on the achievement of clinical development and regulatory approval milestones;
- Novartis is also obligated to pay us royalties on net sales of all products, if any, commercialized by Novartis, its affiliates and sublicensees; and
- Novartis license rights under the agreements to products that it elects to develop and commercialize are worldwide, exclusive rights.

We and Novartis agreed that the term of the research and collaboration phase would be two years commencing in May 2005. In February 2007, Novartis extended our research collaboration by an additional year until May 2008. In connection with this extension, Novartis will pay us an additional license fee of $1.0 million. Under the agreements, Novartis obligations to pay us royalties extend, on a product-by-product and country-by-country basis, until the expiration of the patent rights covering the product licensed to Novartis in countries in which there is coverage by licensed patent rights, and, in countries in which there is no coverage by licensed patent rights, until the earlier of the

last day of the calendar year in which Novartis loses market exclusivity with respect to a product and the date 10 years after the product s commercial launch.

Novartis may terminate the research collaboration and option agreement without cause upon 90 days written notice to us and the license, development, and commercialization agreement upon 60 days written notice to us. Upon 30 days written notice, either party may terminate the research collaboration and option agreement for a material breach if such breach is not cured within the 30-day notice period, and upon 90 days written notice, either party may terminate the license, development, and commercialization agreement if such breach is not cured within the 90-day notice period. Upon 30 days written notice, either party may terminate the research collaboration and option agreement and/or the license, development, and commercialization agreement upon the other party s filing of bankruptcy.

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Merck & Co., Inc.

In December 2006, we entered into an exclusive license and research collaboration agreement with Merck to research, develop, and commercialize vaccine products containing our TLR7, 8, and 9 agonists in the fields of oncology, infectious diseases, and Alzheimer s disease. Under the terms of the agreement, we granted Merck worldwide exclusive rights to a number of our TLR7, 8 and 9 agonists for use in combination with Merck s therapeutic and prophylactic vaccines under development in the fields of oncology, infectious diseases, and Alzheimer s disease. There is no limit to the number of vaccines to which Merck can apply our agonists within these fields. We also agreed with Merck to engage in a two-year research collaboration to generate novel agonists targeting TLR7 and TLR8 and incorporating both Merck and Idera chemistry for use in vaccines in the defined fields, which collaboration may be extended by Merck for two additional one-year periods. Under the terms of the agreement:

Merck paid us a $20.0 million upfront license fee;

Merck purchased $10.0 million of our common stock at $5.50 per share;

Merck agreed to fund the research and development collaboration;

Merck agreed to pay us milestone payments as follows:

up to $165.0 million if vaccines containing our TLR9 agonist compounds are successfully developed and marketed in each of the oncology, infectious disease and Alzheimer s disease fields;

up to $260.0 million if vaccines containing our TLR9 agonist compounds are successfully developed and marketed for follow-on indications in the oncology field and if vaccines containing our TLR7 or TLR8 agonists are successfully developed and marketed in each of the oncology, infectious disease, and Alzheimer s disease fields; and

if Merck develops and commercializes additional vaccines using our agonists, we would be entitled to receive additional milestone payments and

Merck agreed to pay us royalties on net product sales of vaccines using our TLR agonist technology that are developed and marketed.

Merck has agreed, subject to certain exceptions, that prior to December 8, 2007, it will not sell any of the shares of our common stock acquired by it under the agreement and that, for the duration of the research and collaboration term, its ability to sell such shares will be subject to specified volume limitations.

Under the agreement, Merck is obligated to pay us royalties, on a product-by-product and country-by-country basis, until the later of the expiration of the patent rights licensed to Merck and the expiration of regulatory-based exclusivity for the vaccine product. If the patent rights and regulatory-based exclusivity expire in a particular country before the 10th anniversary of the product s first commercial sale in such country, Merck shall continue to pay us royalties at a reduced royalty rate until such anniversary, except that Merck s royalty obligation will terminate upon the achievement of a specified market share in such country by a competing vaccine containing an agonist targeting the same toll-like receptor as that targeted by the agonist in the Merck vaccine. In addition, the applicable royalties may be reduced if Merck is required to pay royalties to third parties for licenses to intellectual property rights, which royalties exceed a specified threshold. Merck s royalty and milestone obligations may also be reduced if Merck terminates the agreement based on specified uncured material breaches by us.

Merck may terminate the collaboration relationship without cause upon 180 days written notice to us during the research term and upon 90 days written notice to us after the research term has ended. Either party may terminate the collaboration relationship upon the other party s filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings, or for a material breach if such breach is not cured within 60 days after delivery of written notice.

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TLR Licenses

We have granted a non-exclusive license to The Immune Response Corporation to research, develop, and commercialize the potential application of IMO-2055 agonist for use as an adjuvant in one specific vaccine candidate for the treatment and prevention of HIV. Under the terms of the agreement, The Immune Response Corporation agreed to pay us royalties on its sales of licensed products and a percentage of sublicense income. Either party may terminate the license agreement for a material breach or a breach of a payment obligation, unless such breach is cured within the notice period.

Antisense Technology

We have been a pioneer in the development of antisense technology. Although we are no longer developing this technology, we believe that our antisense technology may be useful to pharmaceutical and biotechnology companies that are seeking to develop product candidates that down-regulate gene targets discovered by, or proprietary to, such companies. Antisense product candidates are designed to bind, through hybridization, RNA targets and modulate production of the specific protein encoded by the target RNA. We believe that drugs based on antisense technology may be more effective and cause fewer side effects than conventional drugs in applications with well-defined RNA targets because antisense drugs are designed to intervene in a highly specific fashion in the production of proteins, rather than after the proteins are made.

Currently, we are a party to five collaboration and license agreements involving the use of our antisense technology and specified indications. These agreements include a license agreement with Isis Pharmaceuticals, Inc. involving intellectual property for antisense chemistry and delivery.

Under the agreement with Isis, we granted Isis a license, with the right to sublicense, to our antisense chemistry and delivery patents and patent applications; and we retained the right to use these patents and applications in our own drug discovery and development efforts and in collaborations with third parties. Isis paid us an initial licensing fee and is required to pay us a portion of specified sublicense income it receives from some types of sublicenses of our patents and patent applications. Also under the agreement, we licensed from Isis specified antisense patents and patent applications, principally Isis suite of RNase H patents and patent applications. We also paid an initial licensing fee for this license and are obligated to pay Isis a maintenance fee and royalties. We have the right to use these patents and patent applications in our drug discovery and development efforts and in some types of third party collaborations. The licenses granted under the Isis agreement terminate upon the last to expire of the patents and patent applications licensed under the agreement. We may terminate at any time the sublicense by Isis to us of the patents and patent applications.

We are also a party to four other license agreements involving the license of our antisense patents and patent applications for specific gene targets under which we typically are entitled to receive license fees, sublicensing income, research payments, payments upon achievement of developmental milestones, and royalties on product sales. These agreements typically expire upon the later of the last to expire of the licensed patents or a specified number of years after the first commercial sale of a licensed product. These agreements may be terminated by either party for a material breach, and our collaborators may terminate these agreements at any time for convenience, with written notice.

We are also a party to six royalty-bearing license agreements under which we have acquired rights to antisense related patents, patent applications, and technology. Each of these in-licenses automatically terminates upon the expiration of the last to expire patent included in the license. Our principal in-license is with University of Massachusetts Medical Center for chemistry and for certain gene targets. Additionally, as part of a 2003 interference resolution for one of the

licensed patents, a settlement was made enabling us to receive a percentage of the royalty amounts the National Institutes of Health receives for the sale of a product that is covered by such patent. Under these in-licenses, we are obligated to pay royalties on our net sales of products or processes covered by a valid claim of a licensed patent or patent application. In certain cases, we are required to pay a specified percentage of any sublicense income, and all of these licenses impose various commercialization, sublicensing, insurance, and other obligations on us, and our failure to comply with these requirements could result in termination of the licenses.

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Research and Development Expenses

For the years ended December 31, 2006, 2005 and 2004, we spent approximately $12.7 million, $11.2 million and $8.2 million, respectively, on research and development activities. In 2005, Novartis sponsored approximately $1.0 million of our research and development activities. Our collaborators sponsored only a nominal portion of our research and development activities in 2006 and 2004.

Patents, Proprietary Rights and Trade Secrets

Patents and Proprietary Rights

Our success depends in part on our ability to obtain and maintain proprietary protection for our product candidates, technology and know-how, to operate without infringing the proprietary rights of others and to prevent others from infringing our proprietary rights. We use a variety of methods to seek to protect our proprietary position, including filing U.S. and foreign patent applications related to our proprietary technology, inventions and improvements that are important to the development of our business. We also rely on trade secrets, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our proprietary position.

We have devoted and continue to devote a substantial amount of our resources into establishing intellectual property protection for:

Novel chemical entities that function as agonists of TLR7, 8 or 9;

Novel chemical entities that function as antagonists of TLR7, 8 and 9; and

Use of our novel chemical entities and chemical modifications to treat and/or prevent a variety of diseases.

As of February 28, 2007, we owned 49 U.S. patents and U.S. patent applications and 142 corresponding worldwide patents and patent applications for our TLR-targeted immune modulation technologies. These patents and patents applications include novel chemical compositions of matter and methods of use for our immunomodulatory compounds. Patent applications covering the compositions of matter and methods of use for IMO-2055 and IMO-2125 are pending worldwide.

To date, all of our intellectual property covering immune modulation compositions and methods of their use is based on discoveries made solely by us. The earliest of the issued patents for these discoveries expires in 2017.

In addition to our TLR-targeted patent portfolio, we are the owner or hold licenses of patents and patent applications related to antisense technology. As of February 28, 2007, our antisense patent portfolio included 112 U.S. patents and patent applications and 216 patents and patent applications throughout the rest of the world. These antisense patents and patent applications include novel compositions of matter, the use of these compositions for various genes, sequences and therapeutic targets, and oral and other routes of administration. Some of the patents and patent applications in our antisense portfolio were in-licensed. These patents expire at various dates ranging from 2007 to 2022.

Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in the scientific literature often lag behind actual discoveries, we cannot be certain that we were the first to make the inventions claimed in each of our issued patents or pending patent applications, or that we were the first to file for protection of the inventions set

forth in these patent applications.

Litigation may be necessary to defend against or assert claims of infringement, to enforce patents issued to us, to protect trade secrets or know-how owned by us, or to determine the scope and validity of the proprietary rights of others. In addition, the U.S. Patent and Trademark Office may declare interference proceedings to determine the priority of inventions with respect to our patent applications or reexamination or reissue proceedings to determine if the scope of a patent should be narrowed. Litigation or any of these other proceedings could result in substantial costs to and diversion of effort by us, and could have a material adverse effect on our business, financial condition and results of operations. These efforts by us may not be successful.

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Trade Secrets and Confidentiality Agreements

We may rely, in some circumstances, on trade secrets and confidentiality agreements to protect our technology. Although trade secrets are difficult to protect, wherever possible, we use confidential disclosure agreements to protect the proprietary nature of our technology. We regularly implement confidentiality agreements with our employees, consultants, scientific advisors, and other contractors and collaborators. However, there can be no assurance that these agreements will not be breached, that we will have adequate remedies for any breach, or that our trade secrets and/or proprietary information will not otherwise become known or be independently discovered by competitors. To the extent that our employees, consultants or contractors use intellectual property owned by others in their work for us, disputes may also arise as to the rights in related or resulting know-how and inventions.

Government Regulation

The testing, manufacturing, labeling, advertising, promotion, distribution, import, export, and marketing, among other things, of drugs are extensively regulated by governmental authorities in the United States and other countries. In the U.S., the FDA regulates pharmaceutical products under the Federal Food, Drug, and Cosmetic Act, or FDCA, and other laws and regulations. Both before and after approval for marketing is obtained, violations of regulatory requirements may result in various adverse consequences, including the FDA s delay in approving or refusal to approve a drug, withdrawal of approval, suspension or withdrawal of an approved product from the market, operating restrictions, warning letters, product recalls, product seizures, injunctions, fines, and the imposition of civil or criminal penalties.

The steps required before a product may be approved for marketing in the U.S. generally include:

- nonclinical laboratory tests and animal tests under the FDA s good laboratory practices regulations;
- the submission to the FDA of an IND for human clinical testing, which must become effective before human clinical trials may begin;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the product for each indication;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is made to assess compliance with the FDA s regulations on current good manufacturing practices, or cGMP; and
- the submission to the FDA of an new drug application, or NDA, or a biologic license application, or BLA.

Nonclinical tests include laboratory evaluation of the product, as well as animal studies to assess the potential safety and pharmacological activity of a drug. The results of the nonclinical tests, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND, which must become effective before human clinical trials may be commenced. The IND will automatically become effective 30 days after its receipt by the FDA, unless the FDA before that time raises concerns or questions about the conduct of the trials as outlined in the IND. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can proceed. If these issues are unresolved, the FDA may choose to not allow the clinical trials to commence. There is no guarantee that submission of an IND will result in the FDA allowing clinical trials to begin.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap or be combined. Clinical trials are conducted under protocols detailing the objectives of the trials, the parameters to be used in monitoring

safety and the effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND prior to beginning the trial. Each trial must be reviewed and approved by an independent Institutional Research Board for each investigative site before it can begin at that site. Subjects must provide informed consent for all trials.

In Phase 1, the initial introduction of the drug into human subjects, the drug is usually tested for safety or adverse effects, dosage tolerance, pharmacokinetics, and pharmacologic action;

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Phase 2 usually involves controlled trials in a limited patient population to:

evaluate preliminarily the efficacy of the drug for a specific, targeted condition,

determine dosage tolerance and appropriate dosage for further trials, and

identify possible adverse effects and safety risks.

Phase 3 trials generally further evaluate clinical efficacy and test further for safety within an expanded patient population with considerations of statistical design and power.

Phase 1, 2, and 3 testing may not be completed successfully within any specified period, or at all. We, an Institutional Review Board, or the FDA, may suspend or terminate clinical trials at any time on various grounds, including a finding that the patients are being exposed to an unacceptable health risk. Additional nonclinical toxicology studies are required after clinical trials have begun. Our clinical testing program may be delayed or terminated due to factors such as:

unforeseen safety issues in the clinical trials and/or the continuing nonclinical toxicology studies;

inability to recruit patients at the rate we expect;

failure by the subjects and/or the investigators to adhere to protocol requirements;

inability to collect the information required to assess patients adequately for safety and efficacy; and

insufficient evidence of efficacy.

The results of the nonclinical and clinical studies, together with other detailed information, including information on the manufacture and composition of the product, are submitted to the FDA as part of an NDA or BLA for review and potential approval prior to the marketing and commercial shipment of the product. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use. The FDA reviews a BLA to determine, among other things, whether the product is safe, pure, and potent and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product s continued safety, purity, and potency. In most cases, the NDA or BLA must be accompanied by a substantial user fee. The FDA also will inspect the manufacturing facility used to produce the product for compliance with cGMPs. The FDA may deny an NDA or BLA if all applicable regulatory criteria are not satisfied or may require additional clinical, toxicology or manufacturing data. Even after an NDA or BLA results in approval to market a product, the FDA may limit the indications or place other limitations that restrict the commercial application of the product. The FDA may issue a not approvable response to any NDA or BLA we or our collaborators may submit for a variety of reasons, including insufficient evidence of safety and/or efficacy or inadequate manufacturing procedures.

After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. The FDA may require additional clinical testing to be conducted after initial marketing approval or Phase 4 clinical trials. The FDA may withdraw product approval if compliance with regulatory standards and/or conditions of the marketing approval is not maintained or if safety problems occur after the product reaches the market. In addition, the FDA requires surveillance programs to monitor the consistency of manufacturing and the safety of approved products that have been commercialized. Holders of an approved NDA are required to report certain adverse reactions and production

problems to the FDA to provide updated safety and efficacy information and to comply with requirements concerning advertising and promotional labeling. The agency has the power to require changes in labeling or to prevent further marketing of a product based on new data that may arise after commercialization. Also, new federal, state, or local government requirements may be established that could delay or prevent regulatory approval of our products under development.

It may take many years and the expenditure of substantial resources to evaluate fully the safety and efficacy of a product candidate in nonclinical and clinical studies, to qualify appropriate drug product formulations, and to ensure manufacturing processes are compliant with regulations. Data obtained in nonclinical studies or early clinical studies may not be indicative of results that might be obtained in later clinical trials that are often critical to the regulatory approval process. Formulation and/or manufacturing changes may cause delays in the development

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plan or require re-testing. Many of the activities may be subject to varying interpretations that could limit, delay, or prevent regulatory approval.

We will also be subject to a variety of foreign regulations governing clinical trials and the marketing and sale of our products. Whether or not FDA approval has been obtained, approval of a product by the comparable regulatory authorities of foreign countries must be obtained prior to the commencement of marketing of the product in those countries. The approval process varies from country to country and the time may be longer or shorter than that required for FDA approval. For marketing outside the U.S., we are also subject to foreign regulatory requirements governing human clinical trials. The requirements governing the conduct of clinical trials, product licensing, approval, pricing, and reimbursement vary greatly from country to country.

In addition to regulations enforced by the FDA, we are also subject to regulation under the Occupational Safety and Health Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act, and other present and potential future federal, state, or local regulations. Our research and development activities involve the controlled use of hazardous materials, chemicals and various radioactive compounds. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by state, federal, and local regulations, 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.

Our collaborators under the various license agreements we have completed have assumed responsibility for regulatory issues pertinent to any product candidates or marketed products that may arise from our collaborations.

Manufacturing

We do not currently own or operate manufacturing facilities for the production of clinical or commercial quantities of any of our product candidates. We currently rely and expect to continue to rely on third parties for the manufacture of our product candidates for preclinical and clinical development. We currently source our bulk drug manufacturing requirements from one contract manufacturer through the issuance of purchase orders on an as-needed basis. We depend and will continue to depend on our contract manufacturers to manufacture our product candidates in accordance with cGMP for use in clinical trials. We will ultimately depend on contract manufacturers for the manufacture of our products for commercial sale. Contract manufacturers are subject to extensive governmental regulation.

Under our collaborative agreements with Novartis and Merck, our collaborators are responsible for manufacturing the product candidates. We believe each collaborator purchases bulk drugs from a contract manufacturer.

Competition

We are developing our TLR-targeted potential therapies for use in the treatment of cancer, infectious diseases, autoimmune diseases and asthma and allergies, and for use as vaccine adjuvants. For all of the disease areas in which we are developing potential therapies, we face competition from other companies developing products involving TLR targeted compounds as well as non-TLR targeted therapies. Some of these non-TLR targeted therapies have been in development or commercialized for years, in some cases by large, well established pharmaceutical companies. Many of the marketed therapies have been accepted by the medical community, patients, and third-party payors. Our ability to compete may be affected by the previous adoption of such therapies by the medical community, patients, and third party payors. Additionally, in some instances, insurers and other third-party payors seek to encourage the use of generic products, which makes branded products, such as our product candidates, potentially less attractive, from a cost perspective, to buyers.

With respect to the development of products involving stimulation of the immune system, there are a number of companies, both privately and publicly held, that are actively engaged in the discovery, development, and commercialization of products and technologies involving TLR-targeted compounds that compete with our technologies and product candidates, including compounds targeting TLR7, TLR8 or TLR9. Our principal competitors developing TLR-targeted compounds include: Coley Pharmaceutical Group, or Coley; Dynavax Technologies Corporation, or Dynavax; and Anadys Pharmaceutical, Inc., or Anadys. Other companies developing

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TLR-targeted compounds include: Cytos Biotechnology AG, or Cytos; Eisai, Inc.; GlaxoSmithKline plc, or GlaxoSmithKline; Hemispherx Biopharma, Inc.; Inex Pharmaceuticals Corporation; Innate Pharma SA; Intercell AG, or Intercell; Juvaris BioTherapeutics, Inc.; Mologen AG; MultiCell Technologies, Inc.; Opsona Therapeutics Ltd.; and VaxInnate, Inc., or VaxInnate.

In cancer, we compete with Pfizer Inc., which in collaboration with Coley has multiple Phase 3 and Phase 2 clinical trials on-going with a TLR9 agonist for treating cancer. In addition, Dynavax has announced initiation of a clinical trial for its TLR9 agonist for cancer.

In infectious diseases and hepatitis C potential competitors include Coley and Anadys, which is working in collaboration with Novartis. Coley recently announced a strategic decision to suspend their independent development of a product candidate for hepatitis C based upon preliminary data from two proof-of-concept clinical trials. Anadys announced that the IND for their hepatitis C product candidate is on clinical hold by the FDA. We believe that the issues which led to these announcements by potential competitors are specific to the compounds that were under evaluation.

In autoimmune diseases, potential competitors include Coley and Dynavax, both of which have announced discovery stage programs.

In asthma/allergy and respiratory diseases, potential competitors include Dynavax by itself and in collaboration with AstraZeneca Pharmaceuticals LP; and Coley in collaboration with sanofi-aventis Groupe.

We are collaborating with Merck in developing our TLR7, 8 and 9 agonists as vaccine adjuvants in the fields of oncology, infectious diseases, and Alzheimer s disease. Merck s vaccines using our TLR7, 8 or 9 agonists as adjuvants may compete with vaccines being developed or marketed by GlaxoSmithKline, Novartis, Dynavax, VaxInnate, Intercell, and Cytos.

Many of our competitors have substantially greater financial, technical, and human resources than we have. In addition, many of our competitors have significantly greater experience than we have in undertaking preclinical studies and human clinical trials of new pharmaceutical products, obtaining FDA and other regulatory approvals of products for use in health care and manufacturing, marketing and selling approved products.

Competition among these products and therapies will be based, among other things, on product efficacy, safety, reliability, availability, price, and patent position.

The timing of market introduction of our products and competitive products will also affect competition among products. We also expect the relative speed with which we can develop products, complete the clinical trials and approval processes and supply commercial quantities of the products to the market to be an important competitive factor. Our competitive position will also depend upon our ability to attract and retain qualified personnel, to obtain patent protection or otherwise develop proprietary products or processes and to secure sufficient capital resources for the often substantial period between technological conception and commercial sales.

Employees

As of March 1, 2007, we employed 33 individuals full-time. Of our 33 employees, 22 are engaged in research and development. Nineteen of our employees hold a Ph.D., M.D., or equivalent degree. None of our employees are covered by a collective bargaining agreement, and we consider relations with our employees to be good.

Information Available on the Internet

Our internet address is www.iderapharma.com. The contents of our website are not part of this Annual Report on Form 10-K and our internet address is included in this document as an inactive textual reference. We make available free of charge through our web site our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to these reports filed or furnished pursuant to Section 12(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file or furnish such materials to the Securities and Exchange Commission.

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Item 1A. ***Risk Factors***

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below in addition to the other information included or incorporated by reference in this annual report on Form 10-K before purchasing our common stock. If any of the following risks actually occurs, our business, financial condition or results of operations would likely suffer, possibly materially. In that case, the trading price of our common stock could fall, and you may lose all or part of the money you paid to buy our common stock.

Risks Relating to Our Financial Results and Need for Financing

We have incurred substantial losses and expect to continue to incur losses. We will not be successful unless we reverse this trend.

We have incurred losses in every year since our inception, except for 2002 when our recognition of revenues under a license and collaboration agreement resulted in us reporting net income for that year. As of December 31, 2006, we had an accumulated deficit of $329.5 million. Our net loss applicable to common stockholders amounted to $16.5 million for the year ended December 31, 2006, $13.7 million for the year ended December 31, 2005 and $15.4 million for the year ended December 31, 2004. We expect to continue to incur substantial operating losses in future periods. These losses, among other things, have had and will continue to have an adverse effect on our stockholders equity, total assets and working capital.

We have never had any products of our own available for commercial sale and have received no revenues from the sale of drugs. To date, almost all of our revenues have been from collaborative and license agreements. We have devoted substantially all of our efforts to research and development, including clinical trials, and we have not completed development of any drugs. Because of the numerous risks and uncertainties associated with developing drugs, we are unable to predict the extent of any future losses, whether or when any of our products will become commercially available, or when we will become profitable, if at all. We expect to continue to incur significant and increasing operating losses for at least the next several years. We anticipate that our expenses will increase as we continue the clinical development of IMO-2055, and commence the clinical development of IMO-2125.

We will need additional financing, which may be difficult to obtain. Our failure to obtain necessary financing or doing so on unattractive terms could adversely affect our research and development programs and other operations.

We will require substantial funds to conduct research and development, including preclinical testing and clinical trials of our product candidates. We will also require substantial funds to conduct regulatory activities and to establish commercial manufacturing, marketing and sales capabilities. We believe that, based on our current operating plan, our existing cash, cash equivalents and short-term investments, will be sufficient to fund our operations through at least 2008.

We will need to raise additional funds to operate our business beyond such time. We believe that the key factors that will affect our ability to obtain additional funding are:

- the success of our clinical and preclinical development programs;

the success of our existing strategic collaborations with Novartis and Merck;

the cost, timing and outcome of regulatory reviews;

the receptivity of the capital markets to financings by biotechnology companies; and

our ability to enter into additional strategic collaborations with biotechnology and pharmaceutical companies and the success of such collaborations.

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If we cannot obtain adequate funds, we may terminate, modify or delay preclinical or clinical trials of one or more of our product candidates, fail to establish or delay the establishment of manufacturing, sale or marketing capabilities, or curtail research and development programs for new product candidates.

Additional financing may not be available to us when we need it or may not be available to us on favorable terms. We could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies, product candidates or drugs that we would otherwise pursue on our own. In addition, if we raise additional funds by issuing equity securities, our then existing stockholders will experience dilution. The terms of any financing may adversely affect the holdings or the rights of existing stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends, and are likely to include rights that are senior to the holders of our common stock. Any additional debt financing or equity that we raise may contain terms, such as liquidation and other preferences, or liens or other restrictions on our assets, which are not favorable to us or our stockholders. If we are unable to obtain adequate funding on a timely basis or at all, we may be required to significantly curtail one or more of our discovery or development programs. For example, we significantly curtailed expenditures on our research and development programs during 1999 and 2000 because we did not have sufficient funds available to advance these programs at planned levels.

Risks Relating to Our Business, Strategy and Industry

We are depending heavily on the success of our lead product candidate, IMO-2055, which is in clinical development. If we are unable to successfully develop and commercialize this product, or experience significant delays in doing so, our business will be materially harmed.

We are investing a significant portion of our time and financial resources in the development of our lead product candidate, IMO-2055. We anticipate that our ability to generate product revenues will depend heavily on the successful development and commercialization of this product. The commercial success of this product will depend on several factors, including the following:

- acceptable safety profile during clinical trials;
- demonstration of statistically recognized efficacy in clinical trials;
- receipt of marketing approvals from the FDA and equivalent foreign regulatory authorities;
- establishment of commercial manufacturing arrangements with third-party manufacturers;
- the successful commercial launch of the product, whether alone or in collaboration with others;
- acceptance of the product by the medical community and third-party payors;
- competition from other companies and their therapies;
- successful protection of our intellectual property rights from competing products in the United States and abroad; and
- a continued acceptable safety and efficacy profile of our product candidates following approval.

Our efforts to commercialize this product are at an early stage, as we are currently conducting a Phase 2 clinical trial in patients with metastatic or recurrent clear cell renal cancer and a Phase 1/2 clinical trial in patients with refractory solid tumors. If we are not successful in commercializing this product, or are significantly delayed in doing so, our business will be materially harmed.

If our clinical trials are unsuccessful, or if they are delayed or terminated, we may not be able to develop and commercialize our products.

In order to obtain regulatory approvals for the commercial sale of our products, we are required to complete extensive clinical trials in humans to demonstrate the safety and efficacy of our product candidates. Clinical trials

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are lengthy, complex and expensive processes with uncertain results. We may not be able to complete any clinical trial of a potential product within any specified time period. Moreover, clinical trials may not show our potential products to be both safe and efficacious. The FDA and other regulatory authorities may not approve any of our potential products for any indication. We may not be able to obtain authority from the FDA or other equivalent foreign regulatory agencies to complete these trials or commence and complete any other clinical trials.

The results from preclinical testing of a product candidate that is under development may not be predictive of results that will be obtained in human clinical trials. In addition, the results of early human clinical trials may not be predictive of results that will be obtained in larger scale, advanced stage clinical trials. A failure of any of our clinical trials can occur at any stage of testing. Companies in the biotechnology and pharmaceutical industries, including companies with greater experience in preclinical testing and clinical trials than we have, have suffered significant setbacks in clinical trials, even after demonstrating promising results in earlier trials. Furthermore, interim results of a clinical trial do not necessarily predict final results.

There is to date little data on the long-term clinical safety of our lead compounds under conditions of prolonged use in humans, or on any long-term consequences subsequent to human use. Effects seen in preclinical studies, even if not observed in clinical trials, may result in limitations or restrictions on our clinical trials. We may experience numerous unforeseen events during, or as a result of, preclinical testing, nonclinical testing, or the clinical trial process that could delay or inhibit our ability to receive regulatory approval or to commercialize our products, including:

- regulators or institutional review boards may not authorize us to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- preclinical or clinical data may not be readily interpreted, which may lead to delays and/or misinterpretation;
- our preclinical tests, including toxicology studies, or clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical testing or clinical trials or we may abandon projects that we expect may not be promising;
- the rate of enrollment or retention of patients in our clinical trials may be less than expected;
- we might have to suspend or terminate our clinical trials if the participating patients experience serious adverse events or undesirable side effects or are exposed to unacceptable health risks;
- regulators or institutional review boards may require that we hold, suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements, including any issues identified through inspections of manufacturing or clinical trial operations or clinical trial sites;
- regulators may hold or suspend our clinical trials while collecting supplemental information on, or clarification of, our clinical trials or other clinical trials, including trials conducted in other countries or trials conducted by other companies;
- we, along with our collaborators and subcontractors, may not employ, in any capacity, persons who have been debarred under the FDA s Application Integrity Policy. Employment of such debarred persons, even if inadvertently, may result in delays in the FDA s review or approval of our products, or the rejection of data developed with the involvement of such person(s);
- the cost of our clinical trials may be greater than we currently anticipate; and

our products may not cause the desired effects or may cause undesirable side effects or our products may have other unexpected characteristics.

As an example, in 1997, after reviewing the results from the clinical trial of GEM91, a first generation antisense compound and our lead product candidate at the time, we determined not to continue the development of GEM91 and suspended clinical trials of this product candidate.

The rate of completion of clinical trials is dependent in part upon the rate of enrollment of patients. For example, in the first stage of our Phase 2 trial of IMO-2055 in renal cell cancer, the enrollment has been slower than projected due to the recent approval of two new therapies developed by other companies, Sutent® and Nexavar®, for treatment of the same patient populations. Patient accrual is a function of many factors, including:

the size of the patient population,

the proximity of patients to clinical sites,

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the eligibility criteria for the study,

the nature of the study,

the existence of competitive clinical trials, and

the availability of alternative treatments.

We do not know whether clinical trials will begin as planned, will need to be restructured or will be completed on schedule, if at all. Significant clinical trial delays also could allow our competitors to bring products to market before we do and impair our ability to commercialize our products.

Delays in commencing clinical trials of potential products could increase our costs, delay any potential revenues and reduce the probability that a potential product will receive regulatory approval.

Our product candidates and our collaborators product candidates will require preclinical and other nonclinical testing and extensive clinical trials prior to submission of any regulatory application for commercial sales. We are currently conducting clinical trials with IMO-2055 in oncology and plan to commence clinical trials of IMO-2125 in infectious disease in 2007. In conducting clinical trials, we cannot be certain that any planned clinical trial will begin on time, if at all. Delays in commencing clinical trials of potential products could increase our product development costs, delay any potential revenues and reduce the probability that a potential product will receive regulatory approval.

Commencing clinical trials may be delayed for a number of reasons, including delays in:

manufacturing sufficient quantities of product candidate that satisfy the required quality standards for use in clinical trials;

demonstrating sufficient safety to obtain regulatory approval for conducting a clinical trial;

reaching an agreement with any collaborators on all aspects of the clinical trial;

reaching agreement with contract research organizations, if any, and clinical trial sites on all aspects of the clinical trial;

resolving any objections from the FDA or any regulatory authority on an IND application or proposed clinical trial design;

obtaining institutional review board approval for conducting a clinical trial at a prospective site; and

enrolling patients in order to commence the clinical trial.

The technologies on which we rely are unproven and may not result in any approved and marketable products.

The product candidates that we are developing are based upon technologies or therapeutic approaches that are relatively new and unproven. We have focused our efforts on the research and development of RNA- and DNA-based compounds targeted to TLRs. Neither we nor any other company have obtained regulatory approval to market such compounds as therapeutic drugs, and no such products currently are being marketed. It is unknown whether the results of preclinical studies with TLR-targeted compounds will be indicative of results that may be obtained in clinical trials,

and results we have obtained in the initial small-scale clinical trials we have conducted to date may not be predictive of results in subsequent large-scale trials. Further, the chemical and pharmacological properties of RNA- and DNA-based compounds targeted to TLRs may not be fully recognized in preclinical and small-scale clinical trials, and such compounds may interact with human biological systems in unforeseen, ineffective, or harmful ways that we have not yet identified. As a result of these factors, we may never succeed in obtaining a regulatory approval to market any product. Furthermore, the commercial success of any of our products for which we may obtain marketing approval from the FDA or other regulatory authorities will depend upon their acceptance by the medical community and third party payors as clinically useful, cost-effective and safe. In addition, if products based upon TLR technology being developed by our competitors have negative clinical trial results or otherwise are viewed negatively, the perception of our TLR technology and market acceptance of our products could be impacted

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negatively. Our efforts to educate the medical community on these potentially unique approaches may require greater resources than would be typically required for products based on conventional technologies or therapeutic approaches. The safety, efficacy, convenience and cost-effectiveness of our products as compared to competitive products will also affect market acceptance.

We face substantial competition, which may result in others discovering, developing or commercializing drugs before or more successfully than us.

The biotechnology industry is highly competitive and characterized by rapid and significant technological change. We face, and will continue to face, intense competition from pharmaceutical and biotechnology companies, as well as academic and research institutions and government agencies. Some of these organizations are pursuing products based on technologies similar to our technologies. Other of these organizations have developed and are marketing products, or are pursuing other technological approaches designed to produce products, that are competitive with our product candidates in the therapeutic effect these competitive products have on diseases targeted by our product candidates. Our competitors may discover, develop or commercialize products or other novel technologies that are more effective, safer or less costly than any that we are developing. Our competitors may also obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours. As examples, the FDA recently approved drugs developed by other companies, Sutent® and Nexavar®, for use in renal cell cancer, which is the indication for which we are evaluating IMO-2055 monotherapy in our Phase 2 trial. Pfizer Inc., in collaboration with Coley has multiple Phase 3 and Phase 2 clinical trials on-going with a TLR9 agonist for treating cancer. In addition, Dynavax has announced initiation of a clinical trial for its TLR9 agonist for cancer.

Many of our competitors are substantially larger than we are and have greater capital resources, research and development staffs and facilities than we have. In addition, many of our competitors are more experienced than we are in drug discovery, development and commercialization, obtaining regulatory approvals and drug manufacturing and marketing.

We anticipate that the competition with our products and technologies will be based on a number of factors including product efficacy, safety, availability and price. The timing of market introduction of our products and competitive products will also affect competition among products. We expect the relative speed with which we can develop products, complete the clinical trials and approval processes and supply commercial quantities of the products to the market to be important competitive factors. Our competitive position will also depend upon our ability to attract and retain qualified personnel, to obtain patent protection or otherwise develop proprietary products or processes and protect our intellectual property, and to secure sufficient capital resources for the period between technological conception and commercial sales.

Competition for technical and management personnel is intense in our industry, and we may not be able to sustain our operations or grow if we are unable to attract and retain key personnel.

Our success is highly dependent on the retention of principal members of our technical and management staff, including Dr. Sudhir Agrawal and Dr. Robert Karr. Dr. Agrawal serves as our Chief Executive Officer and Chief Scientific Officer. Dr. Karr serves as our President. Dr. Agrawal has made significant contributions to the field of antisense technology, and has led the development of our compounds targeted to TLRs. He is named as an inventor on 300 patents and patent applications worldwide. Dr. Karr has extensive experience in the pharmaceutical industry. Drs. Agrawal and Karr provide us leadership for management, research and development activities. The loss of either Dr. Agrawal s or Dr. Karr s services would be detrimental to our ongoing scientific progress and the execution of our business plan.

We are a party to an employment agreement with Dr. Agrawal that expires on October 19, 2009, but may be renewed for additional one-year terms. This agreement may be terminated by us or Dr. Agrawal for any reason or no reason at any time upon notice to the other party. We do not carry key man life insurance for Dr. Agrawal.

We are a party to an employment agreement with Dr. Karr that has an initial term ending on December 5, 2007, and that may be renewed for additional one-year terms. This agreement may be terminated by us or Dr. Karr for any reason or no reason at any time upon notice to the other party. We do not carry key man life insurance for Dr. Karr.

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Furthermore, our future growth will require hiring a significant number of qualified technical and management personnel. Accordingly, recruiting and retaining such personnel in the future will be critical to our success. There is intense competition from other companies and research and academic institutions for qualified personnel in the areas of our activities. If we are not able to continue to attract and retain, on acceptable terms, the qualified personnel necessary for the continued development of our business, we may not be able to sustain our operations or grow.

Regulatory Risks

We may not be able to obtain marketing approval for products resulting from our development efforts.

All of the products that we are developing or may develop in the future will require additional research and development, extensive preclinical studies and clinical trials and regulatory approval prior to any commercial sales. This process is lengthy, often taking a number of years, is uncertain and is expensive. Since our inception, we have conducted clinical trials of a number of compounds. In 1997, we determined not to continue clinical development of GEM91, our lead product candidate at the time. Currently, we are conducting clinical trials of IMO-2055.

We may need to address a number of technological challenges in order to complete development of our products. Moreover, these products may not be effective in treating any disease or may prove to have undesirable or unintended side effects, unintended alteration of the immune system over time, toxicities or other characteristics that may preclude our obtaining regulatory approval or prevent or limit commercial use.

We are subject to comprehensive regulatory requirements, which are costly and time consuming to comply with; if we fail to comply with these requirements, we could be subject to adverse consequences and penalties.

The testing, manufacturing, labeling, advertising, promotion, export and marketing of our products are subject to extensive regulation by governmental authorities in Europe, the United States and elsewhere throughout the world.

In general, submission of materials requesting permission to conduct clinical trials may not result in authorization by the FDA or any equivalent foreign regulatory agency to commence clinical trials. Further, permission to continue ongoing trials may be withdrawn by the FDA or other regulatory agency at any time after initiation, based on new information available after the initial authorization to commence clinical trials. In addition, submission of an application for marketing approval to the relevant regulatory agency following completion of clinical trials may not result in the regulatory agency approving the application if applicable regulatory criteria are not satisfied, and may result in the regulatory agency requiring additional testing or information.

Any regulatory approval of a product may contain limitations on the indicated uses for which the product may be marketed or requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the product. Any product for which we obtain marketing approval, along with the facilities at which the product is manufactured, any post-approval clinical data and any advertising and promotional activities for the product will be subject to continual review and periodic inspections by the FDA and other regulatory agencies.

Both before and after approval is obtained, violations of regulatory requirements may result in:

- the regulatory agency s delay in approving, or refusal to approve, an application for approval of a product;
- restrictions on our products or the manufacturing of our products;
- withdrawal of our products from the market;

warning letters;

voluntary or mandatory recall;

fines;

suspension or withdrawal of regulatory approvals;

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product seizure;

refusal to permit the import or export of our products;

injunctions or the imposition of civil penalties; and

criminal penalties.

We have only limited experience in regulatory affairs and our products are based on new technologies; these factors may affect our ability or the time we require to obtain necessary regulatory approvals.

We have only limited experience in filing the applications necessary to gain regulatory approvals. Moreover, the products that result from our research and development programs will likely be based on new technologies and new therapeutic approaches that have not been extensively tested in humans. The regulatory requirements governing these types of products may be more rigorous than for conventional drugs. As a result, we may experience a longer regulatory process in connection with obtaining regulatory approvals of any product that we develop.

Risks Relating to Collaborators

We need to establish additional collaborative relationships in order to succeed.

If we do not reach agreements with additional collaborators in the future, we may fail to meet our business objectives. We believe collaborations can provide us with expertise and resources. If we cannot enter into additional collaboration agreements, we may not be able to obtain the expertise and resources necessary to achieve our business objectives. We face, and will continue to face, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time consuming to negotiate, document and implement. We may not be successful in our efforts to establish and implement collaborations or other alternative arrangements. The terms of any collaborations or other arrangements that we establish, if any, may not be favorable to us.

The failure of these collaborative relationships could delay our drug development or impair commercialization of our products and could materially harm our business and might accelerate our need for additional capital.

Any collaboration that we enter into may not be successful. The success of our collaboration arrangements, if any, will depend heavily on the efforts and activities of our collaborators. Possible future collaborations have risks, including the following:

disputes may arise in the future with respect to the ownership of rights to technology developed with future collaborators;

disagreements with future collaborators could delay or terminate the research, development or commercialization of products, or result in litigation or arbitration;

future collaboration agreements are likely to be for fixed terms and subject to termination by our collaborators in the event of a material breach or lack of scientific progress by us;

future collaborators are likely to have the first right to maintain or defend our intellectual property rights and, although we would likely have the right to assume the maintenance and defense of our intellectual property rights if our collaborators do not, our ability to do so may be compromised by our collaborators acts or

omissions;

future collaborators may utilize our intellectual property rights in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential liability;

future collaborators may change the focus of their development and commercialization efforts. Pharmaceutical and biotechnology companies historically have re-evaluated their priorities following mergers and consolidations, which have been common in recent years in these industries. The ability of our products to reach their potential could be limited if future collaborators decrease or fail to increase spending relating to such products;

future collaborators may underfund or not commit sufficient resources to the testing, marketing, distribution or development of our products; and

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future collaborators may develop alternative products either on their own or in collaboration with others, or encounter conflicts of interest or changes in business strategy or other business issues, which could adversely affect their willingness or ability to fulfill their obligations to us.

Given these risks, it is possible that any collaborative arrangements into which we enter may not be successful.

Our existing collaborations and any collaborations we enter into in the future may not be successful.

An important element of our business strategy includes entering into strategic collaborations with corporate collaborators, primarily large pharmaceutical companies, for the development, commercialization, marketing and distribution of some of our product candidates. In May 2005, we entered into a collaborative arrangement with Novartis involving our TLR9 agonists for application in asthma and allergies. In December 2006, we entered into a collaborative agreement with Merck involving our TLR7, 8 and 9 agonists for application in vaccine products for oncology, infectious diseases and Alzheimer s disease. The failure of these collaborative relationships or any others we enter into in the future could delay our drug development or impair commercialization of our products and could materially harm our business and might accelerate our need for additional capital.

The success of our collaboration arrangements, if any, will depend heavily on the efforts and activities of our collaborators. Our existing collaborations have risks, including the following:

disputes may arise in the future with respect to the ownership of rights to technology developed with our collaborators;

disagreements with our collaborators could delay or terminate the research, development or commercialization of products, or result in litigation or arbitration;

we may have difficulty enforcing the contracts if one of our collaborators fails to perform;

our collaborators may terminate their collaborations with us, which could make it difficult for us to attract new collaborators or adversely affect the perception of us in the business or financial communities;

our collaboration agreements are likely to be for fixed terms and subject to termination by our collaborators in the event of a material breach or lack of scientific progress by us;

our collaborators are likely to have the first right to maintain or defend our intellectual property rights and, although we would likely have the right to assume the maintenance and defense of our intellectual property rights if our collaborators do not, our ability to do so may be compromised by our collaborators acts or omissions;

our collaborators may utilize our intellectual property rights in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential liability;

our collaborators may change the focus of their development and commercialization efforts. Pharmaceutical and biotechnology companies historically have re-evaluated their priorities following mergers and consolidations, which have been common in recent years in these industries. The ability of our products to reach their potential could be limited if our collaborators decrease or fail to increase spending relating to such products;

our collaborators may underfund or not commit sufficient resources to the testing, marketing, distribution or development of our products; and

our collaborators may develop alternative products either on their own or in collaboration with others, or encounter conflicts of interest or changes in business strategy or other business issues, which could adversely affect their willingness or ability to fulfill their obligations to us.

Collaborations with pharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. Such terminations or expirations may adversely affect us financially and could harm our business reputation in the event we elect to pursue collaborations that ultimately expire or are terminated in such a manner.

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Risks Relating to Intellectual Property

If we are unable to obtain patent protection for our discoveries, the value of our technology and products will be adversely affected.

Our patent positions, and those of other drug discovery companies, are generally uncertain and involve complex legal, scientific and factual questions. Our ability to develop and commercialize drugs depends in significant part on our ability to:

obtain patents;

obtain licenses to the proprietary rights of others on commercially reasonable terms;

operate without infringing upon the proprietary rights of others;

prevent others from infringing on our proprietary rights; and

protect trade secrets.

We do not know whether any of our patent applications or those patent applications that we license will result in the issuance of any patents. Our issued patents and those that may be issue in the future, or those licensed to us, may be challenged, invalidated or circumvented, and the rights granted thereunder may not provide us proprietary protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies or duplicate any technology developed by us. Because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any of our products can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thus reducing any advantage of the patent.

Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in the scientific literature often lag behind actual discoveries, neither we nor our licensors can be certain that we or they were the first to make the inventions claimed in issued patents or pending patent applications, or that we or they were the first to file for protection of the inventions set forth in these patent applications.

Third parties may own or control patents or patent applications and require us to seek licenses, which could increase our development and commercialization costs, or prevent us from developing or marketing products.

We may not have rights under some patents or patent applications related to our products. Third parties may own or control these patents and patent applications in the United States and abroad. Therefore, in some cases, to develop, manufacture, sell or import some of our products, we or our collaborators may choose to seek, or be required to seek, licenses under third party patents issued in the United States and abroad or under patents that might issue from United States and foreign patent applications. In such an event, we would be required to pay license fees or royalties or both to the licensor. If licenses are not available to us on acceptable terms, we or our collaborators may not be able to develop, manufacture, sell or import these products.

We may lose our rights to patents, patent applications or technologies of third parties if our licenses from these third parties are terminated. In such an event, we might not be able to develop or commercialize products covered by the licenses.

We are party to five royalty-bearing license agreements in the field of antisense technology under which we have acquired rights to patents, patent applications and technology of third parties. Under these licenses we are obligated to pay royalties on net sales by us of products or processes covered by a valid claim of a patent or patent application licensed to us. We also are required in some cases to pay a specified percentage of any sublicense income that we may receive. These licenses impose various commercialization, sublicensing, insurance and other

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obligations on us. Our failure to comply with these requirements could result in termination of the licenses. These licenses generally will otherwise remain in effect until the expiration of all valid claims of the patents covered by such licenses or upon earlier termination by the parties. The issued patents covered by these licenses expire at various dates ranging from 2007 to 2022. If one or more of these licenses is terminated, we may be delayed in our efforts, or be unable, to develop and market the products that are covered by the applicable license or licenses.

We may become involved in expensive patent litigation or other proceedings, which could result in our incurring substantial costs and expenses or substantial liability for damages or require us to stop our development and commercialization efforts.

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the biotechnology industry. We may become a party to various types of patent litigation or other proceedings regarding intellectual property rights from time to time even under circumstances where we are not practicing and do not intend to practice any of the intellectual property involved in the proceedings. For instance, in 2002, 2003, and 2005, we became involved in interference proceedings declared by the United States Patent and Trademark Office, or USPTO, for certain of our antisense and ribozyme patents. All of these interferences have since been resolved. We are neither practicing nor intending to practice the intellectual property that is associated with any of these interference proceedings.

The cost to us of any patent litigation or other proceeding, including the interferences referred to above, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the cost of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. If any patent litigation or other proceeding is resolved against us, we or our collaborators may be enjoined from developing, manufacturing, selling or importing our drugs without a license from the other party and we may be held liable for significant damages. We may not be able to obtain any required license on commercially acceptable terms or at all.

Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

Risks Relating to Product Manufacturing, Marketing and Sales and Reliance on Third Parties

Because we have limited manufacturing experience, facilities or infrastructure, we are dependent on third-party manufacturers to manufacture products for us. If we cannot rely on third-party manufacturers, we will be required to incur significant costs and devote significant efforts to establish our own manufacturing facilities and capabilities.

We have limited manufacturing experience, no manufacturing facilities, infrastructure or clinical or commercial scale manufacturing capabilities. In order to continue to develop our products, apply for regulatory approvals and ultimately commercialize products, we need to develop, contract for or otherwise arrange for the necessary manufacturing capabilities.

We currently rely upon third parties to produce material for preclinical and clinical testing purposes and expect to continue to do so in the future. We also expect to rely upon third parties to produce materials that may be required for the commercial production of our products. Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins and our ability to develop product candidates and commercialize any product candidates on a timely and competitive basis. We currently do not have any long term supply contracts and rely on only one contract manufacturer.

There are a limited number of manufacturers that operate under the FDA s cGMP regulations capable of manufacturing our products. As a result, we may have difficulty finding manufacturers for our products with adequate capacity for our needs. If we are unable to arrange for third party manufacturing of our products on a timely basis, or to do so on commercially reasonable terms, we may not be able to complete development of our products or market them.

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Reliance on third party manufacturers entails risks to which we would not be subject if we manufactured products ourselves, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control;
- the possibility of termination or nonrenewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us;
- the potential that third party manufacturers will develop know-how owned by such third party in connection with the production of our products that is necessary for the manufacture of our products; and
- reliance upon third party manufacturers to assist us in preventing inadvertent disclosure or theft of our proprietary knowledge.

Additionally, contract manufacturers may not be able to manufacture our TLR product candidates at a cost or in quantities necessary to make them commercially viable. To date, our third-party manufacturers have met our manufacturing requirements, but we cannot assure you that they will continue to do so. Furthermore, changes in the manufacturing process or procedure, including a change in the location where the drug is manufactured or a change of a third-party manufacturer, may require prior FDA review and approval in accordance with the FDA s current cGMPs. There are comparable foreign requirements. This review may be costly and time-consuming and could delay or prevent the launch of a product. The FDA or similar foreign regulatory agencies at any time may also implement new standards, or change their interpretation and enforcement of existing standards for manufacture, packaging or testing of products. If we or our contract manufacturers are unable to comply, we or they may be subject to regulatory action, civil actions or penalties.

We have no experience selling, marketing or distributing products and no internal capability to do so.

If we receive regulatory approval to commence commercial sales of any of our products, we will face competition with respect to commercial sales, marketing and distribution. These are areas in which we have no experience. To market any of our products directly, we would need to develop a marketing and sales force with technical expertise and with supporting distribution capability. In particular, we would need to recruit a large number of experienced marketing and sales personnel. Alternatively, we could engage a pharmaceutical or other healthcare company with an existing distribution system and direct sales force to assist us. However, to the extent we entered into such arrangements, we would be dependent on the efforts of third parties. If we are unable to establish sales and distribution capabilities, whether internally or in reliance on third parties, our business would suffer materially.

If third parties on whom we rely for clinical trials do not perform as contractually required or as we expect, we may not be able to obtain regulatory approval for or commercialize our products and our business may suffer.

We do not have the ability to independently conduct the clinical trials required to obtain regulatory approval for our products. We depend on independent clinical investigators, contract research organizations and other third party service providers in the conduct of the clinical trials of our products and expect to continue to do so. For example, we have contracted with a contract research organization to manage our Phase 2 clinical trial of IMO-2055 in renal cell cancer. We rely heavily on these parties for successful execution of our clinical trials, but do not control many aspects of their activities. We are responsible for ensuring that each of our clinical trials is conducted in accordance with the

general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as good clinical practices, for conducting, recording and reporting clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. Third parties may not complete activities on schedule or may not conduct our clinical trials in accordance with regulatory requirements or our stated protocols. The failure of these third parties to carry out their obligations could delay or prevent the development, approval and commercialization of our products.

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If we seek to conduct any of these activities ourselves in the future, we will need to recruit appropriately trained personnel and add to our infrastructure.

The commercial success of any product candidates that we may develop will depend upon the degree of market acceptance by physicians, patients, third party payors and others in the medical community.

Any products that we ultimately bring to the market, if they receive marketing approval, may not gain market acceptance by physicians, patients, third party payors and others in the medical community. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the prevalence and severity of any side effects, including any limitations or warnings contained in the product s approved labeling;
- the efficacy and potential advantages over alternative treatments;
- the ability to offer our product candidates for sale at competitive prices;
- relative convenience and ease of administration;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support and the timing of market introduction of competitive products; and
- publicity concerning our products or competing products and treatments.

Even if a potential product displays a favorable efficacy and safety profile, market acceptance of the product will not be known until after it is launched. Our efforts to educate the medical community and third party payors on the benefits of our product candidates may require significant resources and may never be successful. Such efforts to educate the marketplace may require more resources than are required by conventional technologies marketed by our competitors.

If we are unable to obtain adequate reimbursement from third party payors for any products that we may develop or acceptable prices for those products, our revenues and prospects for profitability will suffer.

Most patients rely on Medicare and Medicaid, private health insurers and other third party payors to pay for their medical needs, including any drugs we may market. If third party payors do not provide adequate coverage or reimbursement for any products that we may develop, our revenues and prospects for profitability will suffer. Congress enacted a limited prescription drug benefit for Medicare recipients in the Medicare Prescription Drug and Modernization Act of 2003. While the program established by this statute may increase demand for our products, if we participate in this program, our prices will be negotiated with drug procurement organizations for Medicare beneficiaries and are likely to be lower than we might otherwise obtain. Non-Medicare third party drug procurement organizations may also base the price they are willing to pay on the rate paid by drug procurement organizations for Medicare beneficiaries.

A primary trend in the United States healthcare industry is toward cost containment. In addition, in some foreign countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take six months or longer after the receipt of regulatory marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost effectiveness of our product candidates or products to other available therapies. The conduct of such a clinical trial could be expensive and result in delays in commercialization of our products. These further clinical trials would require additional time, resources and expenses. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our prospects for generating revenue, if any, could be adversely affected and our business may suffer.

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Third party payors are challenging the prices charged for medical products and services, and many third party payors limit reimbursement for newly-approved healthcare products. In particular, third party payors may limit the indications for which they will reimburse patients who use any products that we may develop. Cost control initiatives could decrease the price we might establish for products that we may develop, which would result in lower product revenues to us.

We face a risk of product liability claims and may not be able to obtain insurance.

Our business exposes us to the risk of product liability claims that is inherent in the manufacturing, testing and marketing of human therapeutic drugs. We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products. Regardless of merit or eventual outcome, liability claims and product recalls may result in:

decreased demand for our product candidates and products;

damage to our reputation;

regulatory investigations that could require costly recalls or product modifications;

withdrawal of clinical trial participants;

costs to defend related litigation;

substantial monetary awards to trial participants or patients, including awards that substantially exceed our product liability insurance, which we would then have to pay using other sources, if available, and would damage our ability to obtain liability insurance at reasonable costs, or at all, in the future;

loss of revenue;

the diversion of management s attention away from managing our business; and

the inability to commercialize any products that we may develop.

Although we have product liability and clinical trial liability insurance that we believe is adequate, this insurance is subject to deductibles and coverage limitations. We may not be able to obtain or maintain adequate protection against potential liabilities. If we are unable to obtain insurance at acceptable cost or otherwise protect against potential product liability claims, we will be exposed to significant liabilities, which may materially and adversely affect our business and financial position. These liabilities could prevent or interfere with our commercialization efforts.

Risks Relating to an Investment in Our Common Stock

Our corporate governance structure, including provisions in our certificate of incorporation and by-laws, our stockholder rights plan and Delaware law, may prevent a change in control or management that stockholders may consider desirable.

Section 203 of the Delaware General Corporation Law and our certificate of incorporation, by-laws and stockholder rights plan contain provisions that might enable our management to resist a takeover of our company or discourage a third party from attempting to take over our company. These provisions include:

a classified board of directors,

limitations on the removal of directors,

limitations on stockholder proposals at meetings of stockholders,

the inability of stockholders to act by written consent or to call special meetings, and

the ability of our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval.

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In addition, Section 203 of the Delaware General Corporation Law imposes restrictions on our ability to engage in business combinations and other specified transactions with significant stockholders. These provisions could have the effect of delaying, deferring, or preventing a change in control of us or a change in our management that stockholders may consider favorable or beneficial. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors and take other corporate actions. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock.

Our stock price has been and may in the future be extremely volatile. In addition, because an active trading market for our common stock has not developed, our investors ability to trade our common stock may be limited. As a result, investors may lose all or a significant portion of their investment.

Our stock price has been volatile. During the period from January 1, 2005 to December 31, 2006, the closing sales price of our common stock, as adjusted to reflect the one-for-eight reverse split of our common stock effected on June 29, 2006, ranged from a high of $6.48 per share to a low of $2.36 per share. The stock market has also experienced significant price and volume fluctuations, and the market prices of biotechnology companies in particular have been highly volatile, often for reasons that have been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

results of clinical trials of our product candidates or those of our competitors;

the regulatory status of our product candidates;

failure of any of our product candidates, if approved, to achieve commercial success;

the success of competitive products or technologies;

regulatory developments in the United States and foreign countries;

our success in entering into collaborative agreements;

developments or disputes concerning patents or other proprietary rights;

the departure of key personnel;

variations in our financial results or those of companies that are perceived to be similar to us;

our cash resources;

the terms of any financing conducted by us;

changes in the structure of healthcare payment systems;

market conditions in the pharmaceutical and biotechnology sectors and issuance of new or changed securities analysts reports or recommendations; and

general economic, industry and market conditions.

In addition, our common stock has historically been traded at low volume levels and may continue to trade at low volume levels. As a result, any large purchase or sale of our common stock could have a significant impact on the price of our common stock and it may be difficult for investors to sell our common stock in the market without depressing the market price for the common stock or at all.

As a result of the foregoing, investors may not be able to resell their shares at or above the price they paid for such shares. Investors in our common stock must be willing to bear the risk of fluctuations in the price of our common stock and the risk that the value of their investment in our stock could decline.

Item 1B. ***Unresolved Staff Comments***

None.

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Item 2. ***Properties***

We currently lease approximately 26,000 square feet of laboratory and office space, including 6,000 square feet of specialized preclinical lab space, in Cambridge, Massachusetts under a lease that expires April 30, 2007. In October 2006, we entered into a lease agreement for approximately 26,000 square feet of newly built-out laboratory and office space also located in Cambridge, Massachusetts for a term commencing in May 2007 and expiring in June 2014. We have specified rights to sublease this facility and a five-year renewal option. We intend to move our operations from our current facility to the new facility in June 2007 and to continue to occupy our existing space in Cambridge on a month-to-month basis, as required.

Item 3. ***Legal Proceedings***

None.

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

None.

Executive Officers of Idera Pharmaceuticals

The following table sets forth the names, ages and positions of our executive officers as of March 1, 2007:

Name	Age	Position
Sudhir Agrawal, D. Phil	53	Chief Executive Officer, Chief Scientific Officer and Director
Robert W. Karr, M.D.	58	President and Director Chief Financial Officer, Vice President of Operations,
Robert G. Andersen	56	Treasurer and Secretary
Alice Bexon, MBChB	37	Vice President of Clinical Development
Timothy M. Sullivan, Ph.D	52	Vice President of Development Programs

Sudhir Agrawal, D. Phil., is our Chief Executive Officer and Chief Scientific Officer. He joined us in 1990 and has served as our Chief Scientific Officer since January 1993, our Senior Vice President of Discovery since March 1994, our President from February 2000 to October 2005, a director since March 1993 and our Chief Executive Officer since August 2004. Prior to his appointment as Chief Scientific Officer, he served as our Principal Research Scientist from February 1990 to January 1993 and as our Vice President of Discovery from December 1991 to January 1993. He served as Acting Chief Executive Officer from February 2000 until September 2001. Prior to joining us, Dr. Agrawal served as a Foundation Scholar at the Worcester Foundation for Experimental Biology from 1987 through 1991 and at the Medical Research Council s Laboratory of Molecular Biology in Cambridge, England from 1985 to 1986. Dr. Agrawal received a D. Phil. in chemistry in 1980 from Allahabad University in India. He has authored more than 260 research papers and reviews. He is a member of the editorial board of several scientific journals. Dr. Agrawal is co-author of more than 300 patents and patent applications worldwide.

Robert W. Karr, M.D., is our President. He was appointed a member of our Board of Directors in June 2005 and became our President in December 2005. From June 2000 through December 2004, Dr. Karr was a senior executive

for Global Research & Development for Pfizer, Inc., a pharmaceutical company, where he served as Senior Vice President, Strategic Management from 2003-2004. Prior to its merger with Pfizer, Dr. Karr served as Vice President, Research & Development Strategy for Warner-Lambert Company, a pharmaceutical company. He currently serves on the Board of Directors of GTx, Inc., a biotechnology company. Dr. Karr received his B.S. with honors from Southwestern University in 1971 and his M.D. from the University of Texas Medical Branch in 1975. Dr. Karr completed his internship and residency in internal medicine at Washington University School of Medicine and served as a faculty member at both the University of Iowa College of Medicine and Washington University School of Medicine.

Robert G. Andersen is our Chief Financial Officer and Vice President of Operations. He joined us in November 1996 as Vice President of Systems Engineering and Management Information Systems and has served as our Vice

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President of Operations and Planning since 1997, our Treasurer since March 1998 and our Chief Financial Officer since February 2000. Prior to joining us, Mr. Andersen held a variety of management positions at Digital Equipment Corporation, a computer company, from 1986 to 1996, most recently as Group Manager of the Applied Objects Business Unit. From 1978 to 1986, Mr. Andersen held technical management positions at United Technologies Corporation, a building systems and aerospace technology company, most recently as Director of Quality for Otis Elevator Company s European Operations based in Paris, France and Worldwide Director of Controls for Otis Group. Mr. Andersen received an M.S. in Management from Northeastern University in 1978 and his B.E.E. magna cum laude in Electrical Engineering from The City College of New York in 1972. He is also a graduate of the United Technologies Advanced Studies Program.

Alice S. Bexon, MBChB, joined us in January 2007 as our Vice President of Clinical Development. From April 2001 to January 2007, Dr. Bexon worked for Hoffmann-La Roche, Inc. s Pharma Division, where she served initially as International Medical Leader for the Oncology Business organization from April 2001 through June 2006 and subsequently as Clinical Science Leader for Pharma Development Medical Oncology from July 2006 to January 2007. Dr. Bexon also served as Medical Director from 1998 to 2001 in the oncology business unit of Sanofi-Synthelabo s French affiliate (now sanofi-aventis), a pharmaceutical company. In addition, from 1997 to 1998 Dr. Bexon worked for the European Organization for Research and Treatment of Cancer (subsequently NDDO Oncology) in the Netherlands, and in 1997, she worked for Parexel International, a global bio/pharmaceutical services organization, in France. Dr. Bexon received her MBChB (MD equivalent) from Bristol University Medical School in the United Kingdom in 1994 and her full General Medical Council registration to practice medicine the following year. She completed internships in internal medicine and general surgery at Newcastle s Freeman and North Tyneside General Hospitals in the UK and her oncology residency under Professor Jean-Pierre Armand at the Institut Gustave Roussy in Villejuif, France

Timothy Sullivan, Ph.D., is our Vice President of Development Programs. He joined us in 2002 as Senior Director, Preclinical Drug Development. His prior professional experience includes positions as Executive Director of Non-clinical Drug Safety Evaluation for Purdue Pharma L.P., a pharmaceutical company. from 1999 to 2002 and Vice President of Eastern Operations for Oread, Inc., a contract drug development organization, from 1997 to 1999. Prior to 1997, Dr. Sullivan held a variety of technical management roles with other pharmaceutical companies and contract research organizations (Adria, Battelle, Roma Toxicology Centre), and in veterinary medicine (International Minerals & Chemical). Dr. Sullivan earned his B.S. in Microbiology from Michigan State University in 1975. His graduate studies were at Purdue University, where he earned a M.S. degree in Health Physics in 1978 and a Ph.D. in Toxicology in 1981.

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PART II.

Item 5. ***Market For Registrant s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

Market Information

On September 12, 2005, we changed our name from Hybridon, Inc. to Idera Pharmaceuticals, Inc. On September 13, 2005, Idera s American Stock Exchange ticker symbol changed from HBY to IDP.

The following table sets forth, for the periods indicated, the high and low sales prices per share of our common stock, as adjusted to reflect the one-for-eight reverse split of our common stock effected on June 29, 2006, during each of the quarters set forth below as reported on the American Stock Exchange. These prices reflect inter-dealer prices without retail mark-up, mark-down or commission and may not necessarily represent actual transactions.

	High	Low
2005		
First Quarter	$ 9.20	$ 3.60
Second Quarter	6.64	4.08
Third Quarter	5.76	3.44
Fourth Quarter	6.72	4.00
2006		
First Quarter	$ 5.52	$ 4.00
Second Quarter	5.44	1.60
Third Quarter	4.87	2.31
Fourth Quarter	6.99	3.65

The number of common stockholders of record on March 13, 2007 was 300.

We have never declared or paid cash dividends on our common stock, and we do not expect to pay any cash dividends on our common stock in the foreseeable future.

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Item 6. ***Selected Financial Data***

The following selected financial data are derived from our financial statements. The data should be read in conjunction with Management s Discussion and Analysis of Financial Condition and Results of Operations and the financial statements, related notes, and other financial information included herein. Patent related costs were previously included in research and development expenses but have been reclassified to general and administrative expenses for all periods displayed below.

	Year Ended December 31,				
	2006	2005	2004	2003	2002
	(In thousands, except per share data)				
Statement of Operations Data:					
Alliance revenue(1)	$ 2,421	$ 2,467	$ 942	$ 897	$ 29,606
Operating expenses:					
Research and development	12,705	11,170	8,249	9,898	6,169
General and administrative	6,276	5,120	5,616	8,386	7,465
Total operating expenses	18,981	16,290	13,865	18,284	13,634
(Loss) income from operations	(16,560)	(13,823)	(12,923)	(17,387)	15,972
Other income (expense):					
Investment income, net	505	369	217	190	650
Interest expense	(425)	(252)	(29)	(118)	(150)
Gain on sale of securities, net				104	
(Loss) income before income taxes	(16,480)	(13,706)	(12,735)	(17,211)	16,472
Income tax (provision) benefit	(45)				500
Net (loss) income	(16,525)	(13,706)	(12,735)	(17,211)	16,972
Accretion of preferred stock dividend			(2,676)	(5,529)	(4,246)
Net (loss) income applicable to common stockholders	$ (16,525)	$ (13,706)	$ (15,411)	$ (22,740)	$ 12,726
Basic net (loss) income per share	$ (0.99)	$ (0.99)	$ (1.03)	$ (2.69)	$ 2.90
Accretion of preferred stock dividends			(0.22)	(0.87)	(0.73)
Net (loss) income per share applicable to common stockholders	$ (0.99)	$ (0.99)	$ (1.25)	$ (3.56)	$ 2.17
Diluted net (loss) income per share	$ (0.99)	$ (0.99)	$ (1.03)	$ (2.69)	$ 2.56
Accretion of preferred stock dividends			(0.22)	(0.87)	(0.64)
	$ (0.99)	$ (0.99)	$ (1.25)	$ (3.56)	$ 1.92

Net (loss) income per share applicable to common stockholders					
Shares used in computing basic net (loss) income per common share(2)	16,625	13,886	12,364	6,382	5,860
Shares used in computing diluted net (loss) income per common share(2)	16,625	13,886	12,364	6,382	6,623
Balance Sheet Data:					
Cash, cash equivalents and short-term investments	$ 38,187	$ 8,376	$ 14,413	$ 13,668	$ 19,175
Working capital	30,983	4,998	13,181	10,740	17,638
Total assets	40,541	9,989	15,391	14,410	21,249
Capital lease obligations, current portion	7	7			34
4% convertible subordinated notes payable	5,033	5,033			
9% convertible subordinated notes payable				1,306	1,306
Series A convertible preferred stock				5	7
Accumulated deficit	(329,526)	(313,000)	(299,294)	(283,883)	(261,143)
Total stockholders equity (deficit)	12,237	(335)	12,769	10,526	17,444

(1) 2002 alliance revenue includes approximately $29.5 million related to the collaboration and license agreement with Isis Pharmaceuticals, Inc.

(2) Computed on the basis described in Note 12 of notes to financial statements appearing elsewhere in this Annual Report on Form 10-K.

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

Overview

We are engaged in the discovery and development of synthetic DNA- and RNA-based compounds for the treatment of cancer, infectious diseases, autoimmune diseases, and asthma/allergies, and for use as vaccine adjuvants. We have designed proprietary product candidates to modulate immune responses through Toll-like Receptors, or TLRs. TLRs are specific receptors present in immune system cells that direct the immune system to respond to potential disease threats. Relying on our expertise in DNA and RNA chemistry, we are identifying product candidates targeted to TLRs 7, 8 or 9 for our internal development programs and for collaborative alliances. We are developing both agonists and antagonists of TLRs 7, 8 and 9. We have three internal programs, in oncology, infectious diseases, and autoimmune diseases, and two collaborative alliances relating to the development of treatments for asthma and allergies and the development of adjuvants for vaccines.

Our most advanced product candidate, IMO-2055, is an agonist of TLR9. We are currently conducting a Phase 2 trial of IMO-2055 in oncology and a Phase 1/2 trial of IMO-2055 in combination with chemotherapy in oncology. We have selected a second TLR9 agonist, IMO-2125, as a lead product candidate for treating infectious diseases and plan to submit an Investigational New Drug application, or IND, to the U.S. Food and Drug Administration, or FDA, for this product candidate in the second quarter of 2007. In our autoimmune disease program, which is in earlier stages of research, we are evaluating TLR antagonists in preclinical models. We are collaborating with Novartis International Pharmaceutical, Ltd., or Novartis, for the discovery, development, and commercialization of TLR9 agonists for the treatment of asthma/allergy indications. We also are collaborating with Merck & Co., Inc., or Merck, for the use of our TLR7, 8 and 9 agonists in combination with Merck s therapeutic and prophylactic vaccines in the areas of oncology, infectious diseases, and Alzheimer s disease.

At December 31, 2006, we had an accumulated deficit of $329.5 million. We expect to incur substantial operating losses in the future and do not expect to generate significant funds internally until we successfully complete development and obtain marketing approval for products, either alone or in collaborations with third parties, which we expect will take a number of years. In order to commercialize our therapeutic products, we need to address a number of technological challenges and to comply with comprehensive regulatory requirements. In 2007, we expect that our research and development expenses will be higher than our research and development expenses in 2006 as we commence new clinical trials of IMO-2055 and, subject to filing an IND and the IND becoming effective, begin clinical trials of IMO-2125.

Critical Accounting Policies and Estimates

This management s discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, management evaluates its estimates and judgments, including those related to revenue recognition. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We regard an accounting estimate or assumption underlying our financial statements as a critical accounting estimate where (i) the nature of the estimate or assumption is material due to the level of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change; and (ii) the impact of the estimates and assumptions on financial condition or operating performance is material.

Our significant accounting policies are described in Note 2 of the notes to our financial statements appearing elsewhere in this annual report on Form 10-K. Not all of these significant policies, however, fit the definition of critical accounting estimates. We believe that our accounting policies relating to revenue recognition and stock-based compensation fit the description of critical accounting estimates.

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Revenue Recognition

We recognize revenue in accordance with Securities and Exchange Commission, or SEC Staff Accounting Bulletin No. 104, or SAB 104, that requires four basic criteria be met before revenue can be recognized:

persuasive evidence of an arrangement exists;

delivery has occurred, services have been rendered or obligations have been satisfied;

the fee is fixed or determinable; and

collectibility is reasonably assured.

Determination of the last three criteria are based on management s judgments regarding the fixed nature of the fee charged for services rendered or products delivered and the collectibility of these fees. Should changes in conditions cause management to determine these criteria are not met for any future transactions, revenues recognized for any reporting period could be adversely affected.

When evaluating multiple element arrangements, the Company considers whether the components of the arrangement represent separate units of accounting as defined in Emerging Issues Task Force Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables* .

We recognize license fees and other upfront fees, not specifically tied to a separate earnings process, ratably over the term of our contractual obligation or our estimated continuing involvement under the research arrangement.

We recognize service and research and development revenue when the services are performed.

For payments that are specifically associated with a separate earnings process, we recognize revenue when the specific performance obligation is completed. Performance obligations typically consist of significant milestones in the development life cycle of the related technology, such as initiating clinical trials, filing for approval with regulatory agencies and obtaining approvals from regulatory agencies.

Stock-Based Compensation

We adopted Statement of Financial Accounting Standards, or SFAS, No. 123R, *Share-Based Payment,* on January 1, 2006. This statement requires us to recognize all share-based payments to employees as expense in the financial statements based on their fair values. Under SFAS No. 123R, we are required to record compensation expense over an award s vesting period based on the award s fair value at the date of grant. We elected to adopt SFAS No. 123R on a modified prospective basis. As a result, the financial statements for periods prior to January 1, 2006, do not include compensation cost calculated under the fair value method. Our policy is to charge the fair value of stock options as an expense on a straight-line basis over the vesting period. Prior to January 1, 2006, we applied Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees,* and therefore, recorded the intrinsic value of stock-based compensation as an expense.

New Accounting Pronouncements

In September 2006, the Financial Accounting Standards Board, or FASB, issued SFAS No. 157, *Fair Value Measurements* , or SFAS No. 157. SFAS No. 157 defines fair value, establishes a framework for measuring fair

value, and expands disclosures about fair value measurement. This statement applies under other accounting pronouncements that require or permit fair value measurements and does not require any new fair value measurement. SFAS No. 157 is effective for fiscal years beginning after November 15, 2007. We are currently evaluating the effect of SFAS No. 157 on our financial statements.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities*, or SFAS No. 159, which includes an amendment of SFAS No. 115, *Accounting for Certain Investments in Debt or Equity Securities*. SFAS No. 159 permits entities to choose to measure many financial instruments and certain other items at fair value to improve financial reporting by mitigating volatilities in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge

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accounting provisions. SFAS No. 159 is effective for fiscal years beginning after November 15, 2007. We are currently evaluating the effect of SFAS No. 159 on our financial statements.

In June 2006, the FASB issued FASB Interpretation No. (FIN) 48, *Accounting for Uncertainty in Income Taxes an Interpretation of FASB Statement No. 109*, or FIN No. 48. FIN No. 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise s financial statements in accordance with SFAS No. 109, *Accounting for Income Taxes*. FIN No. 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. It also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition. FIN No. 48 is effective for fiscal years beginning after December 15, 2006. We are currently evaluating the effect of FIN No. 48 on our financial statements.

Results of Operations

Years ended December 31, 2006, 2005 and 2004

Revenues

Total revenues decreased slightly by approximately $0.1 million, or 4%, from $2.5 million in 2005 to $2.4 million in 2006 and increased by $1.6 million, or 178%, from $0.9 million in 2004 to $2.5 million in 2005. The decrease in revenue in 2006 primarily reflects the inclusion in 2005 of revenues related to a reimbursement of third party expenses in 2005 under our collaboration agreement with Novartis. This decrease is partially offset by $1.7 million representing a full year of license fee revenue recognized in 2006 under the same collaboration with Novartis and license fee revenue recognized under our collaboration agreement with Merck signed in December 2006. In December 2006, we received a $20.0 million upfront payment under our collaboration agreement with Merck. We are recognizing the $20.0 million upfront payment over the potential research term under the agreement. Of this $20.0 million, we recognized $0.3 million as revenue in 2006 with the balance recorded in deferred revenue at December 31, 2006.

Revenue increased in 2005 from 2004 primarily due to the license fees and reimbursed third party expenses recognized under our collaboration agreement with Novartis entered into in May 2005. In July 2005, we received from Novartis a $4.0 million upfront fee under the Novartis agreement. Of this $4.0 million, we recognized $1.2 million as revenue in 2005 with the balance being recorded in deferred revenue at December 31, 2005 and amortized over the expected research term.

Our revenues for 2006, 2005 and 2004 were comprised of payments under various collaboration and licensing agreements for research and development, including reimbursement of third party expenses, and license fees, sublicense fees, and royalty payments. Revenue for 2004 also included a milestone payment.

Research and Development Expenses

Research and development expenses increased by approximately $1.5 million, or 13%, from $11.2 million in 2005 to $12.7 million in 2006 and increased by approximately $3.0 million, or 35%, from $8.2 million in 2004 to $11.2 million in 2005. The increase in research and development expenses from 2005 to 2006 was primarily due to increased costs associated with IMO-2125 preclinical studies in infectious disease, higher payroll costs, an increase in stock-based compensation and costs associated with the formation of our Oncology Clinical Advisory Board. These increased expenses were offset, in part, by third party expenses incurred by us in 2005 related to the Novartis collaboration, which were not incurred in 2006. The increase in 2005 was primarily attributable to patient and management costs associated with our Phase 2 clinical trial of IMO-2055, studies leading to the selection of

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IMO-2125 as a lead compound, and manufacturing of IMO-2125. The year 2005 also included third-party costs associated with our Novartis collaboration.

	Year Ended December 31,			Annual Percentage Change	
	2006	2005	2004	2006/2005	2005/2004
	(In thousands)				
IMO-2055 External Development Expenses	$ 2,890	$ 3,872	$ 2,234	(25)%	73%
Other Drug Development Expenses	5,439	2,652	2,147	105%	24%
Basic Discovery Expenses	4,376	4,646	3,868	(6)%	20%
Total Research and Development Expenses	$ 12,705	$ 11,170	$ 8,249	13%	35%

Patent related costs were previously included in research and development expenses but have been reclassified to general and administrative expenses for all periods displayed above. In the preceding table, research and development expense is set forth in the following three categories:

IMO-2055 External Development Expenses. These expenses include external expenses that we have incurred in connection with IMO-2055, our lead compound being developed for oncology applications. These external expenses reflect payments to independent contractors and vendors for drug development trials and studies conducted after the initiation of IMO-2055 clinical trials and drug manufacturing and related costs but exclude internal costs such as payroll and overhead. Since 2003, when we commenced clinical development of IMO-2055, we have incurred approximately $10.6 million in external expenses in connection with IMO-2055. The decrease in IMO-2055 expenses in 2006 compared to 2005 was primarily attributable to lower Phase 2 trial expenses as we approached full enrollment of our Phase 2 clinical trial and to a decrease in drug supply expenses as a result of the manufacture and expense recognition of IMO-2055 during 2005 but not during 2006. These decreases were partially offset by an increase in the Phase 1/2 clinical trial, which we initiated in October 2005, expenses and an increase in additional nonclinical safety studies of IMO-2055. The increase in IMO-2055 expenses in 2005 compared to 2004 was primarily attributable to expenses associated with our Phase 2 clinical trial, which began in October 2004, and drug supply expenses as a result of the manufacture and expense recognition of IMO-2055 during 2005.

In October 2004, we commenced patient recruitment for an open label, multi-center Phase 2 clinical trial of IMO-2055 as a monotherapy in patients with metastatic or recurrent clear cell renal cancer. The trial is a two-stage, multi-center, open label study of IMO-2055. Under the protocol for the trial, we are seeking to enroll a total of up to 92 patients in the first stage of the trial, 46 who have failed one prior therapy and 46 who have not received any prior therapy. We plan to use the Phase 2 first stage data in the design of appropriate follow-up trials. We plan to present results from this on-going trial when a complete set of data from the first stage becomes available after completion of treatment by all patients.

In October 2005, we initiated a Phase 1/2 clinical trial of IMO-2055 in combination with the chemotherapy agents gemcitabine and carboplatin. We are seeking to enroll up to 26 refractory solid tumor patients in the Phase 1 portion of the trial to evaluate the safety of the combination. We expect to announce results of Phase 1 of this study by the end of 2007.

Other Drug Development Expenses. These expenses include internal and external expenses associated with preclinical development of identified compounds in anticipation of advancing these compounds into clinical

development in addition to internal costs associated with products in clinical development.

The internal and external expenses associated with preclinical compounds include payments to contract vendors for manufacturing and the related stability studies, preclinical studies including animal toxicology and pharmacology studies and professional fees, as well as payroll and overhead. The internal expenses associated with products in clinical development include costs associated with our Oncology Clinical Advisory Board, payroll and overhead.

For the years ended December 31, 2006 and 2005, we had direct external expenses of approximately $2.4 million and $0.3 million, respectively relating to IMO-2125. We had no direct external expenses in 2004 relating to IMO-2125. The increase in these expenses in 2006 was primarily attributable to manufacturing and

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IND-enabling safety study costs associated with IMO-2125, costs associated with the formation of our Oncology Clinical Advisory Board and an increase in compensation costs attributable to the hiring of additional employees and our adoption of SFAS No. 123R. These increases were offset, in part by third party expenses incurred by us in 2005 related to the Novartis collaboration, which were not incurred in 2006. The increase in these expenses in 2005 compared to 2004 was primarily attributable to third party costs associated with our Novartis collaboration and the manufacture of IMO-2125. This increase was partially offset by a decrease in compensation primarily attributable to the retirement of one of our officers in early 2005.

Basic Discovery Expenses. These expenses include our internal and external expenses relating to the continuing discovery and development of our TLR-targeted programs, including agonists and antagonists of TLRs 7, 8 and 9. These expenses reflect payments for laboratory supplies, external research, and professional fees, as well as payroll and overhead. The decrease in these expenses in 2006 compared to 2005 was primarily attributable to a decrease in external research as some of our collaborative agreements with academic institutions were completed. The decrease was also attributable to a decrease in compensation expense as a result of allocating more executive compensation to other departments, offset partially by an increase in compensation costs attributable, in part, to our adoption of SFAS No. 123R. The decrease in 2006 expenses was partially offset by an increase in allocation of overhead costs as a result of higher facility expenses. The increase in 2005 as compared to 2004 was primarily attributable to a credit recorded to stock compensation in 2004 as a result of a decrease in the intrinsic value of the options that had been repriced and marked to market and to higher payroll expenses in 2005.

We do not know if we will be successful in developing IMO-2055 or any of our other product candidates. At this time, without knowing the results of our ongoing clinical trials of IMO-2055 and without an established plan for future clinical tests of IMO-2055, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of, or the period, if any, in which material net cash inflows may commence from, IMO-2055. Moreover, the clinical development of IMO-2055 or any of our other product candidates is subject to numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of unanticipated events arising during clinical development, including with respect to:

the number of clinical sites included in the trials;

the length of time required to enroll suitable subjects;

the number of subjects that ultimately participate in the trials; and

the efficacy and safety results of our clinical trials and the number of additional required clinical trials.

General and Administrative Expenses

General and administrative expenses increased by approximately $1.2 million, or 24%, from $5.1 million in 2005 to $6.3 million in 2006 and decreased by approximately $0.5 million, or 9%, from $5.6 million in 2004 to $5.1 million in 2005. General and administrative expenses consisted primarily of salary expense, stock compensation expense, consulting fees and professional legal fees associated with our patent applications and maintenance, our regulatory filing requirements, and business development.

The $1.2 million increase from 2005 to 2006 primarily reflects an increase in compensation expenses associated with the addition of employees in 2006, higher compensation levels in 2006, and higher stock compensation expenses resulting from our adoption of SFAS No. 123R. The increase also reflects higher consulting and legal expenses as a result of the Merck collaboration signed in December 2006. These increases were partially offset by lower patent

preparation costs resulting from a consolidation of our patent portfolio and greater efficiencies in maintaining our patents. The primary reason for the $0.5 million decrease in 2005 as compared to 2004 was a $0.7 million charge resulting from the resignation of our former Chief Executive Officer. As a result of our lease of new headquarters which we expect to move into in June 2007, our rent expense will increase significantly in 2007 and future years.

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Investment Income, net

Investment income increased by approximately $0.1 million, or 25%, from $0.4 million in 2005 to $0.5 million in 2006 and increased by approximately $0.2 million, or 100%, from $0.2 million in 2004 to $0.4 million in 2005. The increases for both periods is primarily attributable to higher interest rates.

Interest Expense

Interest expense increased by approximately $172,000, or 68%, from $252,000 in 2005 to $424,000 in 2006 and increased by approximately $223,000, or 769%, from $29,000 in 2004 to $252,000 in 2005. The increase in 2006 is due to the inclusion of a full year of interest and amortization of deferred financing costs associated with our 4% notes in the aggregate principal amount of approximately $5.0 million issued in May 2005. The 4% notes were converted into shares of our common stock in February 2007. Interest expense in 2004 is related to our 9% notes that matured on April 1, 2004. Upon the maturity of those notes, we paid $1.3 million to the holders, representing the outstanding principal amount of our 9% notes, plus accrued interest. We expect that interest expense will decrease in 2007 as a result of our conversion of all of our 4% notes into common stock in February 2007.

Income Tax Expense

In 2006, we recorded approximately $45,000 as income tax expense as a result of income subject to the alternative minimum tax or AMT. We did not have income subject to AMT for the years ended 2005 and 2004.

Preferred Stock Dividends

On December 4, 2003, shareholders approved amendments to our Certificate of Incorporation that:

- reduced the liquidation preference of our series A convertible preferred stock from $100 per share to $1 per share;
- reduced the annual dividend on our series A convertible preferred stock from 6.5% to 1%; and
- increased the number of shares of our common stock issuable upon conversion of our series A convertible preferred stock by 25% over the number of shares that would otherwise be issuable. This special conversion extended for a 60-day period between December 4, 2003 and February 2, 2004 inclusive.

During the 60-day conversion period, the conversion ratio was increased such that the series A convertible preferred shareholders received approximately 3.68 shares of common stock for each preferred share converted instead of the 2.94 shares that they would normally have received. During the conversion period holders of 99.9% of the series A convertible preferred stock converted their preferred stock to common stock.

The Series A convertible preferred stock dividends for each of the three years ended December 31, 2006 were as follows:

	Preferred Stock Dividends		
	2006	**2005**	**2004**
	$ 656	$ 656	$ 503

Accretion of dividends expected to be paid on Series A Convertible Preferred Stock			
Reversal of 2003 dividend accretion since preferred shares were converted in January and February 2004 and the dividends were not paid			(570,000)
Market value of 25% additional shares issued upon conversion			3,245,492
Total preferred stock dividend	$ 656	$ 656	$ 2,675,995

As shown above, the value of the 25% additional shares issued during the special preferred stock conversion periods is recorded as an addition to dividends in the statement of operations during 2004 of $3.2 million. As a result of the amendment to our Certificate of Incorporation and the series A convertible preferred stock conversions, the preferred stock liquidation preference was reduced from $73,055,654 at December 3, 2003 to $494,912 at December 31, 2003 and $643 at February 2, 2004.

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All preferred stock dividends are payable, at our election, either in cash or shares of series A convertible preferred stock. We have paid all dividends in stock until 2004 when we elected to pay in cash.

Net Loss Applicable to Common Stockholders

As a result of the factors discussed above, our net loss applicable to common stockholders amounted to $16.5 million for the year ended December 31, 2006, as compared to approximately $13.7 million for the year ended December 31, 2005 and $15.4 million for the year ended December 31, 2004. We have incurred losses of $69.3 million since January 1, 2001. We have incurred net losses of $260.2 million prior to December 31, 2000 during which time we were involved in the development of antisense technology. Since our inception, we had an accumulated deficit of $329.5 million through December 31, 2006. We expect to continue to incur substantial operating losses in the future.

Net Operating Loss Carryforwards

As of December 31, 2006, we had cumulative net operating losses of approximately $261.3 million and tax credit carryforwards of approximately $5.0 million. The Tax Reform Act of 1986 contains provisions that may limit our ability to utilize net operating loss and tax credit carryforwards in any given year if certain events occur, including cumulative changes in ownership interests in excess of 50% over a three-year period. We have completed several financings since the effective date of the Tax Act, which, as of December 31, 2006, have resulted in ownership changes, as defined under the Tax Act. As a result our ability to utilize all of our available net operating loss and tax credit carryforwards in the future will be significantly limited. We have not prepared an analysis to determine the effect of the ownership change limitation on our ability to utilize our net operating losses and tax credit carryforwards.

Liquidity and Capital Resources

Sources of Liquidity

We require cash to fund our operating expenses, to make capital expenditures and to pay debt service. Historically, we have funded our cash requirements primarily through the following:

equity and debt financing;

license fees and research funding under collaborative and license agreements;

interest income; and

lease financings.

In December 2006, we entered into an exclusive license and research collaboration agreement with Merck to research, develop, and commercialize vaccine products containing our TLR7, 8 and 9 agonists in the fields of oncology, infectious diseases and Alzheimer s disease. Under the terms of the agreement, Merck paid us a $20.0 million license fee in December 2006. In addition, in connection with the execution of the license and collaboration agreement, we issued and sold to Merck 1,818,182 shares of our common stock for a price of $5.50 per share resulting in an aggregate purchase price of $10.0 million.

In March 2006, we raised approximately $9.8 million in gross proceeds from a private placement to institutional investors. In the private placement, we sold for a purchase price of $3.52 per share 2,769,886 shares of common stock and warrants to purchase 2,077,414 shares of common stock. The warrants have an exercise price of $5.20 per share,

are fully exercisable and will expire if not exercised on or prior to September 24, 2011. The warrants may be exercised by cash payment only. The net proceeds to us from the offering, excluding the proceeds of any future exercise of the warrants, totaled approximately $8.9 million.

In March 2006, we secured a purchase commitment from an investor to purchase from us up to $9.8 million of our common stock during the period from June 24, 2006 through December 31, 2006 in up to three drawdowns made by us at our discretion. Prior to December 31, 2006, we drew down the full $9.8 million through the sale of 1,904,296 shares of common stock at a price of $5.12 per share resulting in net proceeds to us, excluding the

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proceeds of any future exercise of the warrants, described below, of approximately $8.9 million. The agent fees and other costs directly related to securing the commitment amounted to approximately $0.9 million. As part of the arrangement, we issued warrants to the investor to purchase 761,718 shares of common stock at an exercise price of $5.92 per share. The warrants are exercisable by cash payment only. The warrants are exercisable at any time on or prior to September 24, 2011. On or after March 24, 2010, we may redeem the warrants for $0.08 per warrant share following notice to the warrant holders if the closing sales price of the common stock exceeds 250% of the warrant exercise price for 15 consecutive trading days prior to the notice. We may exercise our right to redeem the warrants by providing at least 30 days prior written notice to the holders of the warrants.

In May 2005, we entered into a research collaboration and option agreement and a license, development and commercialization agreement with Novartis to discover, develop and potentially commercialize immune modulatory oligonucleotides that are TLR9 agonists and that are identified as potential treatments for asthma and allergies. Under the terms of the agreements, Novartis paid us a $4.0 million license fee in July 2005. In February 2007, Novartis elected to extend the research phase of the collaboration by one year until May 2008 and, in connection with the extension, will pay us $1.0 million.

In May 2005, we issued approximately $5.0 million in principal amount of 4% convertible subordinated notes due April 30, 2008 to overseas investors. Interest on the 4% convertible subordinated notes was payable in arrears on December 15, 2005 for the period from issuance to that date, and thereafter semi-annually on April 30 and October 30 and at maturity or upon conversion. We have the option to pay interest on the 4% convertible subordinated notes in cash or in shares of common stock at the then current market value of the common stock. In 2005, we issued 19,963 shares of common stock in payment of interest on the 4% convertible subordinated notes. All other interest payments have been paid in cash. The net proceeds from the offering totaled approximately $4.6 million. On February 13, 2007, we elected to automatically convert the 4% convertible subordinated notes in the aggregate principal amount of $5.0 million into 706,844 shares of our common stock effective on February 20, 2007. We were entitled to exercise the right of automatic conversion because the volume-weighted average of the closing prices of the our common stock for the ten consecutive trading days ending February 8, 2007 exceeded $8.90, which represented 125% of the conversion price of the notes.

In August 2004, we raised approximately $5.1 million in gross proceeds from a private placement to institutional and overseas investors. In the private placement, we sold 1,102,925 shares of common stock and warrants to purchase 220,585 shares of common stock. The warrants to purchase common stock have an exercise price of $5.36 per share and will expire if not exercised on or prior to August 27, 2009. The warrants may be exercised by cash payment only. On or after February 27, 2005, we may redeem the warrants if the closing sales price of the common stock for each day of any 20 consecutive trading day period is greater than or equal to $10.72 per share. The redemption price will be $0.08 per share of common stock underlying the warrants. We may exercise our right to redeem the warrants by providing 30 days prior written notice to the holders of the warrants. The net proceeds to us from the offering, excluding the proceeds of any future exercise of the warrants, totaled approximately $4.7 million.

In April 2004, we raised approximately $11.8 million in gross proceeds through a registered direct offering. In the offering, we sold 2,112,475 shares of common stock and warrants to purchase 380,246 shares of common stock to institutional and other investors. The warrants to purchase common stock have an exercise price of $9.12 per share and are exercisable on or prior to April 20, 2009. The warrants may be exercised by cash payment only. We may redeem the warrants if the closing sales price of the common stock for each day of any 20 consecutive trading day period ending within 30 days prior to providing notice of redemption is greater than or equal to $20.80 per share. The redemption price will be $0.08 per share of common stock underlying the warrants. We may exercise our right to redeem the warrants by providing 30 days prior written notice to the holders of the warrants. The net proceeds to us from the offering, excluding the proceeds of any future exercise of the warrants, totaled approximately $10.7 million.

Cash Flows

As of December 31, 2006, we had approximately $38.2 million in cash and cash equivalents and investments, a net increase of approximately $29.8 million from December 31, 2005. We generated $2.6 million of cash from

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operating activities during 2006. The $2.6 million primarily reflects a $17.8 million increase in deferred revenue that is attributable to the receipt of the $20.0 million upfront payment we received under our collaboration agreement with Merck less the amortization of other license fees included in deferred revenue at December 31, 2005. This increase was offset by our $16.5 million net loss for the period, as adjusted for non-cash expenses, including depreciation, amortization and stock-based compensation, and changes in our accounts receivable and payable.

The net cash used in investing activities during 2006 of $6.9 million reflects our purchase of approximately $26.8 million in securities offset by our sale of $8.0 million of securities and the proceeds of approximately $12.6 million from securities that matured in 2006. The net cash used in investing activities also reflects an increase in restricted cash to secure a line of credit for the security deposit of our new facility and our 2006 purchases of laboratory and computer equipment.

The net cash provided by financing activities during 2006 of $27.9 million, reflects approximately $10.0 million in gross proceeds that we received from the sale of common stock to Merck under our agreement with Merck , approximately $9.8 million in gross proceeds that we received from the private placement to institutional investors in March 2006, and approximately $9.8 in gross proceeds from the sale of common stock under our March 2006 purchase commitment, offset by the expenses associated with both the March 2006 private placement and the purchase commitment. The net cash provided by financing activities also reflects approximately $0.1 million in proceeds received from the exercise of stock options during 2006.

Funding Requirements

We have incurred operating losses in all fiscal years except 2002 and had an accumulated deficit of $329.5 million at December 31, 2006. We had cash, cash equivalents and short-term investments of $38.2 million at December 31, 2006. We believe that our existing cash, cash equivalents and short-term investments will be sufficient to fund our operations at least through December 31, 2008. We expect to continue to incur substantial operating losses in future periods. These losses, among other things, have had and will continue to have an adverse effect on our stockholders equity, total assets and working capital.

We have received no revenues from the sale of drugs. To date, almost all of our revenues have been from collaborative and license agreements. We have devoted substantially all of our efforts to research and development, including clinical trials, and we have not completed development of any drugs. Because of the numerous risks and uncertainties associated with developing drugs, we are unable to predict the extent of any future losses, whether or when any of our products will become commercially available, or when we will become profitable, if at all.

We do not expect to generate significant additional funds internally until we successfully complete development and obtain marketing approval for products, either alone or in collaboration with third parties, which we expect will take a number of years. In addition, we have no committed external sources of funds. Should we be unable to raise sufficient funds in the future, we may be required to significantly curtail our operating plans and possibly relinquish rights to portions of our technology or products. In addition, increases in expenses or delays in clinical development may adversely impact our cash position and require further cost reductions. No assurance can be given that we will be able to operate profitably on a consistent basis, or at all, in the future.

We believe that the key factors that will affect our internal and external sources of cash are:

- the success of our clinical and preclinical development programs;

- the success of our existing strategic collaborations with Novartis and Merck;

the cost, timing and outcome of regulatory reviews;

the receptivity of the capital markets to financings by biotechnology companies; and

our ability to enter into new strategic collaborations with biotechnology and pharmaceutical companies and the success of such collaborations.

Additional financing may not be available to us when we need it or may not be available to us on favorable terms. We could be required to seek funds through arrangements with collaborators or others that may require us to

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relinquish rights to some of our technologies, product candidates or drugs that we would otherwise pursue on our own. In addition, if we raise additional funds by issuing equity securities, our then existing stockholders will experience dilution. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends, and are likely to include rights that are senior to the holders of our common stock. Any additional debt financing or equity that we raise may contain terms, such as liquidation and other preferences, or liens or other restrictions on our assets, which are not favorable to us or our stockholders. The terms of any financing may adversely affect the holdings or the rights of existing stockholders. If we are unable to obtain adequate funding on a timely basis or at all, we may be required to significantly curtail one or more of our discovery or development programs. For example, we significantly curtailed expenditures on our research and development programs during 1999 and 2000 because we did not have sufficient funds available to advance these programs at planned levels.

Contractual Obligations

As of December 31, 2006, our contractual commitments were as follows:

	Payments Due by Period				
Contractual Obligations	**Total**	**Less than 1 year**	**2-3 years**	**4-5 years**	**After 5 years**
Operating Lease Commitments	$ 9,181,000	$ 877,000	$ 2,397,000	$ 2,567,000	$ 3,340,000
Capital Lease Commitments	10,000	7,000	3,000		
4% Convertible Notes Payable	5,033,000		5,033,000		
Total	$ 14,224,000	$ 884,000	$ 7,433,000	$ 2,567,000	$ 3,340,000

Our only material lease commitment relates to our new facility in Cambridge, Massachusetts. Under our license agreements, we are obligated to make milestone payments upon achieving specified milestones and to pay royalties to our licensors. These contingent milestone and royalty payment obligations are not included in the above table.

In July 2004, we signed an agreement with a contract research organization, or CRO, to manage the Phase 2 clinical trial of IMO-2055 in patients with renal cell cancer. Under the agreement and a subsequent change in scope, we may pay the CRO up to $4.8 million in connection with this trial. As of December 31, 2006, we have paid approximately $2.9 million to the CRO under the agreement.

In May 2005, we sold approximately $5.0 million in principal amount of 4% convertible subordinated notes due April 30, 2008. In February 2007, we converted all of the notes into 706,844 shares of our common stock.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

Historically, our primary exposures have been related to nondollar-denominated operating expenses in Europe. As of December 31, 2006, we have no assets and liabilities related to nondollar-denominated currencies.

We maintain investments in accordance with our investment policy. The primary objectives of our investment activities are to preserve principal, maintain proper liquidity to meet operating needs and maximize yields. Although our investments are subject to credit risk, our investment policy specifies credit quality standards for our investments

and limits the amount of credit exposure from any single issue, issuer or type of investments. We do not own derivative financial investment instruments in our investment portfolio.

Based on a hypothetical ten percent adverse movement in interest rates, the potential losses in future earnings, fair value of risk sensitive financial instruments, and cash flows are immaterial, although the actual effects may differ materially from the hypothetical analysis.

Item 8. ***Financial Statements and Supplementary Data***

All financial statements required to be filed hereunder are filed as listed under Item 15(a) and are incorporated herein by this reference.

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Quarterly Operating Results (Unaudited)

The following table presents the unaudited statement of operations data for each of the eight quarters in the period ended December 31, 2006. The information for each of these quarters is unaudited, but has been prepared on the same basis as the audited financial statements appearing elsewhere in this Annual Report on Form 10-K. In our opinion, all necessary adjustments, consisting only of normal recurring adjustments, have been made to present fairly the unaudited quarterly results when read in conjunction with the audited financial statements and the notes thereto appearing elsewhere in this document. These operating results are not necessarily indicative of the results of operations that may be expected for any future period. Patent related costs were previously included in research and development expenses but have been reclassified to general and administrative expenses for all periods displayed below.

	Three Months Ended							
	Dec. 31 2006	Sep. 30 2006	Jun. 30 2006	Mar. 31 2006	Dec. 31 2005	Sep. 30 2005	Jun. 30 2005	Mar. 31 2005
	(In thousands, except per share data)							
Statement of Operations Data:								
Alliance revenues	$ 592	$ 572	$ 622	$ 636	$ 1,441	$ 544	$ 311	$ 171
Operating expenses:								
Research and development	3,046	3,009	3,665	2,986	3,988	2,261	2,679	2,242
General and administrative	2,302	1,395	1,312	1,267	1,339	1,232	1,331	1,218
Total operating expenses	5,348	4,404	4,977	4,253	5,327	3,493	4,010	3,460
Loss from operations	(4,756)	(3,832)	(4,355)	(3,617)	(3,886)	(2,949)	(3,699)	(3,289)
Investment income	179	120	134	72	113	107	83	66
Interest expense	(107)	(107)	(106)	(105)	(107)	(108)	(37)	
Loss before income taxes	(4,684)	(3,819)	(4,327)	(3,650)	(3,880)	(2,950)	(3,653)	(3,223)
Income tax provision	(45)							
Net loss applicable to common stockholders	$ (4,729)	$ (3,819)	$ (4,327)	$ (3,650)	$ (3,880)	$ (2,950)	$ (3,653)	$ (3,223)
Basic and diluted net loss per share applicable to common stockholders	$ (0.26)	$ (0.22)	$ (0.26)	$ (0.26)	$ (0.28)	$ (0.21)	$ (0.26)	$ (0.23)

Shares used in computing basic and diluted loss per common share(1)	18,352	17,223	16,718	14,154	13,902	13,889	13,881	13,871

(1) Computed on the basis described in Note 12 of notes to financial statements appearing elsewhere in this Annual Report on Form 10-K.

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

None.

Item 9A. ***Controls and Procedures***

(a) *Evaluation of Disclosure Controls and Procedures.* Our management, with the participation of our chief executive officer and our chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2006. The term disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company s management, including its principal executive

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and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2006, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

(b) *Changes in Internal Controls.* No change in our internal control over financial reporting occurred during the fiscal year ended December 31, 2006 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information.***

None.

PART III.

The response to the Part III items incorporate by reference certain sections of our Proxy Statement for our annual meeting of stockholders to be held on June 13, 2007.

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

We have adopted a written code of business conduct and ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. We intend to disclose any amendments to, or waivers from, our code of business conduct and ethics on our website at www.iderapharma.com.

The remainder of the response to this item is contained under the following captions in the 2007 Proxy Statement: Proposal 1 Election of Directors, Section 16(a) Beneficial Ownership Reporting Compliance and Information Relating to our Board of Directors and its Committees, which sections are incorporated herein by reference. See Part I of this Annual Report on 10-K under the caption Executive Officers of Idera Pharmaceuticals.

Item 11. ***Executive Compensation***

The response to this item is contained in the 2007 Proxy Statement under the captions: Certain Relationships and Policies on Related Party Transactions, and Director Compensation and Executive Compensation, which sections are incorporated herein by reference.

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

The response to this item is contained in the 2007 Proxy Statement under the caption Security Ownership of Certain Beneficial Owners and Management which section is incorporated herein by reference.

The disclosures required for securities authorized for issuance under equity compensation plans are contained in the 2007 Proxy Statement under the caption Equity Compensation Plan Information.

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

The response to this item is contained in the 2007 Proxy Statement under the captions Certain Relationships and Policies on Related Party Transactions, and Director Compensation, which sections are incorporated herein by reference.

Item 14. ***Principal Accountant Fees and Services***

The response to this item is contained in the 2007 Proxy Statement under the caption Independent Auditors Fees and Other Matters , which section is incorporated herein by reference.

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PART IV.

Item 15. *Exhibits and Financial Statement Schedules*

(a)(1) *Financial Statements.*

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Statements of Operations for the years ended December 31, 2006, 2005 and 2004	F-3
Statements of Stockholders Equity (Deficit) for the years ended December 31, 2006, 2005 and 2004	F-4
Statements of Cash Flows for the years ended December 31, 2006, 2005 and 2004	F-5
Notes to Financial Statements	F-6

(2) We are not filing any financial statement schedules as part of this Annual Report on Form 10-K because they are not applicable or the required information is included in the financial statements or notes thereto.

(3) The list of Exhibits filed as a part of this Annual Report on Form 10-K is set forth on the Exhibit Index immediately preceding such Exhibits and is incorporated herein by this reference.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on this 30th day of March 2007.

Idera Pharmaceuticals, Inc.

By: /s/ Sudhir Agrawal
Sudhir Agrawal
Chief Executive Officer

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

Signature	Title	Date
/s/ James B. Wyngaarden James B. Wyngaarden, M.D.	Chairman of the Board of Directors	March 30, 2007
/s/ Sudhir Agrawal Sudhir Agrawal, D. Phil	Chief Executive Officer, Chief Scientific Officer and Director (Principal Executive Officer)	March 30, 2007
/s/ Robert W. Karr Robert W. Karr, M.D.	President and Director	March 30, 2007
/s/ Robert G. Andersen Robert G. Andersen	Chief Financial Officer and Vice President of Operations, Treasurer and Secretary (Principal Financial and Accounting Officer)	March 30, 2007
/s/ Youssef El-Zein Youssef El-Zein	Director	March 30, 2007
/s/ C. Keith Hartley C. Keith Hartley	Director	March 30, 2007
/s/ William S. Reardon William S. Reardon, C.P.A.	Director	March 30, 2007
/s/ Alison Taunton-Rigby	Director	March 30, 2007

Alison Taunton-Rigby, Ph.D., OBE

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IDERA PHARMACEUTICALS, INC.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Idera Pharmaceuticals, Inc.

We have audited the accompanying balance sheets of Idera Pharmaceuticals, Inc. as of December 31, 2006 and 2005, and the related statements of operations, stockholders equity (deficit) and cash flows for the each of the three years in the period ended December 31, 2006. These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company s internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Idera Pharmaceuticals, Inc. at December 31, 2006 and 2005, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2006, in conformity with U.S. generally accepted accounting principles.

As discussed in Notes 2 and 8 to the financial statements, on January 1, 2006, the Company adopted the provisions of Statement of Financial Accounting Standards No. 123(R), *Share-Based Payment.*

/s/ Ernst & Young LLP

Boston, Massachusetts
March 27, 2007

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IDERA PHARMACEUTICALS, INC.

BALANCE SHEETS

	December 31, 2006	Pro Forma December 31, 2006 Note 16 (Unaudited)	December 31, 2005
ASSETS			
Current assets:			
Cash and cash equivalents	$ 24,596,398	$ 24,561,927	$ 984,766
Short-term investments	13,590,783	13,590,783	7,390,903
Receivables	398,214	398,214	175,905
Prepaid expenses and other current assets	416,345	416,345	498,347
Total current assets	39,001,740	38,967,269	9,049,921
Property and equipment, net	622,358	622,358	418,684
Deferred financing costs	297,538		520,692
Restricted cash	619,551	619,551	
Total assets	$ 40,541,187	$ 40,209,178	$ 9,989,297
LIABILITIES AND STOCKHOLDERS EQUITY			
Current liabilities:			
Accounts payable	$ 1,155,046	$ 1,155,046	$ 536,371
Accrued expenses	864,500	830,029	1,338,048
Current portion of capital lease	6,519	6,519	6,519
Current portion of deferred revenue	5,992,314	5,992,314	2,171,287
Total current liabilities	8,018,379	7,983,908	4,052,225
Long term 4% convertible notes payable	5,032,750		5,032,750
Capital lease obligation, excluding current portion	3,259	3,259	10,321
Deferred revenue, net of current portion	15,249,583	15,249,583	1,229,451
Total liabilities	28,303,971	23,236,750	10,324,747
Commitments and contingencies			
Stockholders equity:			
Preferred stock, $0.01 par value, Authorized 5,000,000 shares			
Series A convertible preferred stock, Designated 1,500,000 shares, Issued and outstanding 655 at December 31, 2006 and 2005, respectively,			

Liquidation value $655 at December 31, 2006	7	7	7
Common stock, $0.001 par value, Authorized 40,000,000 and 25,000,000 shares at December 31, 2006 and 2005, respectively, Issued and outstanding 20,458,220, 21,165,064 and 13,927,631 shares at December 31, 2006 actual, December 31, 2006 pro forma and December 31, 2005 actual, respectively	20,458	21,165	13,928
Additional paid-in capital	341,742,775	346,477,280	312,729,992
Accumulated deficit	(329,525,608)	(329,525,608)	(313,000,200)
Accumulated other comprehensive loss	(416)	(416)	(11,341)
Deferred compensation			(67,836)
Total stockholders equity (deficit)	12,237,216	16,972,428	(335,450)
Total liabilities and stockholders equity (deficit)	$ 40,541,187	$ 40,209,178	$ 9,989,297

The accompanying notes are an integral part of these financial statements.

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IDERA PHARMACEUTICALS, INC.

STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2006	**2005**	**2004**
Alliance revenue	$ 2,421,186	$ 2,467,021	$ 942,598
Operating expenses:			
Research and development	12,704,746	11,170,224	8,249,319
General and administrative	6,276,367	5,119,739	5,615,908
Total operating expenses	18,981,113	16,289,963	13,865,227
Loss from operations	(16,559,927)	(13,822,942)	(12,922,629)
Other income (expense):			
Investment income, net	504,640	369,245	217,064
Interest expense	(424,465)	(252,062)	(29,385)
Loss before income taxes	(16,479,752)	(13,705,759)	(12,734,950)
Income tax provision	(45,000)		
Net loss	(16,524,752)	(13,705,759)	(12,734,950)
Accretion of preferred stock dividends	(656)	(656)	(2,675,995)
Net loss applicable to common stockholders	$ (16,525,408)	$ (13,706,415)	$ (15,410,945)
Basic and diluted net loss per share	$ (0.99)	$ (0.99)	$ (1.03)
Basic and diluted net loss per share applicable to common stockholders	$ (0.99)	$ (0.99)	$ (1.25)
Shares used in computing basic and diluted net loss per common share	16,625,060	13,885,882	12,364,240

The accompanying notes are an integral part of these financial statements.

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IDERA PHARMACEUTICALS, INC.

STATEMENTS OF STOCKHOLDERS EQUITY (DEFICIT)

	Series A Convertible Preferred Stock		Common Stock		Additional		Accumulated Other	
	Number of Shares	$0.01 Par Value	Number of Shares	$0.001 Par Value	Paid-In Capital	Accumulated Deficit	Comprehensive (Loss)/Income	Deferred Compensation
er 31, 2003	489,205	$ 4,892	8,810,321	$ 8,810	$ 294,435,303	$ (283,882,840)	$ (2,995)	$ (37,362)
tock			3,215,400	3,215	15,400,074			
on stock nts and urchases			30,772	31	154,712			
options and			13,731	14	129,434			
eferred								16,122
vidends	20				2,675,995	(2,675,995)		
ferred into	(488,570)	(4,885)	1,796,217	1,796	3,089			
ensation ons					(713,074)			
ss: marketable							(11,994)	
						(12,734,950)		
ve loss								
er 31, 2004	655	7	13,866,441	13,866	312,085,533	(299,293,785)	(14,989)	(21,240)
on stock nts and urchases			33,348	34	124,396			
and warrants terest			27,842	28	347,686			
options					72,000			(72,000)
eferred								25,404
vidends					656	(656)		
ensation ons					99,721			
come/(loss): n marketable							3,648	

						(13,705,759)		
ve loss									
er 31, 2005	655	7	13,927,631	13,928	312,729,992	(313,000,200)	(11,341)	(67,836)
tock			6,492,365	6,492	27,781,575			
on stock								
yee stock								
			31,963	32	108,159			
for services			6,261	6	27,349			
mployee								
					238,397			
erred								
					(67,836)			67,836
vidends					656	(656)		
ensation					924,483			
come/(loss):								
n marketable								
							10,925	
						(16,524,752)		
ve loss								
er 31, 2006	655	$ 7	20,458,220	$ 20,458	$ 341,742,775	$ (329,525,608)	$ (416)	$

The accompanying notes are an integral part of these financial statements.

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IDERA PHARMACEUTICALS, INC.

STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2006	**2005**	**2004**
Cash Flows from Operating Activities:			
Net loss	$ (16,524,752)	$ (13,705,759)	$ (12,734,950)
Adjustments to reconcile net loss to net cash used in operating activities			
Loss from disposition of assets	267	2,134	
Amortization of deferred compensation		25,404	16,122
Stock-based compensation	924,483	99,721	(713,074)
Depreciation and amortization expense	226,551	170,876	288,464
Issuance of stock options and stock for services	265,752	36,177	129,448
Amortization of deferred financing costs	223,154	130,173	
Non cash interest expense	34,472	100,976	
Changes in operating assets and liabilities Receivables	(222,309)	117,208	(90,177)
Prepaid expenses and other current assets	82,002	(165,031)	(231,619)
Accounts payable and accrued expenses	(251,314)	(61,290)	127,903
Deferred revenue	17,841,159	2,705,796	(83,787)
Net cash provided by (used in) operating activities	2,599,465	(10,543,615)	(13,291,670)
Cash Flows from Investing Activities:			
Purchases of available-for-sale securities	(26,768,159)	(19,853,754)	(18,635,747)
Proceeds from sale of available-for-sale securities	7,975,000	16,850,000	12,300,000
Proceeds from maturities of available-for-sale securities	12,625,066	5,000,000	2,850,000
Increase in restricted cash	(619,551)		
Purchases of property and equipment	(89,385)	(212,709)	(60,410)
Net cash (used in) provided by investing activities	(6,877,029)	1,783,537	(3,546,157)
Cash Flows from Financing Activities:			
Proceeds from issuance of convertible notes payable		5,032,750	
Sale of common stock and warrants, net of issuance costs	27,788,067		15,403,289
Issuance costs from issuance of note		(431,480)	
Proceeds from exercise of common stock options and employee stock purchases	108,191	124,430	154,743
Payment of debt			(1,306,000)
Payments on capital lease	(7,062)	(2,716)	
Net cash provided by financing activities	27,889,196	4,722,984	14,252,032
Net increase (decrease) in cash and cash equivalents	23,611,632	(4,037,094)	(2,585,795)
Cash and cash equivalents, beginning of period	984,766	5,021,860	7,607,655
Cash and cash equivalents, end of period	$ 24,596,398	$ 984,766	$ 5,021,860

The accompanying notes are an integral part of these financial statements.

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS
December 31, 2006

(1) Organization

Idera Pharmaceuticals, Inc. (Idera or the Company) is a biotechnology company engaged in the discovery and development of synthetic DNA- and RNA-based compounds for the treatment of cancer, infectious diseases, autoimmune diseases, and asthma/allergies, and for use as vaccine adjuvants. The Company has designed proprietary product candidates to modulate immune responses through Toll-like Receptors, or TLRs. TLRs are specific receptors present in immune system cells that direct the immune system to respond to potential disease threats. Relying on its expertise in DNA and RNA chemistry, the Company identifies product candidates targeted to TLRs 7, 8 or 9 for its internal development programs and for collaborative alliances. It is developing both agonists and antagonists of TLRs 7, 8 and 9. The Company has three internal programs, in oncology, infectious diseases, and autoimmune diseases, and two collaborative alliances relating to the development of treatments for asthma and allergies and the development of adjuvants for vaccines.

The Company s most advanced product candidate, IMO-2055, is an agonist of TLR9. It is currently conducting a Phase 2 trial of IMO-2055 in oncology and a Phase 1/2 trial of IMO-2055 in combination with chemotherapy in oncology. The Company has selected a second TLR9 agonist, IMO-2125, as a lead product candidate for treating infectious diseases and plans to submit an Investigational New Drug application, or IND, to the U.S. Food and Drug Administration, or FDA, for this product candidate in the second quarter of 2007. In its autoimmune disease program, which is in earlier stages of research, the Company is evaluating TLR antagonists in preclinical models. The Company is collaborating with Novartis International Pharmaceutical, Ltd. (Novartis) for the discovery, development, and commercialization of TLR9 agonists for the treatment of asthma/allergy indications and with Merck & Co., Inc. (Merck) for the use of our TLR7, 8 and 9 agonists in combination with Merck s therapeutic and prophylactic vaccines in the areas of oncology, infectious diseases, and Alzheimer s disease.

The Company has incurred operating losses in all fiscal years except 2002 and had an accumulated deficit of $329.5 million at December 31, 2006. The Company expects to incur substantial operating losses in the future and does not expect to generate significant funds internally until it successfully completes development and obtains marketing approval for products, either alone or in collaborations with third parties, which the Company expects will take a number of years. In order to commercialize our therapeutic products, the Company needs to address a number of technological challenges and to comply with comprehensive regulatory requirements.

(2) Summary of Significant Accounting Policies

(a) Basis of Presentation

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The Company is subject to a number of risks and uncertainties similar to those of other companies of the same size within the biotechnology industry, such as uncertainty of clinical trial outcomes, uncertainty of additional funding and history of operating losses.

(b) Reclassification and Additional Disclosures

Certain amounts in the prior year s financial statements have been reclassified and certain additional disclosures have been made to such financial statements. Patent related costs were previously included in research and development expenses but have been reclassified to general and administrative expenses for all periods presented.

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

(c) Cash Equivalents and Short-Term Investments

The Company considers all highly liquid investments with maturities of 90 days or less when purchased to be cash equivalents. Cash and cash equivalents at December 31, 2006 and 2005 consisted of cash and money market funds. On December 31, 2006, certain corporate bonds that had maturity dates of less than 90 days at the time of purchase were also included as cash equivalents.

The Company accounts for investments in accordance with Statement of Financial Accounting Standards (SFAS) No. 115, *Accounting for Certain Investments in Debt and Equity Securities* (SFAS No. 115). Management determines the appropriate classification of marketable securities at the time of purchase. In accordance with SFAS No. 115, investments that the Company does not have the positive intent to hold to maturity are classified as available-for-sale and reported at fair market value. Unrealized gains and losses associated with available-for-sale investments are recorded in Accumulated other comprehensive loss on the accompanying balance sheets. The amortization of premiums and accretion of discounts, and any realized gains and losses and declines in value judged to be other than temporary, and interest and dividends for all available-for-sale securities are included in Investment income, net on the accompanying statement of operations. The Company had no held-to-maturity investments, as defined by SFAS No. 115, at December 31, 2006 and 2005. The cost of securities sold is based on the specific identification method.

The Company had no realized gains or losses from available-for-sale securities in 2006, 2005 or 2004. There were no losses or permanent declines in value included in investment income, net for any securities for the years ended December 31, 2006, 2005 and 2004.

The Company had no long-term investments as of December 31, 2006 and 2005. Available-for-sale securities are classified as short-term regardless of the maturity date as the Company considers them available for use to fund operations within one year of the balance sheet date. Auction securities are highly liquid securities that have floating interest or dividend rates that reset periodically through an auctioning process that sets rates based on bids. Issuers include municipalities, closed-end bond funds and corporations. These securities can either be debt or preferred shares.

(d) Restricted Cash

As part of a new operating lease that had not commenced as of December 31, 2006, the Company was required to restrict approximately $620,000 of cash for a security deposit. These funds are held in certificates of deposit securing a line of credit for the lessor. The restricted cash amount is expected to be reduced by approximately $103,000 upon each of the second, third and fourth anniversaries of the commencement date, subject to certain conditions.

(e) Depreciation and Amortization

Depreciation and amortization are computed using the straight-line method based on the estimated useful lives of the related assets, as follows:

Asset Classification	Estimated Useful Life
Leasehold improvements	Life of lease
Laboratory equipment and other	3 5 years

(f) Revenue Recognition

The Company s revenue recognition policy complies with Staff Accounting Bulletin (SAB) No. 104, *Revenue Recognition.* Alliance revenues are comprised of payments under various collaboration and licensing agreements

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

for research and development, including reimbursement of third party expenses, milestone payments, license fees, sublicense fees, and royalty payments. When evaluating multiple element arrangements, the Company considers whether the components of the arrangement represent separate units of accounting as defined in Emerging Issues Task Force Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables.*

The Company recognizes license fees and other upfront fees, not specifically tied to a separate earnings process, ratably over the contractual obligation or continuing involvement under the collaboration agreement.

The Company recognizes service and research and development revenue when the services are performed.

For payments that are specifically associated with a separate earnings process, the Company recognizes revenue when the specific performance obligation is completed. Performance obligations typically consist of significant milestones in the development life cycle of the related technology, such as initiation of clinical trials, filing for approval with regulatory agencies and approvals by regulatory agencies.

Royalty income represents amounts earned under certain collaboration and license agreements and is recognized as earned, which generally occurs upon receipt of quarterly royalty statements from the licensee or, in the case of a contractually-stated minimum annual royalty arrangement, the greater of the amount actually earned or the guaranteed minimum amount.

(g) Financial Instruments

SFAS No. 107, *Disclosures About Fair Value of Financial Instruments*, requires disclosure of the estimated fair values of financial instruments. The Company s financial instruments consist of cash and cash equivalents, short-term investments, receivables, and convertible notes payable. The estimated fair values of these financial instruments approximates their carrying values as of December 31, 2006 and 2005, respectively. The estimated fair values have been determined through information obtained from market sources and management estimates. As of December 31, 2006 and 2005, the Company does not have any derivatives or any other financial instruments as defined by SFAS No. 133, *Accounting for Derivative and Hedging Instruments.*

(h) Comprehensive Loss

The Company applies SFAS No. 130, *Reporting Comprehensive Income*. Comprehensive loss is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from nonowner sources. Comprehensive loss for the years ended December 31, 2006, 2005 and 2004 is comprised of reported net income or loss and the change in net unrealized losses on investments during each year, which is included in Accumulated other comprehensive loss on the accompanying balance sheets.

(i) Net Loss per Common Share

The Company applies SFAS No. 128, *Earnings per Share* (SFAS No. 128). Under SFAS No. 128, basic and diluted net loss per common share is computed using the weighted average number of shares of common stock outstanding during the period. In addition, diluted net income per common share is calculated to give effect of stock options, convertible preferred stock and convertible debt (where the effect is not antidilutive) resulting in lower net income per

share. The dilutive effect of outstanding stock options is reflected by the application of the treasury stock method under SFAS No. 128. Diluted net loss per common share is the same as basic net loss per common share for the years ended December 31, 2006, 2005 and 2004 as the effects of the Company s potential common stock equivalents are antidilutive (see Note 12).

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

(j) Segment Reporting

SFAS No. 131, *Disclosures About Segments of an Enterprise and Related Information*, (SFAS No. 131) establishes standards for reporting information regarding operating segments in annual financial statements and requires selected information for those segments to be presented in interim financial reports issued to stockholders. SFAS No. 131 also establishes standards for related disclosures about products and services and geographic areas. To date, the Company has viewed its operations and manages its business as one operating segment. Accordingly, the Company operates in one segment, which is the business of discovering and developing novel therapeutics that modulate immune responses through Toll-like Receptors, or TLRs. As a result, the financial information disclosed herein represents all of the material financial information related to the Company s principal operating segment. For all of the periods presented, all of the Company s revenues were generated in the United States. As of December 31, 2006 and 2005, all assets were located in the United States.

(k) Stock-Based Compensation

The Company adopted SFAS No. 123R, *Share-Based Payment*, (SFAS No. 123R) on January 1, 2006. This statement requires the Company to recognize all share-based payments to employees in the financial statements based on their fair values. Under SFAS No. 123R, the Company is required to record compensation expense over an award s vesting period based on the award s fair value at the date of grant. The Company elected to adopt SFAS No. 123R on a modified prospective basis; accordingly, the financial statements for periods prior to January 1, 2006 will not include compensation cost calculated under the fair value method. The Company s policy is to charge the fair value of stock options as an expense on a straight-line basis over the vesting period.

Prior to January 1, 2006, the Company applied Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees,* (APB No. 25) and therefore, recorded the intrinsic value of stock-based compensation as an expense. The following table illustrates the pro forma effect on net loss and net loss per share if the Company had applied the fair value recognition provisions of SFAS No. 123, *Accounting for Stock-Based Compensation,* (SFAS No. 123) to stock-based employee compensation for the two years ended December 31, 2005 and 2004. The effects on years ended December 31, 2005 and 2004 pro forma net loss and net loss per share of expensing the estimated fair value of stock options are not necessarily representative of the effects on reported net (loss) income for future years because of the vesting period of the stock options, the potential for issuance of additional stock options in future years and changes to assumptions.

	2005	2004
Net loss applicable to common stockholders, as reported	$ (13,706,415)	$ (15,410,945)
Less: stock-based compensation expense (income) included in reported net loss	99,721	(713,074)
Add: stock-based employee compensation expense determined under fair value based method for all awards	(993,336)	(1,711,953)
	$ (14,600,030)	$ (17,835,972)

Pro forma net loss applicable to common stockholders, as adjusted for the effect of applying SFAS No. 123				
Basic and diluted net loss per common share				
As reported	$	(0.99)	$	(1.25)
Pro forma	$	(1.05)	$	(1.44)

Prior to adopting SFAS No. 123R on January 1, 2006, the Company recorded changes in the intrinsic value of its repriced options in its statement of operations, including approximately $100,000 of stock compensation expense and a credit of approximately $713,000 to operating results for the years ended December 31, 2005 and

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

2004, respectively, which is shown in the above table. In accordance with SFAS No. 123R, the Company no longer includes changes in the intrinsic value of its repriced options in its statement of operations.

For the year ended December 31, 2006, the Company included charges of approximately $924,000 in its statement of operations representing the stock compensation expense computed in accordance with SFAS No. 123R. There were no corresponding charges included in the statement of operations during the years ended December 31, 2005 and 2004. The adoption of SFAS No. 123R had no effect on cash flows during 2006. The adoption of SFAS No. 123R decreased basic and diluted earnings per share by $0.06 for the year ended December 31, 2006.

The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model and expensed over the requisite service period on a straight-line basis. The Company had computed the pro forma disclosures required by SFAS No. 123 for all stock options granted to employees after January 1, 1995, using the Black-Scholes option-pricing model. The assumptions used for the years ended December 31, 2006, 2005, and 2004 are as follows:

	2006	2005	2004
Average risk free interest rate	4.58%	4.23%	4.18%
Expected dividend yield			
Expected lives	6 years	6 years	6 years
Expected volatility	94%	75%	90%
Weighted average grant date fair value of options granted during the period (per share)	$ 3.77	$ 3.17	$ 3.17

For the years ended December 31, 2006, 2005 and 2004, the weighted average per share grant date fair value and exercise price per share of option grants to employees in relation to market price of the stock on the date of the grant was as follows:

	Exercise Price		
	Equals Market Price	Exceeds Market Price	Is Less than Market Price
2006 Option Grants			
Weighted average grant date fair value of options granted during the period	$ 3.77	$	$
Weighted average exercise price of options granted during the period	$ 4.83	$	$
2005 Option Grants			
Weighted average grant date fair value of options granted during the period	$ 3.06	$ 3.21	$ 4.30
Weighted average exercise price of options granted during the period	$ 4.46	$ 5.76	$ 4.48
2004 Option Grants			
Weighted average grant date fair value of options granted during the period	$ 3.30	$ 2.88	$

Weighted average exercise price of options granted during the period	$ 4.33	$ 4.16	$

The 2005 information in the table above includes certain options that were granted in 2005 with an exercise price less than fair market value and were subsequently cancelled and replaced with options that had an exercise price that was above the market price at the time that they were replaced. Also, as of December 31, 2006, the aggregate intrinsic value of outstanding and exercisable options amounted to approximately $1,684,000 and

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

$939,000, respectively. The intrinsic value of options exercised amounted to $11,989, $21,866, and $29,712 during 2006, 2005 and 2004, respectively. The fair value of options that vested amounted to $1,144,000, $1,111,000 and $1,827,000 during 2006, 2005, and 2004, respectively. As of December 31, 2006, there was $3.3 million of unrecognized compensation costs related to unvested stock-based compensation arrangements. The cost is expected to be recognized over a weighted average period of 3.2 years.

The Company also awarded 125,000 non-employee stock options during 2006. These options had a Black-Scholes fair value of $570,613 at the time of grant. The fair value of the nonvested portion of the non-employee options will be remeasured each quarter in accordance with EITF No. 96-18, *Accounting for Equity Instruments That Are Issued to Other than Employees for Acquiring, or in Conjunction with Selling, Goods or Services* (EITF No. 96-18) and the expense will be based, in part, on the remeasured fair value. During 2006, approximately $238,000 was recorded as an expense for this option. The Company had no compensation expense related to grants to non-employees in 2005 and recorded compensation expense of approximately $1,000 in 2004 related to grants to non-employees.

During 2006, there was approximately $24,000 in compensation expense related to the Stock Purchase Plan. This expense was computed based on the Black-Scholes option pricing model and the following assumptions: (1) term three months, (2) volatility 58%, and (3) risk free interest rate 4.6%.

(l) Research and Development Expenses

All research and development expenses, including amounts funded by research collaborations, are expensed as incurred. Research and development expenses are comprised of costs incurred in performing research and development activities, including drug development trials and studies, drug manufacturing, laboratory supplies, external research, payroll including stock-based compensation and overhead. In 2005, Novartis sponsored approximately $1.0 million of the Company s research and development activities. Collaborators sponsored only a nominal portion of the Company s research and development activities in 2006 and 2004.

(m) Concentration of Credit Risk

Financial instruments that subject the Company to credit risk primarily consist of cash and cash equivalents and short-term investments. The Company s credit risk is managed by investing its cash and cash equivalents and marketable securities in highly rated money market instruments and debt securities. Due to these factors, no significant additional credit risk is believed by management to be inherent in the Company s assets. As of December 31, 2006, approximately 99% of the Company s cash, cash equivalents, and investments are held at one financial institution.

(n) Income taxes

The Company applies SFAS No. 109, *Accounting for Income Taxes.* Accordingly, a deferred tax asset or liability is determined based on the difference between the financial statement and tax basis of assets and liabilities, as measured by the enacted tax rates expected to be in effect when these differences reverse.

(o) New Accounting Pronouncements

In September 2006, the Financial Accounting Standards Board, or FASB, issued SFAS No. 157, *Fair Value Measurements* (SFAS No. 157). SFAS No. 157 defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurement. This statement applies under other accounting pronouncements that require or permit fair value measurements and does not require any new fair value measurement. SFAS No. 157 is effective for fiscal years beginning after November 15, 2007. The Company is currently evaluating the effect of SFAS No. 157 on its financial statements.

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities* (SFAS No. 159) which includes an amendment of SFAS No. 115, *Accounting for Certain Investments in Debt or Equity Securities* (SFAS No. 115). SFAS No. 159 permits entities to choose to measure many financial instruments and certain other items at fair value to improve financial reporting by mitigating volatilities in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge accounting provisions. SFAS No. 159 is effective for fiscal years beginning after November 15, 2007. The Company is currently evaluating the effect of SFAS No. 159 on its financial statements.

In June 2006, the FASB issued FASB Interpretation No. (FIN) 48, *Accounting for Uncertainty in Income Taxes an Interpretation of FASB Statement No. 109* (FIN No. 48). FIN No. 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise s financial statements in accordance with SFAS No. 109, *Accounting for Income Taxes* (SFAS No. 109). FIN No. 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. It also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition. FIN No. 48 is effective for fiscal years beginning after December 15, 2006. The Company is currently evaluating the effect of FIN No. 48 on its financial statements.

(3) Marketable Securities

The Company s short-term available-for-sale investments at market value consisted of the following at December 31, 2006 and 2005:

	December 31, 2006			
	Cost	Gross Unrealized Losses	Gross Unrealized Gains	Estimated Fair Value
Certificates of deposit	$ 300,039	$	$ 3	$ 300,042
Corporate bonds due in one year or less	301,124	116		301,008
Government bonds due in one year or less	1,595,036	303		1,594,733
Auction securities	11,395,000			11,395,000
Total	$ 13,591,199	$ 419	$ 3	$ 13,590,783

	December 31, 2005			
	Cost	Gross Unrealized Losses	Gross Unrealized Gains	Estimated Fair Value

Corporate bonds due in one year or less	$ 2,103,675	$ 1,243	$	$ 2,102,432
Government bonds due in one year or less	2,495,327	10,352		2,484,975
Short term notes	903,242	1,422		901,820
Auction securities	1,900,000		1,676	1,901,676
Total	$ 7,402,244	$ 13,017	$ 1,676	$ 7,390,903

Although unrealized losses exist as of December 31, 2006, the Company does not believe they are other-than-temporary based on the nature of the investment and the lack of any adverse events.

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

(4) Accrued Expenses

At December 31, 2006 and 2005, accrued expenses consist of the following:

	December 31, 2006	2005
Payroll and related costs	$ 70,933	$ 455,427
Clinical trial expenses	249,594	277,259
Professional and consulting fees	217,509	109,000
Other	326,464	496,362
	$ 864,500	$ 1,338,048

(5) Property and Equipment

At December 31, 2006 and 2005, net property and equipment at cost consists of the following:

	December 31, 2006	2005
Leasehold improvements	$ 444,186	$ 424,500
Laboratory equipment and other	2,174,439	1,927,950
Total property and equipment, at cost	2,618,625	2,352,450
Less: Accumulated depreciation and amortization	1,996,267	1,933,766
Property and equipment, net	$ 622,358	$ 418,684

As of December 31, 2006 and 2005, laboratory equipment and other includes approximately $20,000 of office equipment financed under capital leases with accumulated depreciation of approximately $4,000 and $2,000, respectively.

Depreciation expense, which includes amortization of assets recorded under capital leases, was approximately $247,000, $163,000 and $145,000 in 2006, 2005 and 2004, respectively.

In 2006 and 2005, the Company wrote off unused property and equipment that had a gross cost of approximately $185,000, and $109,000, respectively. The write-off of property and equipment resulted in a loss of approximately

$2,000 for the year ended December 31, 2005 and a negligible loss for the year ended December 31, 2006.

(6) Debt

(a) 4% Convertible Notes Payable

On May 24, 2005, the Company sold approximately $5.0 million in principal amount of 4% convertible subordinated notes due April 30, 2008 (the 4% Notes). Interest on the 4% Notes is payable semi-annually in arrears on April 30 and October 30 and at maturity or conversion. The Company has the option to pay interest on the 4% Notes in cash or in shares of the Company s common stock at the then current market value of the Company s common stock. Holders of the 4% Notes could convert, at any time prior to maturity, the total principal amount (or any portion thereof) of the 4% Notes into shares of the Company s common stock at a conversion price of $7.12 per share.

In 2005, the Company issued 19,963 shares of common stock in payment of interest on the 4% Notes, based on the market value of the Company s common stock at the time. All other interest payments have been in cash.

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The Company capitalized its financing costs associated with the sale of the 4% Notes and is amortizing them over the term of the notes. These costs include the Black-Scholes value of the warrants, legal expenses and miscellaneous costs attributable to the placement of the notes.

On February 13, 2007, the Company elected to automatically convert its 4% Notes in the aggregate principal amount of approximately $5.0 million into 706,844 shares of the Company s common stock effective on February 20, 2007. The Company was entitled to exercise this right of automatic conversion because the volume-weighted average of the closing prices of the Company s Common Stock for the ten consecutive trading days ending February 8, 2007 exceeded $8.90, which represents 125% of the conversion price of the 4% Notes. As of February 20, 2007, the 4% Notes were no longer considered outstanding and interest ceased to accrue. Holders of the 4% Notes were paid cash in lieu of any fractional shares and were paid approximately $61,000, which represented accrued interest through February 19, 2007. See Note 16 for further information.

(b) 9% Convertible Subordinated Notes Payable

On April 1, 2004, the Company s 9% convertible subordinated notes payable (the 9% Notes) matured. As a result, the Company paid $1,306,000 to the note holders in payment of the principal amount outstanding under the notes plus accrued interest through the maturity date of $58,770. Upon such payment, the notes were cancelled. Under the terms of the 9% Notes, the Company made semi-annual interest payments on the outstanding principal balance through the maturity date of April 1, 2004.

(7) Collaboration and License Agreements

(a) Collaboration and License Agreement with Novartis International Pharmaceutical, Ltd.

In May 2005, the Company entered into a research collaboration and option agreement and a separate license, development and commercialization agreement with Novartis to discover, develop and potentially commercialize TLR9 agonists that are identified as potential treatments for asthma and allergies. In addition, beginning on May 31, 2007, if specified conditions are satisfied, Novartis may expand the collaboration to include additional human disease areas, other than oncology and infectious diseases. Under the terms of the agreements, upon execution of the agreements, Novartis paid the Company a $4.0 million upfront license fee; Novartis agreed to fund substantially all research activities during the research collaboration phase; if Novartis elects to exercise its option to develop and commercialize licensed TLR9 agonists in the initial collaboration disease areas, Novartis is potentially obligated to pay the Company up to $132.0 million based on the achievement of clinical development, regulatory approval, and annual net sales milestones; Novartis is potentially obligated to pay the Company additional milestone payments if Novartis elects to expand the collaboration to include additional disease areas and then develops and commercializes licensed TLR9 agonists in the additional disease areas based on the achievement of clinical development and regulatory approval milestones; and Novartis is also obligated to pay the Company royalties on net sales of all products, if any, commercialized by Novartis, its affiliates and sublicensees. Novartis license rights under the agreements to products that it elects to develop and commercialize are worldwide, exclusive rights.

The Company and Novartis agreed that the term of the research and collaboration phase would be two years commencing in May 2005. The Company initially was recognizing the $4.0 million upfront payment as revenue over the two-year term of the research collaboration. In February 2007, the Company received notice that Novartis had elected to extend the research collaboration by an additional year, and for such extension is obligated to pay the Company an additional $1.0 million. In connection with this amendment, the Company is extending the time period over which it is amortizing the upfront payment.

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(b) Collaboration and License Agreement with Merck & Co., Inc.

In December 2006, the Company entered into an exclusive license and research collaboration agreement with Merck to research, develop, and commercialize vaccine products containing our TLR7, 8 and 9 agonists in the fields of oncology, infectious diseases, and Alzheimer s disease. Under the terms of the agreement, the Company granted Merck worldwide exclusive rights to a number of the Company s TLR7, 8 and 9 agonists for use in combination with Merck s therapeutic and prophylactic vaccines under development in the fields of oncology, infectious diseases, and Alzheimer s disease. The Company also agreed with Merck to engage in a two-year research collaboration to generate novel agonists targeting TLR7 and TLR8 and incorporating both Merck and Idera chemistry for use in vaccines in the defined fields, which may be extended by Merck for two additional one-year periods. Under the terms of the agreement: Merck paid the Company a $20.0 million upfront license fee; Merck purchased $10.0 million of the Company s common stock at $5.50 per share; and Merck agreed to fund the research and development collaboration. Merck also agreed to pay the Company milestone payments as follows: up to $165.0 million if vaccines containing the Company s TLR9 agonist compounds are successfully developed and marketed in each of the oncology, infectious disease and Alzheimer s disease fields; up to $260.0 million if vaccines containing the Company s TLR9 agonist compounds are successfully developed and marketed for follow-on indications in the oncology field and if vaccines containing the Company s TLR7 or TLR8 agonists are successfully developed and marketed in each of the oncology, infectious disease, and Alzheimer s disease fields; and if Merck develops and commercializes additional vaccines using the Company s agonists, it would be entitled to receive additional milestone payments. In addition, Merck agreed to pay the Company royalties on net product sales of vaccines using the Company s TLR agonist technology that are developed and marketed.

The Company is recognizing the $20.0 million upfront payment as revenue over the two-year initial research term and the additional two-year-period over which the research term could be extended. The Company has estimated that this is its period of continuing involvement under the research arrangement.

In December 2006, in connection with the execution of the license and collaboration agreement, the Company entered into a stock purchase agreement with Merck. Pursuant to the purchase agreement, the Company issued and sold to Merck 1,818,182 shares of the Company s common stock for a price of $5.50 per share resulting in an aggregate gross proceeds of $10.0 million. Merck has agreed, subject to certain exceptions, that prior to December 8, 2007, it will not sell any of the shares of the Company s common stock acquired by it and that, for the duration of the research and collaboration term, its ability to sell such shares will be subject to specified volume limitations.

(c) TLR Licenses

The Company has granted a non-exclusive license to The Immune Response Corporation to research, develop, and commercialize the potential application of IMO-2055 for use as an adjuvant in one specific vaccine candidate for the treatment and prevention of HIV. Under the terms of the agreement, The Immune Response Corporation agreed to pay the Company royalties on its sales of licensed products and a percentage of sublicense income. Either party may terminate the license agreement for a material breach or a breach of a payment obligation, unless such breach is cured within the notice period.

(d) Other License Agreements

Currently, the Company is a party to five collaboration and license agreements involving the use of its antisense technology and specified indications. These agreements include a license agreement with Isis Pharmaceuticals, Inc. involving intellectual property for antisense chemistry and delivery.

Under the agreement with Isis, the Company granted to Isis a license, with the right to sublicense, to the Company s antisense chemistry and delivery patents and patent applications; and the Company retained the right to use these patents and patent applications in its own drug discovery and development efforts and in collaborations

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with third parties. Isis paid the Comany an initial licensing fee and is required to pay the Company a portion of specified sublicense income Isis receives from some types of sublicenses of the Company s patents and patent applications. Also under the agreement, the Company licensed from Isis specified antisense patents and patent applications, principally Isis suite of RNase H patents and patent applications. The Company also paid an initial licensing fee for this license and is obligated to pay Isis a maintenance fee and royalties. The Company has the right to use these patents and patent applications in its own drug discovery and development efforts and in some types of third party collaborations. The licenses granted under the Isis agreement terminate upon the last to expire of the patents and patent applications licensed under the agreement. The Company may terminate at any time the sublicense by Isis to the Company of the patents and patent applications.

The Company is also a party to four other license agreements involving the license of its antisense patents and patent applications for specific gene targets under which the Company typically is entitled to receive license fees, sublicensing income, research payments, payments upon achievement of developmental milestones, and royalties on product sales. These agreements typically expire upon the later of the last to expire of the licensed patents or a specified number of years after the first commercial sale of a licensed product. These agreements may be terminated by either party for a material breach, and our collaborators may terminate these agreements at any time for convenience, with written notice.

The Company is also a party to six royalty-bearing license agreements under which it has acquired rights to antisense related patents, patent applications, and technology. Each of these in-licenses automatically terminates upon the expiration of the last to expire patent included in the license. The Company s principal in-license is with University of Massachusetts Medical Center for chemistry and for certain gene targets. Additionally, as part of a 2003 interference resolution for one of the licensed patents, a settlement was made enabling the Company to receive a percentage of the royalty amounts the National Institutes of Health receives for the sale of a product that is covered by such patent. Under these in-licenses, the Company is obligated to pay royalties on its net sales of products or processes covered by a valid claim of a licensed patent or patent application. In certain cases, the Company is required to pay a specified percentage of any sublicense income, and all of these licenses impose various commercialization, sublicensing, insurance, and other obligations on it, and the Company s failure to comply with these requirements could result in termination of the licenses.

(8) Stockholders Equity

(a) Common Stock

Pursuant to the terms of a unit purchase agreement dated as of May 5, 1998, the Company issued and sold a total of 1,199,684 shares of common stock (the Put Shares) at a price of $16.00 per share. Under the terms of the unit purchase agreement, the initial purchasers (the Put Holders) of the Put Shares have the right (the Put Right) to require the Company to repurchase the Put Shares. The Put Right may not be exercised by any Put Holder unless: 1) the Company liquidates, dissolves or winds up its affairs pursuant to applicable bankruptcy law, whether voluntarily or involuntarily; 2) all of the Company s indebtedness and obligations, including without limitation the indebtedness under the Company s then outstanding notes, has been paid in full; and 3) all rights of the holders of any series or class of capital stock ranking prior and senior to the common stock with respect to liquidation, including without limitation the Series A convertible preferred stock, have been satisfied in full. The Company may terminate the Put Right upon

written notice to the Put Holders if the closing sales price of its common stock exceeds $32.00 per share for the twenty consecutive trading days prior to the date of notice of termination. Because the Put Right is not transferable, in the event that a Put Holder has transferred Put Shares since May 5, 1998, the Put Right with respect to those shares has terminated. As a consequence of the Put Right, in the event the Company is liquidated, holders of shares of common stock that do not have Put Rights with respect to such shares may receive smaller distributions per share upon the liquidation than if there were no Put Rights outstanding.

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In February 2003, the Company repurchased 301,985 Put Shares. As of December 31, 2006, 106,166 of the Put Shares continued to be held in the name of Put Holders. The Company cannot determine at this time what portion of the Put Rights of the remaining 791,533 Put Shares have terminated.

(b) Warrants

The Company has the following warrants outstanding and exercisable for the purchase of common stock at December 31, 2006:

Expiration Date	Shares	Weighted Exercise Price Per Share
January 1, 2007	12,500	$ 13.20
August 28, 2008	1,209,665	7.47
April 20, 2009	380,246	9.12
August 27, 2009	274,650	5.36
May 24, 2010	70,685	7.12
September 24, 2011	2,839,134	5.39
	4,786,880	
Weighted average exercise price per share		$ 6.26

The warrants that expire in 2009, 2010 and 2011 are described in Notes 9(d) and 15.

(c) Stock Options

The 1995 Stock Option Plan provided for the grant of incentive stock options and nonqualified stock options. Options granted under this plan generally vest over three to five years, and expire no later than 10 years from the date of grant. No additional options are being granted under the 1995 Stock Option Plan. As of December 31, 2006, options to purchase a total of 48,759 shares of common stock remained outstanding under the 1995 Stock Option Plan.

Under the 1995 Director Stock Option Plan, a total of 100,000 shares of common stock may be issued upon the exercise of options. Under the terms of the Director Plan options to purchase 469 shares of common stock are granted to each non-employee director on the first day of each calendar quarter and options to purchase 3,125 shares of common stock are granted to non-employee directors upon appointment to the Board. All options vest on the first anniversary of the date of grant. As of December 31, 2006, options to purchase a total of 56,114 shares of common stock remained outstanding under the Director Plan.

Under the 1997 Stock Incentive Plan, options generally vest over three to five years, and expire no later than 10 years from the date of grant. A total of 1,687,500 shares of common stock may be issued upon the exercise of options granted under the plan. The Compensation Committee of the Board of Directors has the authority to select the employees to whom options are granted and determine the terms of each option, including (i) the number of shares of common stock subject to the option; (ii) when the option becomes exercisable; (iii) the option exercise price, which in the case of incentive stock options must be at least 100% (110% in the case of incentive stock options granted to those holding 10% or more of the voting power of the Company) of the fair market value of the common stock as of the date of grant and (iv) the duration of the option, which in the case of incentive stock options may not exceed 10 years. As of December 31, 2006, options to purchase a total of 1,263,783 shares of common stock remained outstanding under the 1997 Stock Incentive Plan. No options may be granted under the 1997 Plan after March 20, 2007.

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Under the 2005 Stock Incentive Plan, the Company may grant options to purchase common stock, stock appreciation rights, restricted stock awards and other forms of stock based compensation. Stock options generally vest over three to four years, and expire no later than 10 years from the date of grant. A total of 1,125,000 shares of common stock may be issued upon the exercise of options granted under the plan. The maximum number of shares of common stock with respect to which awards may be granted to any participant under the plan shall be 125,000 per calendar year. The Compensation Committee of the Board of Directors has the authority to select the employees to whom options are granted and determine the terms of each option, including (i) the number of shares of common stock subject to the option; (ii) when the option becomes exercisable; (iii) the option exercise price, which in the case of incentive stock options must be at least 100% (110% in the case of incentive stock options granted to those holding 10% or more of the voting power of the Company) of the fair market value of the common stock as of the date of grant and (iv) the duration of the option, which in the case of incentive stock options may not exceed 10 years. As of December 31, 2006, options to purchase a total of 949,296 shares of common stock remained outstanding under the 2005 Stock Incentive Plan.

As of December 31, 2006, 342,721 shares of common stock remain available for grant under the 1995 Director Plan, the 1997 Stock Incentive Plan and the 2005 Stock Incentive Plan.

The Company s 1995 Stock Option Plan, the 1995 Employee Stock Purchase Plan, the 1995 Director Stock Option Plan, the 1997 Stock Incentive Plan and the 2005 Stock Incentive Plan have been approved by the Company s stockholders. The Company has also granted options to purchase shares of Common Stock pursuant to agreements with employees that were not approved by stockholders.

Stock option activity for the years ended December 31, 2006, 2005, and 2004 is summarized as follows:

	Number of Shares	Exercise Price Per Share		Weighted Average Price Per Share
Outstanding, December 31, 2003	1,840,010	$ 4.00	$16.00	$ 6.24
Granted	260,599	4.16	9.12	4.28
Exercised	(10,723)	4.00	6.56	4.75
Terminated	(19,899)	4.00	12.32	9.06
Outstanding, December 31, 2004	2,069,987	4.00	16.00	5.98
Granted	623,065	3.84	5.76	4.57
Exercised	(15,304)	4.00	4.16	4.01
Terminated	(129,568)	3.84	8.96	4.63
Outstanding, December 31, 2005	2,548,180	3.84	16.00	5.71
Granted	689,000	3.72	5.36	4.88

Exercised	(13,878)		4.00	4.16		4.00
Terminated	(580,688)		4.00	8.96		6.31
Outstanding, December 31, 2006	2,642,614	$	3.72	$16.00	$	5.37
Exercisable, December 31, 2004	1,610,376	$	4.00	$16.00	$	6.12
Exercisable, December 31, 2005	1,750,078	$	4.00	$16.00	$	6.14
Exercisable, December 31, 2006	1,584,725	$	3.72	$16.00	$	5.81

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	Options Outstanding			Options Exercisable	
Exercise Prices	Number	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price Per Share	Number	Weighted Average Exercise Price Per Share
$3.72 - 4.00	258,761	2.02	$ 4.00	256,526	$ 4.00
4.05 - 4.16	251,695	8.08	4.15	114,464	4.16
4.24 - 4.40	216,796	8.96	4.24	55,029	4.24
4.45	170,000	9.96	4.45		
4.48	133,750	8.37	4.48	71,251	4.48
4.50	303,401	4.24	4.50	303,401	4.50
4.56 - 5.04	161,690	8.86	4.82	49,008	4.80
5.10	425,000	9.95	5.10	50,000	5.10
5.12 - 6.32	94,963	7.64	5.83	68,183	5.87
6.56 - 6.60	289,375	4.56	6.60	289,375	6.60
6.64 - 8.50	183,221	3.83	8.45	183,221	8.47
8.80 - 16.00	153,962	4.60	9.87	144,267	9.93
	2,642,614	6.70	5.37	1,584,725	5.81

The weighted average remaining contractual life of exercisable options was 4.96 years at December 31, 2006.

(d) Employee Stock Purchase Plan

The 1995 Employee Stock Purchase Plan (the Stock Purchase Plan) was adopted in October 1995 and amended in June 2003. Under the Stock Purchase Plan up to 125,000 shares of common stock may be issued to participating employees of the Company or its subsidiaries. Participation is limited to employees that would not own 5% or more of the total combined voting power or value of the stock of the Company after the grant.

Under the Stock Purchase Plan, on the first day of a designated payroll deduction period, the Offering Period , the Company will grant to each eligible employee who has elected to participate in the Stock Purchase Plan an option to purchase shares of common stock as follows: the employee may authorize an amount, a whole percentage from 1% to 10% of such employee s regular pay, to be deducted by the Company from such pay during the Offering Period. On the last day of the Offering Period, the employee is deemed to have exercised the option, at the option exercise price, to the extent of accumulated payroll deductions. Under the terms of the Stock Purchase Plan, the option price is an amount equal to 85% of the fair market value per share of the common stock on either the first day or the last day of the Offering Period, whichever is lower. In no event may an employee purchase in any one Offering Period a number of shares that is more than 15% of the employee s annualized base pay divided by 85% of the market value of a share of common stock on the commencement date of the Offering Period. The Compensation Committee may, in its

discretion, choose an Offering Period of 12 months or less for each of the Offerings and choose a different Offering Period for each Offering.

Offering periods are three months in duration and commence on March 1, June 1, September 1, and December 1. In 2006, 2005, and 2004, the Company issued 18,241, 18,046 and 11,527 shares of common stock, respectively, under the Stock Purchase Plan.

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(e) Repricing

In September 1999, the Company s Board of Directors authorized the repricing of options to purchase 656,478 shares of common stock to $4.00 per share, which represented the market value on the date of the repricing. Prior to 2006, these options were subject to variable plan accounting, as defined in FIN No. 44 which required the Company to remeasure the intrinsic value of the repriced options, through the earlier of the date of exercise, cancellation or expiration, at each reporting date. For the year ended December 31, 2005, the Company recognized approximately $100,000 as stock compensation expense from these repriced options. A decrease in the intrinsic value of these options during 2004 resulted in a credit of approximately $713,000 to stock compensation expense for the year ended December 31, 2004. As explained in Note 2(k), on January 1, 2006, the Company adopted SFAS No. 123R, *Share-Based Payment* (SFAS No. 123R), which is a revision of SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123). SFAS No. 123R supersedes APB Opinion No. 25, *Accounting for Stock Issued to Employees,* and amends SFAS No. 95, *Statement of Cash Flows.* Pursuant to SFAS No. 123R, effective January 1, 2006, the statement of operations no longer includes the effects of marking repriced options to market.

(f) Preferred Stock

The Restated Certificate of Incorporation of the Company permits its Board of Directors to issue up to 5,000,000 shares of preferred stock, par value $0.01 per share, in one or more series, to designate the number of shares constituting such series, and fix by resolution, the powers, privileges, preferences and relative, optional or special rights thereof, including liquidation preferences and dividends, and conversion and redemption rights of each such series. During 1998, the Company designated 1,500,000 shares as Series A convertible preferred stock that is described below in Note (8)(g). As of December 31, 2006 and 2005, there were 655 shares of Series A convertible preferred stock outstanding. As discussed in Note (14), during 2002 the Company designated 100,000 shares of Series C junior participating preferred stock. The Company designated an additional 50,000 shares of Series C junior participating preferred stock in each of the years 2003 and 2005. There were no shares of Series C junior participating preferred stock issued or outstanding at December 31, 2006 and 2005.

(g) Series A Convertible Preferred Stock

On December 4, 2003, stockholders approved amendments to the Company s Restated Certificate of Incorporation that:

reduced the liquidation preference of the Company s Series A convertible preferred stock from $100 per share to $1 per share;

reduced the annual dividend on the Company s Series A convertible preferred stock from 6.5% to 1%; and

increased the number of shares of the Company s common stock issuable upon conversion of the Company s Series A convertible preferred stock by 25% over the number of shares that would otherwise be issuable for a sixty-day conversion period between December 4, 2003 and February 2, 2004 inclusive.

During the sixty-day conversion period, the conversion ratio was increased so that the Series A convertible preferred stockholders could receive approximately 3.68 shares of common stock for each share of Series A convertible preferred stock converted instead of the stated conversion rate of 2.94 shares.

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During the conversion period, 99.9% of the Series A convertible preferred stock was converted to common stock. The combined effects of the amendments to the Company s Restated Certificate of Incorporation and the Series A convertible preferred stock conversions are as follows:

	December 3, 2003	December 31, 2003	February 2, 2004
Shares:			
Preferred stock outstanding	722,727	489,205	635
Common stock issued from conversions		858,536	2,654,753
Common stock outstanding	7,949,430	8,810,321	10,612,578
Series A preferred liquidation preference	$ 73,055,654	$ 494,912	$ 643
Annual dividend amount	$ 4,697,726	$ 937,643	$ 864

The financial statement recognition of the Series A preferred stock conversion is shown below:

	Preferred Stock Dividends		
	2006	2005	2004
Accretion of dividends expected to be paid on Series A Preferred Stock	$ 656	$ 656	$ 503
Reversal of 2003 dividend accretion since preferred shares were converted in January and February 2004 and the dividends were not paid			(570,000)
Market value of 25% additional shares issued upon conversion			3,245,492
Total preferred stock dividend	$ 656	$ 656	$ 2,675,995

As shown above, $3.2 million of the 25% additional shares issued during the sixty-day conversion period was issued between January 1, 2004 and February 2, 2004 and was recorded as additional dividends (a) in the calculation off Net loss applicable to common stockholders in the 2004 statement of operations and (b) in the 2004 statement of stockholders equity. As a result of the amendment to the Company s Certificate of Incorporation and the Series A convertible preferred stock conversions, the preferred stock liquidation preference was reduced from $73,055,654 at December 3, 2003 to $494,912 at December 31, 2003 and $643 at February 2, 2004.

The dividends are now payable semi-annually in arrears at the rate of 1% per annum, at the election of the Company, either in cash or additional duly authorized, fully paid and nonassessable shares of Series A preferred stock. The Company has paid dividends in stock until 2004 when it elected to pay in cash. In the event of liquidation, dissolution or winding up of the Company, after payment of debts and other liabilities of the Company, the holders of the Series A convertible preferred stock then outstanding will be entitled to a distribution of $1 per share out of any assets

available to shareholders. The Series A preferred stock is non-voting. All remaining shares of Series A preferred stock rank as to payment upon the occurrence of any liquidation event senior to the common stock. Shares of Series A preferred stock are convertible, in whole or in part, at the option of the holder into fully paid and nonassessable shares of common stock at $34.00 per share, subject to adjustment.

(h) Reverse Stock Split

At the close of business on June 29, 2006, the Company effected a one-for-eight reverse stock split of its issued and outstanding common stock and fixed the number of authorized shares of its common stock at 40,000,000. As a result of the reverse stock split, each share of common stock outstanding at the close of business on June 29, 2006 automatically converted into one-eighth of one share of common stock. All share and per share information herein reflects this reverse stock split.

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The reverse stock split reduced the number of outstanding shares of common stock from approximately 133.8 million shares to approximately 16.7 million shares, subject to reduction for fractional shares that were paid for in cash. Additionally, the reverse stock split resulted in proportionate adjustments to (i) the number of shares of common stock issuable upon conversion of the Company s Series A convertible preferred stock, (ii) the number of shares of common stock issuable upon conversion of the Company s 4% convertible subordinated notes due April 30, 2008, (iii) the number of shares of common stock issuable upon the exercise of options and warrants outstanding on June 29, 2006 and the exercise price of such options and warrants, and (iv) the number of shares issuable under the Company s stock incentive plans, including the Company s 2005 Stock Incentive Plan, 1997 Stock Incentive Plan, 1995 Director Stock Option Plan, and 1995 Employee Stock Purchase Plan. The reverse stock split did not alter the par value of the common stock, which is $0.001 per share, or modify any voting rights or other terms of the common stock.

(9) Commitments and Contingencies

(a) Lease Commitments

On October 31, 2006, the Company entered into a lease agreement for laboratory and office space located on Sidney Street in Cambridge, Massachusetts. The term of the lease commences on May 15, 2007 and expires on June 1, 2014, with one five-year renewal option exercisable by the Company. The Company intends to move its operations from its current facility to the new facility in June 2007. As part of the lease, the Company was required to restrict approximately $620,000 of cash for a security deposit. Total payments over the seven-year term of the lease are approximately $9.0 million and are included in the table below. The Company currently leases a different facility in Cambridge, Massachusetts, under a lease that has a 10-year term, which commenced on May 1, 1997 and expires April 30, 2007, and which will be extended on a month-to-month basis pending the move to the new facility.

Future minimum commitments as of December 31, 2006 under existing lease agreements through the lease terms, are approximately:

December 31,	Operating Leases
2007	877,000
2008	1,178,000
2009	1,219,000
2010	1,261,000
2011	1,306,000
2012	1,351,000
2013	1,398,000
2014	591,000
	$ 9,181,000

During 2006, 2005, and 2004, facility rent expense for continuing operations, net of sublease income, was approximately $218,000, $269,000 and $282,000, respectively.

(b) External Collaborations

In July 2004, the Company signed an agreement with a contract research organization, or CRO, to manage the Phase 2 clinical trial of IMO-2055 in patients with renal cell cancer. Under the agreement and a subsequent change in scope, the Company may pay the CRO up to $4.8 million in connection with this trial. During the years ended December 31, 2006, 2005, and 2004, the Company paid approximately $1.3 million, $0.9 million, and $0.7 million,

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respectively, to the CRO under the agreement and expensed approximately $1.1 million, $1.2 million and $0.4 million, respectively, in Research and development on the accompanying statement of operations.

(c) Contract Obligations

The Company has employee agreements with its executive officers. As of December 31, 2006, future minimum commitments under these agreements are approximately $1,151,000, $556,000 and $370,000 for the years ended December 31, 2007, 2008, and 2009, respectively.

(d) Related-Party Agreements with Affiliates of Stockholders and Directors

In connection with the purchase commitment described in Note 15, the Company paid one of the Company s directors a commission of $487,500 which represented 5% of the amount available to the Company under the purchase agreement.

In 2005, the Company paid Pillar Investment Limited, which is controlled by a director of the Company, approximately $264,000 in cash and issued warrants to purchase 70,684 shares of common stock at an exercise price of $7.12 per share as fees in connection with Pillar Investment Limited acting as the placement agent for the sale of the 4% convertible subordinated notes in May 2005 (See Note 6(a)). The warrants have a Black-Scholes value of approximately $219,000. Optima Life Sciences Limited, which is controlled by Pillar Investment Ltd., purchased $3,102,750 of the 4% Notes.

In 2004, the Company paid Pillar Investment Ltd. a total of $281,000 for commissions relating to the Company s August 2004 financing. In conjunction with the financing, the Company also issued Pillar Investment Ltd., as additional commissions, warrants to purchase 54,065 shares of common stock at an exercise price of $5.36 per share. These warrants have a Black-Scholes value of approximately $155,000. Optima Life Sciences Limited purchased 346,012 shares of common stock and warrants to purchase 69,202 additional shares of common stock at an exercise price of $5.36 per share in the financing.

In addition to the fees described above, the Company also paid other directors consulting fees of approximately $24,000, $30,000 and $36,000 in 2006, 2005 and 2004, respectively.

(e) Contingencies

In 2005, the Company became involved in an interference proceeding declared by the United States Patent and Trademark Office, or USPTO, for certain of the Company s antisense and ribozyme patents. This interference has since been resolved. The Company is not practicing nor does it intend to practice any of the intellectual property that was associated with this interference proceeding.

(10) Income Taxes

Subject to the limitations described below, at December 31, 2006, the Company had cumulative net operating loss carryforwards of approximately $261.3 million and $50.7 million available to reduce federal and state taxable income,

respectively, which expire through 2026. In addition, the Company has cumulative tax credit carryforwards of $5.0 million available to reduce federal income taxes which expire through 2026. The Tax Reform Act of 1986 contains provisions, which limit the amount of net operating loss and credit carryforwards that companies may utilize in any one year in the event of cumulative changes in ownership over a three-year period in excess of 50%. The Company has completed several financings since the effective date of the Tax Reform Act of 1986, which as of December 31, 2006, have resulted in ownership changes in excess of 50%, as defined under the Act and that may significantly limit the Company s ability to utilize its net operating loss and tax credit carryforwards. The Company has not prepared an analysis to determine the effect of the ownership change limitation on its ability to utilize its net

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

operating loss and tax credit carryforwards. Ownership changes in future periods may place additional limits on the Company s ability to utilize net operating loss and tax credit carryforwards.

As of December 31, 2006 and 2005, the components of the deferred tax assets are approximately as follows:

	2006	2005
Operating loss carryforwards	$ 92,038,173	$ 94,009,346
Tax credit carryforwards	5,026,021	4,709,020
Other	8,818,306	624,561
	105,882,500	99,342,927
Valuation allowance	(105,882,500)	(99,342,927)
	$	$

As of December 31, 2006, $8.5 million of deferred tax assets shown above were attributable to the recognition of collaboration revenue on a cash basis for tax purposes but not for financial statement purposes. The Company has provided a valuation allowance for its deferred tax asset due to the uncertainty surrounding the ability to realize this asset.

The valuation allowance in the current year has increased by approximately $6.5 million which is attributable to an increase in deferred tax assets associated with differences between book and tax accounting methods.

For the years ended December 31, 2006, 2005, and 2004, the primary difference between the income tax provision (benefit) recorded by the Company and the amount of the income tax benefit at statutory income tax rates was the increase in the valuation allowance.

There was $45,000 in alternative minimum tax expense during 2006.

(11) Employee Benefit Plan

The Company has an employee benefit plan under Section 401(k) of the Internal Revenue Code. The plan allows employees to make contributions up to a specified percentage of their compensation. Under the plan, the Company may, but is not obligated to, match a portion of the employees contributions up to a defined maximum. The Company is currently contributing up to 3% of employee base salary, by matching 50% of the first 6% of annual base salary contributed by each employee. Approximately $97,000, $72,000, and $82,000 of 401(k) benefits were charged to continuing operations during 2006, 2005, and 2004, respectively.

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

(12) Loss Per Share

The following table sets forth the computation of basic and diluted loss per share:

	Years Ended December 31,		
	2006	**2005**	**2004**
Numerator:			
Net loss	$ (16,524,752)	$ (13,705,759)	$ (12,734,950)
Accretion of preferred stock dividend	(656)	(656)	(2,675,995)
Numerator for basic and diluted net loss applicable to common shareholders	$ (16,525,408)	$ (13,706,415)	$ (15,410,945)
Denominator for basic and diluted net loss per share	16,625,060	13,885,882	12,364,240
Net loss per share basic and diluted			
Net loss	$ (0.99)	$ (0.99)	$ (1.03)
Accretion of preferred stock dividends			(0.22)
Net loss per share applicable to common stockholders	$ (0.99)	$ (0.99)	$ (1.25)

For the years ended December 31, 2006, 2005 and 2004 diluted net loss per share from operations is the same as basic net loss per common share, as the effects of the Company s potential common stock equivalents are antidilutive. Total antidilutive securities were 8,138,264, 5,267,196 and 4,011,474 at December 31, 2006, 2005 and 2004, respectively, and consist of stock options, warrants, and convertible preferred stock. Antidilutive securities for the year ended December 31, 2006 and 2005 also includes convertible debt instruments (on an as-converted basis).

(13) Supplemental Disclosure of Cash Flow Information

Supplemental disclosure of cash flow information for the periods presented are as follows:

	Years Ended December 31,		
	2006	**2005**	**2004**
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 175,663	$ 20,912	$ 58,770

Supplemental disclosure of non cash financing and investing activities:			
Accretion (reversal) of Series A preferred stock dividends	$ 656	$ 656	$ (569,497)
Dividend from induced conversion of Series A preferred stock	$	$	$ 3,245,492
Issuance of stock options and stock for services	$ 265,752	$ 36,177	$ 129,448
Interest paid in kind on 4% Notes	$	$ 92,152	$
Issuance of warrants in connection with issuance of 4% Notes	$	$ 219,385	$
Conversion of Series A preferred stock into common stock	$	$	$ 14,370
Cashless exercise of stock warrants	$	$	$ 7
Deferred compensation relating to issuance of stock options	$	$ 72,000	$
Equipment acquired under capital lease	$	$ 19,556	$

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

(14) Shareholder Rights Plan

The Company adopted a shareholder rights plan in December 2001. Under the rights plan, one right was distributed as of the close of business on January 7, 2002 on each then outstanding share of the Company s common stock. As a result of the June 2006 reverse stock split discussed in Note 8(h), the number of rights associated with each share of common stock was automatically proportionately adjusted so that (i) eight rights were then associated with each outstanding share of common stock and (ii) so long as the rights are attached to the common stock, eight rights (subject to further adjustment pursuant to the provisions of the rights plan shall be deemed to be delivered for each share of common stock issued or transferred by the Company in the future. The rights will automatically trade with the underlying common stock and ordinarily will not be exercisable. The rights will only become exercisable, subject to certain exclusions, if a person acquires beneficial ownership of, or commences a tender offer for, fifteen percent or more of the Company s common stock, unless, in either case, the transaction was approved by the Company s board of directors. The Company has amended the rights plan to provide that Baker Brothers Investments and its affiliates will be an exempt person under the rights agreement until such time as it owns (i) more than 5,375,000 shares of the Company s common stock (subject to adjustment and disregarding shares purchased by such stockholder pursuant to a participation right in an agreement between such stockholder and the Company) or (ii) less than 14% of the common stock outstanding once such participation right ends.

If the rights become exercisable, the type and amount of securities receivable upon exercise of the rights would depend on the circumstances at the time of exercise. Initially, each right would entitle the holder to purchase one one-thousandth of a share of the Company s Series C junior participating preferred stock for an exercise price of $13.00. If a person (other than an exempt person) acquires fifteen percent or more of the Company s common stock in a transaction that was not approved by the Company s board of directors, then each right, other than those owned by the acquiring person, would instead entitle the holder to purchase $26.00 worth of the Company s common stock for the $13.00 exercise price. If the Company is involved in a merger or other transaction with another company in which the Company is not the surviving corporation, or transfers more than 50% of its assets to another company, in a transaction that was not approved by the Company s board of directors, then each right, other than those owned by the acquiring person, would instead entitle the holder to purchase $26.00 worth of the acquiring company s common stock for the $13.00 exercise price.

The Company s board of directors may redeem the rights for $0.001 per right at any time until ten business days after a person acquires fifteen percent or more of the Company s outstanding common stock. Unless the rights are redeemed or exchanged earlier, they will expire on December 10, 2011.

(15) Equity Offerings

March 2006, the Company raised approximately $9.8 million in gross proceeds from a private placement to institutional investors. In the private placement, the Company sold for a purchase price of $3.52 per share 2,769,886 shares of common stock and warrants to purchase 2,077,414 shares of common stock. The warrants to purchase common stock have an exercise price of $5.20 per share, are fully exercisable, and will expire if not exercised on or prior to September 24, 2011. The warrants may be exercised by cash payment only. After March 24, 2010, the Company may redeem the warrants for $0.08 per warrant share following notice to the warrant holders if the volume weighted average of the closing sales price of the common stock exceeds 300% of the warrant exercise price

for the 15-day period preceding the notice. The Company may exercise its right to redeem the warrants by providing 20 days prior written notice to the holders of the warrants. The net proceeds to the Company from the offering, excluding the proceeds of any future exercise of the warrants, were approximately $8.9 million. The agent fees and other costs directly related to securing the commitment amounted to approximately $0.9 million. The Company has filed a registration statement covering the resale of the common stock and the common stock issuable upon exercise of the warrants, which has been declared effective.

In March 2006, the Company secured a purchase commitment from an investor to purchase from the Company up to $9.8 million of the Company s common stock during the period from June 24, 2006 through December 31, 2006 in up to three drawdowns made by the Company at the Company s discretion. Prior to December 31, 2006, the

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IDERA PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)
December 31, 2006

Company drew down the full $9.8 million through the sale of 1,904,296 shares of common stock at a price of $5.12 per share resulting in net proceeds to the Company, excluding the proceeds of any future exercise of the warrants, described below, of approximately $8.9 million. The agent fees and other costs directly related to securing the commitment amounted to approximately $0.9 million. As part of the arrangement, the Company issued warrants to the investor to purchase 761,718 shares of common stock at an exercise price of $5.92 per share. The warrants are exercisable by cash payment only. The warrants are exercisable at any time on or prior to September 24, 2011. On or after March 24, 2010, Idera may redeem the warrants for $0.08 per warrant share following notice to the warrant holders if the closing sales price of the common stock exceeds 250% of the warrant exercise price for 15 consecutive trading days prior to the notice. The Company may exercise its right to redeem the warrants by providing at least 30 days prior written notice to the holders of the warrants.

In August 2004, the Company raised approximately $5.1 million in gross proceeds from a private placement to institutional and overseas investors. In the private placement, the Company sold 1,102,925 shares of common stock and warrants to purchase 220,585 shares of common stock. The warrants to purchase common stock have an exercise price of $5.36 per share and will expire if not exercised on or prior to August 27, 2009. The warrants may be exercised by cash payment only. On or after February 27, 2005, the Company may redeem the warrants if the closing sales price of the common stock for each day of any 20 consecutive trading day period is greater than or equal to $10.72 per share. The redemption price will be $0.08 per share of common stock underlying the warrants. The Company may exercise its right to redeem the warrants by providing 30 days prior written notice to the holders of the warrants. The net proceeds to the Company from the offering, excluding the proceeds of any future exercise of the warrants, totaled approximately $4.7 million. The agent fees and other costs paid in cash that were directly related to securing the commitment amounted to approximately $0.4 million.

In April 2004, the Company raised approximately $11.8 million in gross proceeds through a registered direct offering. In the offering, the Company sold 2,112,475 shares of common stock and warrants to purchase 380,246 shares of common stock to institutional and other investors. The warrants to purchase common stock have an exercise price of $9.12 per share and are exercisable until April 20, 2009. The warrants may be exercised by cash payment only. The Company may redeem the warrants if the closing sales price of the common stock for each day of any 20 consecutive trading day period within 30 days prior to providing advance notice of redemption is greater than or equal to $20.80 per share. The redemption price will be $0.08 per share of common stock underlying the warrants. The Company may exercise its right to redeem the warrants by providing 30 days prior written notice to the holders of the warrants. The net proceeds to the Company from the offering, excluding the proceeds of any future exercise of the warrants, totaled approximately $10.7 million.

(16) Pro Forma Balance Sheet (unaudited)

On February 13, 2007, the Company elected to automatically convert its 4% Notes (see Note 6(a)) in the aggregate principal amount of $5,032,750 into 706,844 shares of the Company s common stock, par value $0.001 per share, effective on February 20, 2007. In accordance with the terms of the 4% Notes and an agreement, dated May 20, 2005, among the Company and the holders of the 4% Notes, the Company was entitled to exercise this right of automatic conversion because the volume-weighted average of the closing prices of the Company s Common Stock for a period of ten consecutive trading days ending February 8, 2007 exceeded $8.90, which represented 125% of the conversion price of the Notes. As of February 20, 2007, the 4% Notes were no longer considered outstanding and interest ceased

to accrue. Holders of the 4% Notes were paid cash in lieu of any fractional shares and were paid approximately $61,000, which represented accrued interest through February 19, 2007.

The unaudited pro forma balance sheet as of December 31, 2006 reflects the conversion of all of the Company s 4% convertible notes into 706,844 shares of common stock, the reclassification of deferred financing costs to additional paid-in-capital, and the payment of accrued interest.

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Exhibit Index

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
3.1	Restated Certificate of Incorporation of Idera Pharmaceuticals, Inc., as amended.		10-Q	August 14, 2006	001-31918
3.2	Amended and Restated Bylaws of Idera Pharmaceuticals, Inc.		S-1	November 6, 1995	33-99024
3.3	Certificate of Ownership and Merger.		8-K	September 15, 2005	001-31918
4.1	Specimen Certificate for shares of Common Stock, $.001 par value, of Idera Pharmaceuticals, Inc.		S-1	December 8, 1995	33-99024
4.2	Rights Agreement dated December 10, 2001 by and between Idera Pharmaceuticals, Inc. and Mellon Investor Services LLC, as rights agent.		S-2	October 10, 2003	333-109630
4.3	Amendment No. 1 to Rights Agreement dated as of August 27, 2003 between the Company and Mellon Investor Services LLC, as rights agent.		8-K	August 29, 2003	000-27352
4.4	Amendment No. 2 to Rights Agreement dated as of March 24, 2006 between the Company and Mellon Investor Services LLC, as rights agent.		8-K	March 29, 2006	001-31918
4.5	Amendment No. 3 to Rights Agreement dated January 16, 2007 between the Company and Mellon Investor Services, LLC, as rights agent		8-K	January 17, 2007	001-31918
10.1	License Agreement dated February 21, 1990 and restated as of September 8, 1993 between Idera Pharmaceuticals, Inc. and University of Massachusetts Medical Center.		S-1	November 6, 1995	33-99024
10.2	Registration Rights Agreement dated as of February 21, 1990		S-1	November 6, 1995	33-99024

	between Idera Pharmaceuticals, Inc., University of Massachusetts Medical Center and Paul C. Zamecnik.			
10.3	2005 Stock Incentive Plan, as amended	10-Q	August 14, 2006	001-31918
10.4	1995 Stock Option Plan.	S-1	November 6, 1995	33-99024
10.5	1995 Director Stock Option Plan.	S-1	November 6, 1995	33-99024
10.6	1995 Employee Stock Purchase Plan.	S-1	November 6, 1995	33-99024
10.7	Amendment No. 1 to 1995 Employee Stock Purchase Plan.	10-Q	August 14, 2006	001-31918

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Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.8	Employment Agreement dated October 19, 2005 between Idera Pharmaceuticals, Inc. and Dr. Sudhir Agrawal.		10-Q	November 9, 2005	001-31918
10.9	Consulting Agreement dated as of October 19, 2005 between Idera Pharmaceuticals, Inc. and Dr. Paul C. Zamecnik.		10-K	March 31, 2003	000-27352
10.10	Amendment No. 1 to License Agreement, dated as of February 21, 1990 and restated as of September 8, 1993, by and between University of Massachusetts Medical Center and Idera Pharmaceuticals, Inc., dated as of November 26, 1996.		10-Q	August 14, 1997	000-27352
10.11	Amended and Restated 1997 Stock Incentive Plan.		10-Q	May 15, 2001	000-27352
10.12	Collaboration and License Agreement by and between Isis Pharmaceuticals, Inc., and Idera Pharmaceuticals, Inc., dated May 24, 2001.		10-Q	August 20, 2001	000-27352
10.13	Amendment No. 1 to the Collaboration and License Agreement, dated as of May 24, 2001 by and between Isis Pharmaceuticals, Inc. and Idera Pharmaceuticals, Inc., dated as of August 14, 2002.		10-K	March 31, 2003	000-27352
10.14	Master Agreement relating to the Cross License of Certain Intellectual Property and Collaboration by and between Isis Pharmaceuticals, Inc. and Idera Pharmaceuticals, Inc., dated May 24, 2001.		10-Q	August 20, 2001	000-27352
10.15	Unit Purchase Agreement by and among Idera Pharmaceuticals, Inc. and certain persons and entities listed therein, dated April 1, 1998.		10-K	April 1, 2002	000-27352
10.16			10-Q	May 12, 2006	001-31918

	Employment Agreement dated April 13, 2006 between Idera Pharmaceuticals, Inc. and Robert G. Andersen.			
10.17	Executive Stock Option Agreement for 1,260,000 Options effective as of July 25, 2001 between Idera Pharmaceuticals, Inc. and Dr. Sudhir Agrawal.	10-Q	October 24, 2002	000-27352

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Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.18	Executive Stock Option Agreement for 550,000 Options effective as of July 25, 2001 between Idera Pharmaceuticals, Inc. and Dr. Sudhir Agrawal.		10-Q	October 24, 2002	000-27352
10.19	Executive Stock Option Agreement for 500,000 Options effective as of July 25, 2001 between Idera Pharmaceuticals, Inc. and Dr. Sudhir Agrawal.		10-Q	October 24, 2002	000-27352
10.20	Registration Rights Agreement, dated as of August 28, 2003 by and among Idera Pharmaceuticals, Inc., the Purchasers and the Agents.		S-2	October 10, 2003	333-109630
10.21	Form of Common Stock Purchase Warrant issued to purchasers of units in a private placement on August 28, 2003 and August 29, 2003.		S-2	October 10, 2003	333-109630
10.22	Form of Common Stock Purchase Warrant issued to selected dealers and placement agents on August 28, 2003 in connection with a private placement.		S-2	October 10, 2003	333-109630
10.23	Registration Rights Agreement, dated August 27, 2004 by and among Idera Pharmaceuticals, Inc., Pillar Investment Limited and Purchasers.		10-Q	November 12, 2004	001-31918
10.24	Form of Warrants issued to investors and the placement agent in connection with Idera Pharmaceuticals s August 27, 2004 financing.		10-Q	November 12, 2004	001-31918
10.25	Non-Employee Director Nonstatutory Stock Option Agreement Granted under 1997 Stock Incentive Plan.		10-K	March 25, 2005	001-31918

10.26	Form of Incentive Stock Option Agreement Granted Under the 2005 Stock Incentive Plan.	8-K	June 21, 2005	001-31918
10.27	Form of Nonstatutory Stock Option Agreement Granted Under the 2005 Stock Incentive Plan.	8-K	June 21, 2005	001-31918
10.28	Research Collaboration and Option Agreement by and between Idera Pharmaceuticals, Inc. and Novartis International Pharmaceutical Ltd.	10-Q	August 9, 2005	001-31918

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Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.29	License, Development and Commercialization Agreement by and between Idera Pharmaceuticals, Inc and Novartis International Pharmaceutical Ltd.		10-Q	August 9, 2005	001-31918
10.30	Engagement letter, dated May 20, 2005, by and among Idera Pharmaceuticals, Inc. and Pillar Investment Limited.		10-Q	August 9, 2005	001-31918
10.31	Employment Agreement dated December 5, 2005 by and between Robert W. Karr, M.D. and Idera Pharmaceuticals, Inc.		10K	March 31, 2006	001-31918
10.32	Registration Rights Agreement dated as of May 20, 2005 by and among Idera Pharmaceuticals, Inc., Purchasers and Pillar Investment Limited.		10-Q	August 9, 2005	001-31918
10.33	Common Stock Purchase Warrant issued to Pillar Investment Limited in connection with the May 20, 2005 Financing.		10-Q	August 9, 2005	001-31918
10.34	Common Stock Purchase Agreement, dated March 24, 2006, by and among the Company and the Investors named therein.		8-K	March 29, 2006	001-31918
10.35	Registration Rights Agreement, dated March 24, 2006, by and among the Company and the Investors named therein.		8-K	March 29, 2006	001-31918
10.36	Amendment No. 1 to the Common Stock Purchase Agreement, dated March 24, 2006, by and among the Company and the Investors named therein.		10-Q	August 14, 2006	001-31918
10.37	Form of Warrant issued to Investors in the Company s March 24, 2006 Private		8-K	March 29, 2006	001-31918

	Financing.			
10.38	Common Stock Purchase Agreement, dated March 24, 2006, by and between the Company and Biotech Shares Ltd.	8-K	March 29, 2006	001-31918
10.39	Amendment No. 1 to the Common Stock Purchase Agreement, dated March 24, 2006, by and among the Company and Biotech Shares Ltd.	10-Q	November 13, 2006	001-31918
10.40	Engagement Letter, dated March 24, 2006, between the Company and Youssef El Zein.	8-K	March 29, 2006	001-31918

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Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.41	Registration Rights Agreement, dated March 24, 2006, by and among the Company, Biotech Shares Ltd. and Youssef El Zein.		8-K	March 29, 2006	001-31918
10.42	Warrant issued to Biotech Shares Ltd. on March 24, 2006.		8-K	March 29, 2006	001-31918
10.43	Exclusive License and Research Collaboration Agreement by and between Merck & Co., Inc. and Idera Pharmaceuticals, Inc., dated December 8, 2006.		8-K	March 6, 2007	001-31918
10.44	Amendment No. 1 to the Registration Rights Agreement dated March 24, 2006, by and among the Company and Biotech Shares Ltd.		10-Q	August 14, 2007	001-31918
23.1	Consent of Independent Registered Public Accounting Firm.	X			
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002.	X			
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002.	X			

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Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X			
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X			

Confidential treatment granted as to certain portions, which portions are omitted and filed separately with the Commission.

Management contract or compensatory plan or arrangement required to be filed as an Exhibit to the Annual Report on Form 10-K.