Innovative Ideas to Treat Disease in a New Era of Targeted Immune Therapy

idera
PHARMACEUTICALS

ANNUAL REPORT 2005

Today, Idera is focused on development of targeted immune therapy for a broad range of diseases, and is poised to capitalize on the promise of exciting therapeutic opportunities.

TO OUR STOCKHOLDERS:

2005 was a pivotal year for our Company in which we accomplished several defining milestones, including the creation of a new identity for our Company as Idera Pharmaceuticals, Inc. Our own research and recent industry and scientific developments validate our belief in the promise of targeted immune therapy. We believe that targeted immune therapy will play an important role in treating various diseases including cancer, infectious diseases, allergy, and asthma.

Our rationale for focusing on targeted immune therapy is supported by our extensive experience gained through the application of DNA chemistry to drug discovery. Our strategy is reinforced by the hundreds of publications in scientific and trade journals that describe the critical role of Toll-like receptors (TLRs) in immunity and by our early clinical experience with antisense technology. We have designed novel DNA-based compounds that interact with specific members of the TLR family and produce a spectrum of immune responses.

Major international pharmaceutical companies signed license or collaboration agreements in 2005 to gain access to products or programs based on TLR modulation for various disease indications, including oncology, infectious disease, and asthma/allergy. We participated in this licensing activity through an alliance with Novartis.

In 2005, we aligned our human and capital resources to support the discovery, development, and partnering of our proprietary TLR-based programs and products. We put strategy, science, clinical progress and business development together to create value based on our core competency in DNA chemistry.

In 2005, we completed our transition to a company focused on developing novel therapeutics using Toll-like receptors.

Strategic focus. In 2005, we completed our transition to a company focused on developing novel therapeutics using TLRs as the basis for targeted immune therapy. TLRs are the body's first responders to a variety of signals that could indicate a disease process. Our DNA/RNA-based drug candidates show promise for modulating immune responses through TLRs, with our initial focus being compounds that activate an immune response through TLR9. We are also working on agents that target other TLRs, including TLR7 and TLR8, and agents that block the activity of TLR9.

Scientific achievements. Idera's approach to developing TLR-targeted therapeutics stems from our leadership position in DNA chemistry, which has allowed us to create proprietary, differentiated classes of drug candidates that interact with this important family of receptors. During the past year we made important scientific advances and identified new TLR-based drug candidates which we are moving through various stages of preclinical evaluation. Additionally, we continued to build our intellectual property position in the TLR arena, and we now have 147 U.S. and worldwide patents and patent applications covering TLRs.

Clinical progress. Our clinical programs show the progress Idera has made in translating scientific expertise into drug development. We are moving forward in testing promising new therapies for the treatment of cancer and infectious diseases.

In oncology, we have made significant progress with our lead cancer compound IMO-2055, a novel, proprietary compound derived entirely from our in-house discovery program. Our clinical collaborators from the Lombardi Comprehensive Cancer Center at Georgetown University Medical Center presented Phase 1 refractory cancer patient data at the 2005 American Society of Clinical Oncology annual meeting demonstrating the treatment was well tolerated and exhibited evidence of immunological activity. We expanded enrollment in our ongoing Phase 2a monotherapy clinical trial for the treatment of recurrent renal cell carcinoma. We are working towards completing enrollment in the Phase 2a trial by mid 2006 and look forward to reporting data on IMO-2055 for renal cancer later this year.

In addition, we initiated a Phase 1/2 study of IMO-2055 in combination with standard chemotherapy agents for the treatment of non-small cell lung cancer, the most common form of lung cancer.

Our drug discovery platform has delivered another novel chemical entity for potential application in the treatment of infectious disease. Based on successful pre-clinical proof-of-concept studies, we have identified a lead candidate for potential application in the treatment of hepatitis C. We are advancing this candidate under the name IMO-2125 towards planned clinical trials in early 2007.

Strategic alliance. Our technology has broad applications and our know-how enables us to develop multiple drug candidates to drive collaborations with larger biotechnology and pharmaceutical companies. In May 2005, we established a collaboration with Novartis which involves studies of compounds that modulate immune responses through TLR9 for potential treatment of allergy and asthma. We received $4 million as an upfront payment from Novartis. If we are successful through various stages of discovery, development, and commercialization, Idera could receive up to $132 million in milestone payments, in addition to royalties on net sales of products.

In May 2005, we established a collaboration with Novartis which involves studies of compounds that modulate immune responses through TLR9 for potential treatment of allergy and asthma.

Business and financial improvements. As we continue to move the Company forward on all fronts, we also have brought new talent to our management team to maintain and expand our momentum. We were very pleased to add Robert W. Karr, M.D., to our management team as President in December 2005. Dr. Karr is an immunologist with an established career in academics and in the pharmaceutical industry. He was most recently Senior Vice President of Global Strategy at Pfizer Inc.

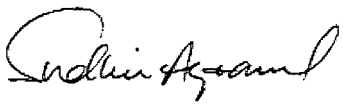
In March 2006 we secured approximately $19.5 million in funding from sources that share our vision of targeted immune therapy based on TLRs. Half of the funding has come from three well-respected biotechnology institutional investors, and the other half has been made available to the Company by existing long-term investors, subject to meeting certain conditions. Together, this funding should support operations midway through 2007.

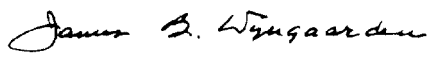
Thoughts about the future. We believe our Company is positioned to be a leader in TLR-based therapeutics and that our proprietary technology gives us a unique capability to synthesize novel chemical compounds. With the wide range of structural variations enabled by our technology, we have the flexibility to create a variety of immune system responses. We are discovering and developing drug candidates to treat multiple conditions and diseases, and we expect to report additional clinical results in late 2006 or early 2007. The strength of our technology platform and its broad applicability make us optimistic about additional corporate alliances.

We continue to build the scientific, clinical and business bases to create value for our stockholders and employees. Today, Idera is focused on development of targeted immune therapy for a broad range of diseases, and is poised to capitalize on the promise of exciting therapeutic opportunities.

We wish to thank our employees, stockholders, collaborators, and the physicians and patients participating in our clinical trials for their continuing support in our efforts to realize the potential of targeted immune therapy.

Sincerely,





Sudhir Agrawal, D.Phil.
Chief Executive Officer and
Chief Scientific Officer

James B. Wyngaarden, M.D.
Chairman

Toll-Like Receptor Programs

CANDIDATE	INDICATION	RESEARCH	PRECLINICAL	PHASE 1	PHASE 2
Agonists of TLR9					
IMO-2055	Renal Cell Cancer				
IMO-2055 + Chemo	Non-Small Cell Lung Cancer				
IMO-2055 + Mabs	Cancer				
IMO-2125	Hepatitis C (pre-IND lead)				
TLR9 Agonists	Asthma/Allergy (IMO candidates)		*Under Alliance*	*with Novartis*	
Other TLR Programs					
TLR9 Antagonists	Autoimmune Diseases				
TLR7 Agonists	Antiviral				
TLR7/8 Agonists	Antiviral				

IMO: Immune Modulatory Oligonucleotide

Toll-Like Receptors: First Line of Defense

TLRs are proteins that form a first line of defense for the immune system. They are a part of the innate immune system and developed very early in evolution. At least ten different TLRs have been identified. Each one recognizes a different set of chemical signals that indicates the possibility of a disease process and has distinctive effects on the immune system.

TLRs were discovered only in the last decade. Researchers have identified their critical role in the immune system even more recently. Drug candidates that work through TLRs exploit natural functions of the immune system and have potential applications across a wide range of diseases, including cancer, allergies and asthma, infectious disease, and autoimmune disease.

Idera's Expertise Applied to TLRs

Idera has more than a decade of experience with the application of DNA chemistry to drug research. This experience allows us to work efficiently and effectively on TLRs.

We have novel drug candidates in various stages of development.

Clinical Program. Our most advanced drug development candidate is designed to activate one specific Toll-like receptor, TLR9. IMO-2055 is in Phase 2 clinical testing for the treatment of renal cell cancer.

Preclinical Lead Candidate. We have another TLR9 agonist, IMO-2125, in preclinical development. We intend to file an IND application for IMO-2125 in the treatment of hepatitis C, because IMO-2125 induces high levels of natural interferon-alpha in appropriate preclinical models. Recombinant interferon-alpha products are widely used in hepatitis C and other viral diseases.

Research Alliance. We have additional TLR9 agonist compounds under evaluation in our Novartis alliance for use in asthma and allergies.

Early-Stage Pipeline. Our experience with the application of DNA chemistry to drug research allows us to work on other TLRs that recognize different types of DNA/RNA structures. Our earlier-stage pipeline programs include agents that activate TLR7 and TLR8 and also agents that block the activity of TLR9.

IDERA PHARMACEUTICALS, INC.

CONSOLIDATED CONDENSED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

	YEARS ENDED DECEMBER 31	
	2005	2004
Revenues	$ 2,467	$ 942
Operating Expenses		
Research & Development	12,687	10,305
General & Administrative	3,503	4,273
Stock-based Compensation	100	(713)
Total Operating Expenses	16,290	13,865
(Loss) from Operations	(13,823)	(12,923)
Investment Income	369	217
Interest Expense	(252)	(29)
Net (Loss)	(13,706)	(12,735)
Accretion of Preferred Stock Dividends	—	(2,676)
Net (Loss) Applicable to Common Stockholders	$ (13,706)	$ (15,411)
Basic and Diluted Net (Loss) Per Common Share Applicable to Common Stockholders	$ (0.12)	$ (0.16)
Shares Used In Computing Basic and Diluted Net (Loss) Per Common Share	111,087	98,914

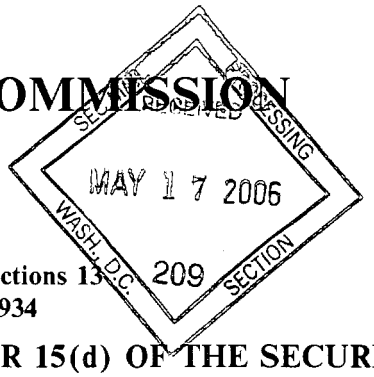
CONSOLIDATED CONDENSED BALANCE SHEET DATA

(in thousands)

	AT DECEMBER 31		
	2005	Pro Forma 2005 (Unaudited)	2004
Cash, Cash Equivalents and Investments	$ 8,376	$ 16,426	$ 14,413
Other Assets	1,613	1,613	978
Total Assets	$ 9,989	$ 18,039	$ 15,391
Current Liabilities	$ 4,052	$ 4,052	$ 1,858
4% Notes Payable	5,033	5,033	—
Non-current Liabilities and Deferred Revenue	1,239	1,239	764
Total Stockholders' Equity	(335)	7,715	12,769
Total Liabilities & Stockholders' Equity	$ 9,989	$ 18,039	$ 15,391

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549



FORM 10-K

For Annual and Transition Reports Pursuant to Sections 13 or 15(d) of the Securities Exchange Act of 1934

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended December 31, 2005

OR

☐ **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: None

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

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of 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. ☐

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 ☐ Accelerated filer ☐ Non-accelerated filer ☑

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

The approximate aggregate market value of the voting stock held by non-affiliates of the registrant was $54,133,722 based on the last sale price of the registrant's common stock on the American Stock Exchange on June 30, 2005. As of February 1, 2006, the registrant had 111,495,117 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 7, 2006 ..... Items 10, 11, 12, 13 and 14 of Part III.

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, 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," "projects," "will," 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.

PART I.

Item 1. *Business*

Overview

We are engaged in the discovery and development of novel therapeutics that modulate immune responses through Toll-like Receptors, or TLRs, for the treatment of multiple diseases. We have developed proprietary DNA- and RNA-based compounds that modulate TLRs and are targeted to TLR7, TLR8 or TLR9. We believe that these immune modulatory oligonucleotides, or IMO™ compounds, are broadly applicable to large and growing markets where significant unmet medical needs exist, including oncology, asthma and allergies, infectious diseases and autoimmune diseases. IMO-2055, our lead drug candidate, is a synthetic DNA-based compound, which acts as an agonist for TLR9 and triggers the activation and modulation of the immune system. IMO-2055 is currently in a Phase 2 clinical trial as a monotherapy for renal cell carcinoma and a Phase 1/2 clinical trial in combination with chemotherapy agents for solid tumors. We have selected another TLR9 agonist, IMO-2125, as a lead compound for infectious diseases. We are also collaborating with Novartis International Pharmaceuticals, Ltd., or Novartis, to develop treatments for asthma and allergies using other of our TLR9 agonist compounds. Our IMO compounds targeted to TLR7 and TLR8 are in the discovery stage.

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".

Drug Development Programs

We are developing IMO-2055, which we also refer to as HYB2055, for oncology applications under the name IMOxine. 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 carcinoma. We originally planned to recruit a minimum of 46 patients who had failed one prior therapy, which we refer to as "second-line" patients, into the first stage of the trial. We also expected to enroll in the first stage of the trial some treatment-naïve patients, although the original protocol did not specify a target enrollment for treatment-naïve patients. On October 19, 2005, in response to a higher than expected enrollment rate of treatment-naïve patients in the Phase 2 trial, we submitted to the U.S. Food and Drug Administration, or FDA, a protocol amendment that provides for enrollment of up to 46 treatment-naïve patients in the first stage of 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 first stage of the trial and plan to continue patient recruitment into the first half of 2006.

On October 26, 2005, we initiated a Phase 1/2 clinical trial of IMO-2055 in combination with the chemotherapy agents gemcitabine, marketed by Eli Lilly and Company as Gemzar®, and carboplatin at the Lombardi Comprehensive Cancer Center at Georgetown University Medical Center. We are seeking to enroll 12 to 18 refractory solid tumor patients in the Phase 1 portion of the trial to evaluate the safety of the combination. The protocol allows for a subsequent Phase 2 portion of the trial as first line treatment of non-small cell lung cancer patients using the Phase 1 data for dosage selection.

We previously conducted a Phase 1 clinical trial of IMO-2055 as a monotherapy in patients with refractory solid tumor cancers at the Lombardi Comprehensive Cancer Center. Except for one patient who received IMO-2055 treatment in the trial for 24 months ending February 2006, treatment under the protocol was completed in September 2004 and results were presented at the American Society of Clinical Oncology annual meeting in May 2005. In the trial, 19 advanced cancer patients received weekly IMO-2055 treatment for at least four weeks. During this period, IMO-2055 dosage was escalated to 0.64 mg/kg/week and was well tolerated at all dose levels. IMO-2055 treatment also exhibited evidence of immunological activity as measured by several parameters.

In addition to these IMO-2055 trials, we may in the future conduct trials in which we evaluate IMO-2055 for the treatment of other specific types of cancer, as a monotherapy and/or in combination with other anticancer agents, including chemotherapeutics, antibodies and vaccines.

In late 2005, we selected our second IMO drug compound, IMO-2125, to advance to clinical development for the treatment of certain infectious diseases. IMO-2055 has demonstrated promising in vitro and in vivo preclinical activity and we have initiated preclinical IND-enabling studies.

IMO Collaborations

In addition to developing drug candidates on our own, we are seeking to establish alliances with other parties for the development and commercialization of products based on our IMO technologies. We believe that pharmaceutical and biotechnology companies may seek to use our IMO compounds as a monotherapy for the treatment of specific diseases or in combination with chemotherapeutics, vaccines and monoclonal antibodies.

In May 2005, we entered into a research collaboration and option agreement and a license, development and commercialization agreement with Novartis to discover, optimize, develop and potentially commercialize immune modulatory oligonucleotides that are TLR9 agonists and that are identified as potential treatments for asthma and allergies. If specific conditions are met, Novartis may choose to expand the collaboration to use identified immune modulatory oligonucleotides for additional human diseases, other than oncology and infectious diseases, which will be subject to agreed upon milestone payments.

IMO-2055 also has applications in combination with vaccines at lower dose levels. We refer to IMO-2055 in this context as Amplivax. We licensed Amplivax to The Immune Response Corporation for use in its development of a potential therapeutic and prophylactic HIV vaccine, REMUNE.

Our Product Pipeline

The table below summarizes the principal products that we or our collaborators are developing and the therapeutic use and development status of these products.

Product Description	Therapeutic Use	Development Status
IMO-2055	Renal Cell Cancer	Phase 2
IMO-2055 (used in combination with chemotherapy agents)	Cancer — solid tumors	Phase 1/2
IMO Compounds[1]	Asthma and allergies	Preclinical candidates
IMO-2125	Infectious Disease	Pre IND lead compound
Amplivax[2]	HIV	Phase 1/2

1. Being developed by Novartis International Pharmaceuticals, Ltd. under a collaboration agreement with us.
2. Being used in patients in combination with REMUNE, an immune-based HIV therapeutic vaccine developed by The Immune Response Corporation, under a collaboration agreement with us.

Immunomodulatory Oligonucleotide (IMO) Technology

Overview

Our IMO technology has evolved from our research and clinical experience with antisense oligonucleotides. We learned from this research and clinical experience that some types of oligonucleotides can act as potent stimulators of the immune system. Our early insights and those of others showed that oligonucleotides containing specific nucleotide segments, or motifs, mimic in the human body the immune stimulating effects of bacterial DNA. Nucleotides are the molecules that are linked together to form DNA. Using our DNA chemistry, we have designed and are developing a new, proprietary class of oligonucleotide compounds, which we refer to as IMO compounds.

We are designing our IMO compounds to be used in the treatment of conditions such as cancer, asthma and allergies, infectious diseases and autoimmune diseases either alone as a monotherapy or in combination therapies with other therapies, including chemotherapeutics, vaccines and antibodies.

Background

The human immune system protects the body against viruses, bacteria and other infectious agents, referred to as pathogens. It also acts to identify and eliminate abnormal cells, such as cancer cells. The immune system works through various mechanisms which recognize pathogens and abnormal 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 a foreign substance 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 foreign pathogen, cells of the innate immune system are activated, resulting in a cascade of signaling events that cause the production of proteins to fight the infection. Unlike the antibodies and proteins produced by the adaptive immune system described below, the proteins produced by the innate immune system are not pathogen-specific, but rather are active against a broad spectrum of pathogens. Moreover, once the infection is resolved, the innate immune system will not remember the pathogen.

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 by recognition of specific cell surface proteins, called antigens, which signal the presence of a pathogen. This process is initiated through signals produced by the innate immune system. Upon recognition of a foreign antigen, the adaptive immune system produces antibodies and antigen-specific cytotoxic 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 pathogen, the adaptive immune system "remembers" the antigens of the pathogen. In this manner, if the pathogen again invades the body, the presence of the "remembered" antigens will allow the adaptive immune system to respond once more, this time in a matter of days. Scientists generally believe that the adaptive immune system also may be able to eliminate abnormal cells, such as cancer cells.

The human immune reaction is initially commenced by activation of the innate immune system. One way this occurs is through recognition by the immune system of a pathogen-associated molecular pattern, referred to as a PAMP. Receptors which are known to recognize PAMPs are TLRs. TLR7, TLR8 and TLR9 are known to recognize certain RNA and DNA from pathogens and induce defensive immune responses.

Our IMO compounds are intended to activate immune responses through TLR7, TLR8 or TLR9. Our most advanced programs are directed at TLR9. Our compounds targeted to TLR7 and TLR8 are in the discovery stage. We believe that our IMO compounds can trigger an immune response similar to the innate immune response. Results from our preclinical studies and our initial clinical trials of our IMO compounds suggest this response leads to signaling events that include production of cytokines. Cytokines are a specific type of immune system molecule that are known to have broad spectrum therapeutic properties against infectious disease as well as against cancer. These signals from the innate immune system also may trigger responses of the adaptive immune system.

Our IMO compounds contain nucleotide motifs and novel structures and are unique in composition. We have a portfolio of these compounds, from which we can select appropriate compounds for different disease indications.

Therapeutic Potential of IMO Compounds

Because IMO compounds can generate a broad range of immune responses, we believe they may provide therapeutic benefits in a number of areas:

- *Cancer.* Cancer cells are recognized by the body as abnormal cells and trigger an immune response. However, the body's immune response to cancer cells is notoriously weak. The benefits of immune stimulation by bacterial DNA in cancer patients have been long recognized. IMO compounds have been shown to activate dendritic cells and B cells and induce Th1 cytokine secretion in human cell-

based assays. The secreted cytokines are known to stimulate natural killer cells to destroy cells within a tumor mass. In preclinical studies in mouse models, our IMO compounds have also been shown to enhance the activity of selected chemotherapeutic agents, selected anticancer antibodies and radiation.

- *Asthma and Allergies.* Based on preclinical studies of our IMO compounds in mouse models, we believe that IMO compounds have potential for use in the treatment of asthma and allergies and other diseases that result from an overreaction of the immune system by suppressing specific allergen induced allergic responses. In our preclinical studies of animal models of allergies, our IMO compounds reversed the imbalance of Th2 activity and improved lung function.

- *Infectious Diseases.* According to published reports, various DNA sequences which mimic bacterial DNA have been shown in studies in mice and other animals to activate an immune defense against pathogens that is of a general nature and not directed at any specific microorganism. As a result, we believe that our IMO compounds have the potential to be used prophylactically to ward off the danger of infection or to boost the immune response to an early-stage or ongoing infection. Some of our IMO compounds have been shown in ongoing preclinical studies to induce Th1-type cytokines, such as elevated plasma concentrations of IFN-alpha in non-human primate studies for example. These cytokines may be useful as anti-infectious agents against bacteria, viruses, and parasites. We have a portfolio of various IMO structures, including compounds that induce high levels of IFN-alpha, which may be suitable for treating Hepatitis C and other viral infections.

- *Autoimmune Diseases.* Independent researchers have published evidence that TLRs may play a role in the pathogenesis of certain autoimmune diseases. We have identified certain DNA-based compounds which may have potential application in autoimmune diseases. We plan to conduct further studies to explore the potential of this novel class of DNA-based compounds.

- *Combinations with Vaccines.* In preclinical studies in mice, the immune response triggered by IMO compounds has been shown to increase the effectiveness of vaccines. As a result, we believe that IMO compounds have the potential to be used in combination with vaccines.

IMO Drug Discovery

Based on our expertise in synthetic oligonucleotide chemistry, we have developed a portfolio of IMO compounds containing different proprietary synthetic motifs and novel DNA and RNA structures. In preclinical studies of our IMO compounds and initial clinical trials of our lead IMO compound, our IMO compounds have triggered an immune response that has resulted in the expression of Th1-type cytokines. This immune response and the resulting expression of cytokines have varied depending on the sequence and structure of the IMO compound. We believe that by varying the synthetic motifs and structures in the IMO compounds, we can design IMO compounds that optimize immunostimulatory activity and induce different profiles of immune response. As a result, we believe we may create IMO compounds that are optimized for the treatment of different diseases.

IMO-2055 Clinical Lead Candidate

IMO-2055

We are focusing most of our internal drug development efforts on the lead drug candidate in our pipeline IMO-2055 for oncology applications. 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*. We filed an Investigational New Drug Application, or IND, for IMO-2055 with the FDA that became effective March 6, 2003.

In March 2004, we completed a Phase 1 clinical trial of IMO-2055 in 28 healthy volunteers over a broad range of dosing levels. In this 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, according to several parameters monitored in the study.

In May 2003, we commenced a Phase 1 clinical trial of IMO-2055 in patients with refractory solid tumor cancers at the Lombardi Comprehensive Cancer Center at Georgetown University Medical Center in Washington, D.C. We enrolled 23 patients in this trial. One patient continued to receive IMO-2055 treatment for 24 months ending February 2006. Except for this one patient, treatment under the protocol was completed in September 2004. Results from this trial were presented at the American Society of Clinical Oncology, or ASCO, annual meeting in May 2005. In the trial, 19 of the 23 patients completed at least four consecutive weekly treatments with IMOxine. IMO-2055 dosage was escalated from 0.04 mg/kg/week to 0.64 mg/kg/week and was well tolerated at all dose levels. IMO-2055 treatment also exhibited evidence of immunological activity as measured by several parameters monitored in the study. 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, pain 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 dyspnea with hypoxia, one patient with rigors/chills one hour post dose, one patient with abdominal pain with nausea/vomiting and two patients with anemia requiring transfusion. The one patient who continued to receive IMO-2055 therapy for 24 months exhibited no serious adverse effects during the treatment period that ended in February 2006. The results of this Phase 1 trial provided evidence of dose response effects on immunology parameters in patients with a variety of cancer types, including renal cell carcinoma, melanoma, colorectal cancer, sarcoma, breast cancer, non-small cell lung cancer and other cancers.

We are currently conducting a Phase 2 clinical trial of IMO-2055 in patients with metastatic or recurrent clear cell renal carcinoma. 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. 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 the trial, one of two dose levels of 0.16 or 0.64 mg/kg is administered by weekly subcutaneous injection. Treatment duration is defined as 24 weeks based on safety and the absence of disease progression. Patients can continue to receive IMO-2055 treatment beyond 24 weeks based on investigator recommendations and independent medical monitor concurrence. We originally planned to recruit a minimum of 46 patients who had failed one prior therapy, which we refer to as "second-line" patients, into the first stage of the trial. We also expected to enroll in the trial some treatment-naïve patients, although the original protocol did not specify a target enrollment for treatment-naïve patients. On October 19, 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 provides for enrollment of up to 46 treatment-naïve patients in the first stage of 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 first stage of the trial and plan to continue patient recruitment into the first half of 2006.

On October 26, 2005, we initiated a Phase 1/2 clinical trial of IMO-2055 in combination with the chemotherapy agents gemcitabine, marketed by Eli Lilly and Company as Gemzar®, and carboplatin at the Lombardi Comprehensive Cancer Center at Georgetown University Medical Center. We are seeking to enroll 12 to 18 refractory solid tumor patients in the Phase 1 portion of the trial to evaluate the safety of the combination. The protocol allows for a subsequent Phase 2 portion of the trial as first line treatment of non-small cell lung cancer patients using the Phase 1 data for dosage selection.

Amplivax

We licensed Amplivax to IRC for use in its development of a potential therapeutic and prophylactic HIV vaccine, REMUNE. We plan to seek additional licensees for Amplivax in the future.

IMO-2125 Preclinical Lead Compound

In late 2005, we selected a second drug compound IMO-2125 to advance to clinical development for the treatment of certain infectious diseases. IMO-2125 has demonstrated promising in vitro and in vivo preclinical activity. We have initiated preclinical IND-enabling studies.

Antisense Technology

We have been a pioneer in antisense technology. Although we are no longer developing this technology in-house, we believe that our antisense technology may be useful to pharmaceutical and biotechnology companies that are seeking to develop drug candidates that down-regulate gene targets discovered by, or proprietary to, such companies. As the owner or licensee of over 500 patents and patent applications in the antisense area, we have entered into nine collaboration and license agreements based upon these technologies. We plan to continue seeking additional collaborations using our antisense technologies and various antisense drug candidates.

Research and Development

For the years ended December 31, 2005, 2004 and 2003, we spent approximately $12.7 million, $10.3 million and $10.8 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 these research and development activities in 2004 and 2003.

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. Our policy is to seek to protect our proprietary position by, among other methods, 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.

As of December 31, 2005, we owned 48 U.S. patents and U.S. patent applications and 99 corresponding worldwide patents and patent applications for our IMO technology. These patents and patents applications include novel chemical compositions of matter and methods of use for our immunomodulatory compounds, including IMO-2055 and IMO-2125. To date all of our IMO intellectual property is based on discoveries made solely by us. The earliest of these issued patents expires in 2017.

Our antisense patent portfolio as of December 31, 2005, included over 513 worldwide patents and patent applications, which we own or have exclusively licensed. Of this portfolio, 135 are U.S. patents and U.S. patent applications, and the remainder are issued or pending throughout the world. These antisense patents and patent applications include novel composition of matter and the use of these compositions for various genes, sequences and therapeutic targets, oral and other routes of administration. These issued patents expire at various dates ranging from 2006 to 2022.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in obtaining effective claims and enforcing those claims once granted. We do not know whether any of our patent applications or those patent applications which we license will result in the issuance of any patents. Our issued patents and those that may 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, which could adversely affect our ability to protect future drug development and, consequently, our operating results and financial position.

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.

Trade Secrets

We may rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect our proprietary technology and processes, in part, by confidentiality agreements with our employees, consultants, scientific advisors and other contractors. 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 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.

Corporate Alliances

IMO Technology

An important part of our business strategy is to enter into research and development collaborations, licensing agreements and other strategic alliances, primarily with biotechnology and pharmaceutical corporations, to develop and commercialize drugs based on our IMO technology.

Novartis International Pharmaceutical, Ltd.

On May 31, 2005, we entered into a research collaboration and option agreement and a license, development and commercialization agreement with Novartis International Pharmaceutical, Ltd. 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 addition to the $4.0 million upfront payment, Novartis agreed to fund substantially all research activities and make milestone payments to Idera upon the achievement of clinical development, regulatory approval and cumulative net sales milestones. If Novartis elects to exercise its option to develop and commercialize licensed IMOs in the initial collaboration disease areas, Novartis is potentially obligated to pay us up to $132.0 million in milestone payments. Novartis is also obligated to pay us a royalty on net sales of all products, if any, commercialized by Novartis, its affiliates and sublicensees. We are recognizing the $4.0 million upfront payment as revenue over the two-year term of the research collaboration. If specific conditions are met, Novartis may choose to expand the collaboration to use identified immune modulatory oligonucleotides for additional human diseases, other than oncology and infectious diseases, which will be subject to agreed upon milestone payments.

The Immune Response Corporation

We licensed Amplivax to The Immune Response Corporation for use in combination with its vaccine, REMUNE, which it is developing.

Antisense Technology

We have been a pioneer in antisense technology. Although we are no longer developing this technology in-house, we believe that our antisense technology may be useful to pharmaceutical and biotechnology companies that are seeking to develop drug candidates that down-regulate gene targets discovered by, or proprietary to, such companies.

Isis Pharmaceuticals, Inc.

In May 2001, we entered into a collaboration and license agreement with Isis Pharmaceuticals, Inc. Under the agreement, we granted Isis a license, with the right to sublicense, to our antisense chemistry and delivery patents and patent applications and retained the right to use these patents and patent applications in our own drug discovery and development efforts and in collaborations with third parties. In addition to payments made by Isis to us during 2001, Isis agreed to pay us a portion of the income it received from specified types of sublicense of our patents and patent applications. Also under this agreement, Isis granted us a license to use specified antisense patents and patent applications, principally Isis' suite of RNase H patents and patent applications. We have the right under the agreement to use these patents and patent applications in our drug discovery and development efforts and in some types of collaborations with third parties. In addition to a payment made by us to Isis during 2002, we agreed to pay Isis a nominal annual maintenance fee and a modest royalty on sales of products covered by specified patents and patent applications Isis sublicensed to us. 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 for which we have maintenance fee and royalty obligations to Isis.

Other Collaborations

We are a party to seven other collaboration and license arrangements involving the use of our antisense technologies and specified indications. Some of these include:

- *VasGene Therapeutics, Inc.* In October 2004, we entered into reciprocal Collaboration and License Agreements with VasGene Therapeutics, Inc. pursuant to which both parties agreed to collaborate on the research and development of VEGF antisense products. We have the right to pursue the treatment of opthalmologic and other non-cancer diseases that are susceptible to treatment based on localized administration under one agreement, and VasGene has the right to pursue the treatment of cancer and other non-ophthalmologic diseases that are susceptible to treatment through systemic administration under the other agreement.

- *Alnylam Pharmaceuticals, Inc.* In August 2004, we entered into a Collaboration and License Agreement with Alnylam Pharmaceuticals, Inc. pursuant to which we granted to Alnylam an exclusive license to a series of patents and patent applications relating to the therapeutic use of oligonucleotides that inhibit the production of the protein VEGF. Under the license, Alnylam's rights are limited to targeting VEGF for ocular indications with RNAi molecules.

- *Aegera Therapeutics Inc.* We are a party to an agreement with Aegera Therapeutics, Inc. that relates to the development of an antisense drug targeted to the XIAP gene, a gene which has been implicated in the resistance of cancer cells to chemotherapy. In July 2003, Aegera and we announced that we had selected AEG35156/GEM640, an antisense oligonucleotide, targeted to the XIAP gene, as the development candidate.

- *Migenix Inc. (formerly Micrologix Biotechnology, Inc.)* We are a party to an agreement with Migenix that relates to the development of an antisense drug for the treatment of human papillomavirus.

- *Epigenesis Pharmaceuticals, Inc.* We are a party to an agreement with Epigenesis that relates to the development of up to five antisense drugs for the treatment of respiratory disease.

Under these arrangements, we typically license to our collaborators our chemistries and delivery patents and patent applications on a non-exclusive basis. In consideration for the license and these services, we typically are entitled to receive license fees and are entitled to receive research payments, payments upon achievement of development milestones and royalties on product sales and sublicensing, if earned. The licenses granted under these agreements typically terminate upon the later of the last to expire of the patents licensed under the agreements or a specified number of years after the first commercial sale of products covered by the agreements. These agreements may be terminated by either party upon a material breach. Our collaborators may terminate these agreements at any time upon written notice.

Other Antisense Licenses

We are a party to a number of royalty-bearing license agreements under which we have acquired rights to the patents, patent applications and technology of third parties. Our principal antisense license agreement is with University of Massachusetts Medical Center, under which we are the worldwide, exclusive licensee of several U.S. issued patents and pending patent applications owned by the University of Massachusetts Medical Center. Many of these U.S. patents and patent applications have foreign counterparts . The patents licensed to us by the University of Massachusetts Medical Center expire between 2006 and 2019, and the license agreement expires upon the expiration of the last to expire of such patents. Additionally, as part of a 2003 interference resolution, a settlement was made that will enable us to receive a defined percentage of the royalty amounts received by the National Institutes of Health for the sale of a product that is covered by the patent that was the subject of that interference.

We are also the licensee of other antisense related technologies, including: Louisiana State University (exclusive license covering mdm2 antisense related technologies), Genzyme Corporation (non-exclusive license covering mdm2 antisense related technologies), Integrated DNA Technologies, Inc., (non-exclusive license covering chemical modifications to synthetic DNA), Dr. Yoon S. Cho-Chung (exclusive license covering Protein Kinase A antisense related technologies), and Children's Hospital Medical Center (exclusive license covering VEGF antisense related technologies).

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. In certain cases, we are required to pay a specified percentage of any sublicense income that we may receive. 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. Each of these licenses automatically terminates upon the expiration of the last to expire patent covered by the license.

Academic and Research Collaborations

We have entered into a number of collaborative research relationships with independent researchers, leading academic and research institutions and U.S. government agencies. These research relationships allow us to augment our internal research capabilities and obtain access to specialized knowledge and expertise.

In general, our collaborative research agreements require us to pay various amounts to support the research. If in the course of conducting research under its agreement with us a collaborator, solely or jointly with us, creates any invention, we generally have an option to negotiate an exclusive, worldwide, royalty-bearing license to the invention. Inventions developed solely by our scientists in connection with a collaborative relationship generally are owned exclusively by us. Most of these collaborative agreements are nonexclusive and can be cancelled with limited notice.

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. 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:

- preclinical laboratory tests and animal tests under the FDA's good laboratory practices regulations;
- the submission to the FDA of an investigational new drug application, or 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 current good manufacturing practices regulations, or cGMP; and
- the submission to the FDA of a new drug application, or NDA.

Preclinical tests include laboratory evaluation of the product, as well as animal studies to assess the potential safety and efficacy of a drug. The results of the preclinical 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 before it can begin. 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, and pharmacologic action;
- Phase 2 usually involves controlled trials in a limited patient population to:
  - evaluate preliminarily the efficacy of the drug for specific, targeted conditions,
  - determine dosage tolerance and appropriate dosage, and
  - identify possible adverse effects and safety risks; and
- 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.

The results of the preclinical 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 for approval prior to the marketing and commercial shipment of the product. In most cases, the NDA 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 a new drug application if all applicable regulatory criteria are not satisfied or may require additional clinical, toxicology or manufacturing data. Even after an NDA 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. 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 withdraw product approval if compliance with regulatory standards 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.

We will also be subject to a variety of foreign regulations governing clinical trials and sales 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 and federal 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.

Manufacturing

We were a party to a supply agreement with Avecia Biotechnology, which was formally known as Boston Biosystems Inc., under which we purchased our requirements for oligonucleotide compounds from Avecia at a preferential price, which expired in March 2004. We have continued to purchase all of the oligonucleotides we are using in our ongoing clinical trials and preclinical testing from Avecia. We expect that we will enter into a longer term arrangement with Avecia or new arrangements with other third-party manufacturers to supply us with the oligonucleotide compounds that we need for our research, preclinical, clinical and if we receive approval of a product, commercial supply purposes.

Competition

We expect that our product candidates will address several different markets defined by the potential indications for which these product candidates are developed and ultimately approved by regulatory authorities. For several of these indications, these product candidates will be competing with products and therapies either currently existing or expected to be developed, including compounds targeting TLR7, TLR8 or TLR9 developed by third parties. Many of these existing products and therapies are marketed by large pharmaceutical companies, have recognized brand names and are widely accepted by physicians and patients.

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.

There are a number of companies, both privately and publicly held, that are conducting research and development, preclinical and clinical and commercial activities relating to technologies and products that are similar to our technologies and products, including large pharmaceutical companies with programs in CpG DNA compounds that have a similar mechanism of action as our IMO compounds. Our principal competitors include Coley Pharmaceutical Group, Dynavax Technologies Corp, Anadys Pharmaceutical, Inc. and 3M.

The primary indications for which we are developing our IMO compounds are cancer, allergy and respiratory diseases and infectious diseases. None of our competitors is currently marketing any compounds targeting to TLR7, TLR8 or TLR9 for cancer, allergy and respiratory diseases or infectious diseases, except 3M. However, our competitors are developing a number of product candidates for cancer, allergy and respiratory diseases and infectious diseases that are currently in clinical trials.

- Dynavax has CpG DNA compounds in clinical trials for multiple indications. These indications include the treatment of cancer, asthma/allergy and infectious disease.
- Coley and its collaborators have CpG DNA compounds in clinical trials for multiple indications. These indications include treatment of cancer, asthma/allergy, biowarfare and infectious disease. Coley has licensed oncology applications to Pfizer, who has announced plans to conduct two Phase 3 clinical trials in non-small cell lung cancer patients.
- Anadys has small molecule compounds that activate TLR7 that are currently in human clinical trials for various indications and is collaborating with Novartis for the treatment of infectious diseases.
- 3M is marketing the product Aldara cream which is a small molecule TLR7 agonist for the treatment of basal cell carcinoma and genital warts.

Many of our competitors, particularly the pharmaceutical and biotechnology companies with which we compete, 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.

Employees

As of March 1, 2006, we employed 27 individuals full-time, including 19 employees in research and development. Thirteen of our employees hold a doctoral 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 of 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.

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 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, 2005, we had incurred operating losses of approximately $313.0 million. 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 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 discovery and development programs and other operations.

We will require substantial funds to conduct research and development, including preclinical testing and clinical trials of our drugs. 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, together with the $8.9 million in net proceeds that we raised in March 2006 through the sale of common stock and warrants less $0.9 million in direct expenses associated with the financing commitment discussed below, will be sufficient to fund our operations through January 2007. In March 2006, we secured a commitment from an investor to purchase up to $9.8 million of our common stock upon drawdowns made at our discretion. Our ability to access this commitment and sell common stock to such investor is subject to stockholder approval of an increase in the number of authorized shares of common stock, which we plan to seek at our annual meeting of stockholders in June 2006, and the effectiveness of a registration statement covering the resale of the shares to be sold. If we are able to make drawdowns under this commitment and sell the full $9.8 million of common stock under it, we expect to have sufficient cash and investments to be able to pursue our clinical and preclinical development programs and continue operations through mid 2007.

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 receptivity of the capital markets to financings by biotechnology companies; and
- our ability to enter into 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 relinquish rights to some of our technologies, drug candidates or drugs which 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. 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 drug candidate, IMO-2055, which is in clinical development. If we are unable to 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 drug 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 the trial and during commercial use;
- successful completion of clinical trials;
- receipt of marketing approvals from the FDA and equivalent foreign regulatory authorities;
- establishing commercial manufacturing arrangements with third party manufacturers;
- launching commercial sales of the product, whether alone or in collaboration with others; and
- acceptance of the product in the medical community and with third party payors.

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 carcinoma. 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 significantly delayed, we may not be able to develop and commercialize our products.

We may not be able to successfully complete any clinical trial of a potential product within any specified time period. In some cases, we may not be able to complete the trial at all. Moreover, clinical trials may not show our potential products to be both safe and efficacious. Thus, the FDA and other regulatory authorities may not approve any of our potential products for any indication.

In order to obtain regulatory approvals for the commercial sale of our products, we will be required to complete extensive clinical trials in humans to demonstrate the safety and efficacy of our drug candidates. 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 drug 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 one or more of our clinical trials can occur at any stage of testing. Further, there is to date little data on the long-term clinical safety of our lead compounds under conditions of prolonged use in humans, nor on any long-term consequences subsequent to human use. We may experience numerous unforeseen events during, or as a result of, preclinical testing and the clinical trial process that could delay or inhibit our ability to receive regulatory approval or 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;
- our preclinical tests 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;
- we might have to suspend or terminate our clinical trials if the participating patients are being 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;

- the cost of our clinical trials may be greater than we currently anticipate; and
- the effects of our products may not be the desired effects or may include undesirable side effects or the products may have other unexpected characteristics.

As an example, in 1997, after reviewing the results from the clinical trial of GEM91, a 1st generation antisense compound and our lead drug 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. The statistical design of our ongoing Phase 2 clinical trial of IMO-2055 in renal cell carcinoma was originally based on patients who had already failed one course of therapy, whom we refer to as second-line patients. As of October 2005, our enrollment of second-line patients was less than anticipated, whereas the enrollment of treatment-naïve patients was more than expected. As a result, the trial protocol was amended in October 2005 to accommodate statistical endpoints for both treatment-naïve and second-line patients, thus extending the completion of the trial beyond the time we expected. Patient accrual is a function of many factors, including:

- the size of the patient population,
- the proximity of patients to clinical sites,
- the eligibility criteria for the study,
- the nature of the study,
- the existence of competitive clinical trials, and
- the availability of alternative treatments.

Our product development costs will increase if we experience delays in our clinical trials. We do not know whether planned 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.

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 organizations such as 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 Sutent® and Nexavar® for use in renal cell carcinoma, which is the indication for which we are evaluating IMO-2055 monotherapy in our Phase 2 trial. Two of our competitors are currently evaluating TLR9 agonists in Phase 3 clinical trials.

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 to secure sufficient capital resources for the period between technological conception and commercial sales.

Because the products that we may develop will be based on new technologies and therapeutic approaches, the market may not be receptive to these products upon their introduction.

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. Many of the products that we are developing are based upon technologies or therapeutic approaches that are relatively new and unproven. The FDA has not granted marketing approval to any products based on IMO technology or TLR9 agonists and no such products are currently being marketed. The FDA has also approved a small molecule against TLR7 which 3M Pharmaceuticals is selling under the name Aldara cream for the treatment of genital warts, basal cell carcinoma and actinic keratosis. As a result, it may be more difficult for us to achieve regulatory approval or market acceptance of our products. 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.

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 Sudhir Agrawal and 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 IMO Technology. He is named as an inventor on over 230 patents and patent applications worldwide. Dr. Karr has extensive experience in the pharmaceutical industry. Drs. Agrawal and Karr provide us the 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 for a term ending on October 19, 2008, subject to annual renewals. 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 for a term ending on December 5, 2007, subject to annual renewals. 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.

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 such products or the manufacturing of such products;
- withdrawal of the products from the market;
- warning letters;
- voluntary or mandatory recall;
- fines;
- suspension or withdrawal of regulatory approvals;
- 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 collaborative relationships in order to succeed.

An important element of our business strategy includes entering into collaborative relationships for the development and commercialization of products based on our discoveries. We face significant competition in seeking appropriate collaborators. Moreover, these arrangements are complex to negotiate and time-consuming to document. We may not be successful in our efforts to establish collaborative relationships or other alternative arrangements.

The success of collaboration arrangements will depend heavily on the efforts and activities of our collaborators. Our collaborators will have significant discretion in determining the efforts and resources that they will apply to these collaborations. The risks that we face in connection with these collaborations include the following:

- disputes may arise in the future with respect to the ownership of rights to technology developed with collaborators;
- disagreements with 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;
- collaborators have considerable discretion in electing whether to pursue the development of any additional drugs and may pursue technologies or products either on their own or in collaboration with our competitors that are similar to or competitive with our technologies or products that are the subject of the collaboration with us; and
- 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.

Given these risks, it is possible that any collaborative arrangements into which we enter may not be successful. In May 2005, we entered into collaborative arrangements with Novartis involving our IMO technology for application in asthma and allergies. Previous collaborative arrangements to which we were a party with F. Hoffmann-La Roche and G.D. Searle & Co., involving our antisense technology, were terminated prior to the development of any product. The failure of any of our collaborative relationships could delay our drug development or impair commercialization of our products.

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 which we license will result in the issuance of any patents. Our issued patents and those that may 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 seven 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 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 2006 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 two 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, 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 and no 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.

There are a limited number of manufacturers that operate under the FDA's current good manufacturing practices 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.

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.

We purchased oligonucleotides for preclinical and clinical testing from Avecia Biotechnology at a preferential price under a supply agreement, which expired in March 2004. We have continued to purchase all of the oligonucleotides we are using in our ongoing clinical trials and preclinical testing from Avecia. The terms of the agreement have been extended until such time as a new agreement is negotiated. If Avecia determines not to accept any purchase order for oligonucleotides or we are unable to enter into a new manufacturing arrangement with Avecia or a new contract manufacturer on a timely basis or at all, our ability to supply the product needed for our clinical trials could be materially impaired.

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 PAREXEL International to manage our Phase 2 clinical trial of IMO-2055 in renal cell carcinoma. 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. 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.

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 will 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 recently 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 to 12 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.

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. 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.

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, 2003 to February 28, 2006, the closing sales price of our common stock ranged from a high of $1.69 per share to a low of $0.41 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;
- 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.

We may be unable to repay our 4% convertible subordinated notes when due or to repurchase the convertible subordinated notes if we are required to do so under the terms of our agreement with the holders of the 4% convertible subordinated notes.

In May 2005, we sold approximately $5.0 million in principal amount of 4% convertible subordinated notes. On April 30, 2008, the entire outstanding principal amount of our 4% convertible subordinated notes will become due and payable, unless the notes are converted to common stock prior to expiration. In addition, we may be required to redeem all or part of the convertible subordinated notes prior to the final maturity date if specified events occur. We may not have sufficient funds or may be unable to arrange for additional financing to pay the amount due under the convertible subordinated notes at maturity or to pay the price to repurchase the convertible subordinated notes. Any future borrowing arrangements or debt agreements to which we may become a party may restrict or prohibit us from repaying or repurchasing the convertible subordinated notes. If we are prohibited from repaying or repurchasing the convertible subordinated notes, we could try to obtain the consent of lenders under those arrangements, or we could attempt to refinance the indebtedness that contains the restrictions. If we could not obtain the necessary consents or refinance the indebtedness, we would be unable to repay or repurchase the convertible subordinated notes. Any such failure would constitute an event of default under the agreement with the holders of the 4% convertible subordinated notes, which could, in turn, constitute a default under the terms of any future indebtedness.

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

None.

Item 2. ***Properties***

We 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. We believe these facilities are adequate to accommodate our needs for the next year. In 2006, we expect to look for a new facility to lease and if no satisfactory space is located we plan to seek to renegotiate the lease of our current facility.

Item 3. ***Legal Proceedings***

None.

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

None.

Executive Officers and Key Employees of Idera Pharmaceuticals

The following table sets forth the names, ages and positions of our executive officers and other key employees as of March 1, 2006:

Name	Age	Position
Sudhir Agrawal, D. Phil	52	Chief Executive Officer, Chief Scientific Officer and Director
Robert W. Karr, M.D.	57	President and Director
Robert G. Andersen	55	Chief Financial Officer, Vice President of Operations, Treasurer and Secretary
Timothy M. Sullivan, Ph.D.	51	Vice President of Development Programs

Dr. Sudhir Agrawal 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 the co-author of more than 230 patents worldwide.

Dr. 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 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 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, 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.

Dr. Timothy Sullivan 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. 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 brings broad expertise in the design, execution, and application of drug development programs. 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.

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 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	$1.15	$0.45
Second Quarter	0.83	0.51
Third Quarter	0.72	0.43
Fourth Quarter	0.84	0.50
2004		
First Quarter	$1.51	$0.92
Second Quarter	1.10	0.51
Third Quarter	0.69	0.36
Fourth Quarter	0.68	0.40

The number of common stockholders of record on March 1, 2006 was 415.

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.

Since December 4, 2003, our series A convertible preferred stock has paid dividends at 1.0% per year, payable semi-annually in arrears. We may pay these dividends either in cash or in additional shares of series A convertible preferred stock, at our discretion.

Sales of Unregistered Securities

Sales by us during 2005 of securities that were not registered under the Securities Act of 1933, as amended, consist of:

- On December 15, 2005, we issued 75,143 shares of common stock in lieu of $43,359 in interest due to holders of our 4% convertible subordinated notes payable. The shares were issued without registration under the Securities Act in reliance on the exemption provided by Regulation S under the Securities Act.
- On December 22, 2005, we issued 84,561 shares of common stock in lieu of $48,794 in interest due to Optima Life Sciences Ltd., or Optima, in interest due on our 4% Notes held by Optima. Mr. Youssef El Zein is one of our directors and he is also a director of Optima. The shares were issued without registration under the Securities Act in reliance on the exemption provided by Regulation S under the Securities Act.

Item 6. *Selected Financial Data*

The following selected financial data are derived from the consolidated financial statements of Idera Pharmaceuticals, Inc. The data should be read in conjunction with the consolidated financial statements, related notes, and other financial information included herein.

	Year Ended December 31,				
	2005	2004	2003	2002	2001
	(In thousands, except per share data)				
Statement of Operations Data:					
Alliance revenue(1)	$ 2,467	$ 942	$ 897	$ 29,606	$ 1,122
Operating expenses:					
Research and development	12,687	10,305	10,817	7,877	4,868
General and administrative	3,503	4,273	6,924	7,054	5,051
Stock-based compensation from repriced options	100	(713)	543	(1,297)	1,762
Total operating expenses	16,290	13,865	18,284	13,634	11,681
(Loss) income from operations	(13,823)	(12,923)	(17,387)	15,972	(10,559)
Other income (expense):					
Investment income, net	369	217	190	650	577
Interest expense	(252)	(29)	(118)	(150)	(1,319)
Loss on conversion of 8% convertible subordinated notes payable	—	—	—	—	(1,412)
Gain on sale of securities, net	—	—	104	—	5,217
(Loss) income from continuing operations	(13,706)	(12,735)	(17,211)	16,472	(7,496)
Income from discontinued operations(2)	—	—	—	—	2,663
(Loss) income before income taxes	(13,706)	(12,735)	(17,211)	16,472	(4,833)
Income tax benefit (provision)	—	—	—	500	(500)
Net (loss) income	(13,706)	(12,735)	(17,211)	16,972	(5,333)
Accretion of preferred stock dividend	—	(2,676)	(5,529)	(4,246)	(8,342)
Net (loss) income applicable to common stockholders	$ (13,706)	$ (15,411)	$ (22,740)	$ 12,726	$ (13,675)
Basic net (loss) income per common share from:					
Continuing operations	$ (0.12)	$ (0.13)	$ (0.34)	$ 0.36	$ (0.26)
Discontinued operations	—	—	—	—	0.09
Net (loss) income per share	(0.12)	(0.13)	(0.34)	0.36	(0.17)
Accretion of preferred stock dividends	—	(0.03)	(0.11)	(0.09)	(0.27)
Net (loss) income per share applicable to common stockholders	$ (0.12)	$ (0.16)	$ (0.45)	$ 0.27	$ (0.44)
Diluted net (loss) income per common share from:					
Continuing operations	$ (0.12)	$ (0.13)	$ (0.34)	$ 0.32	$ (0.26)
Discontinued operations	—	—	—	—	0.09
Net (loss) income per share	(0.12)	(0.13)	(0.34)	0.32	(0.17)
Accretion of preferred stock dividends	—	(0.03)	(0.11)	(0.08)	(0.27)
Net (loss) income per share applicable to common stockholders	$ (0.12)	$ (0.16)	$ (0.45)	$ 0.24	$ (0.44)
Shares used in computing basic net (loss) income per common share(3)	111,087	98,914	51,053	46,879	30,820
Shares used in computing diluted net (loss) income per common share(3)	111,087	98,914	51,053	52,984	30,820
Balance Sheet Data:					
Cash, cash equivalents and short-term investments	$ 8,376	$ 14,413	$ 13,668	$ 19,175	$ 31,834
Working capital	4,998	13,181	10,740	17,638	27,259
Total assets	9,989	15,391	14,410	21,249	32,309
Capital lease obligations, current portion	7	—	—	34	—
4% convertible subordinated notes payable	5,033	—	—	—	—
9% convertible subordinated notes payable	—	—	1,306	1,306	1,306
8% convertible subordinated notes payable	—	—	—	—	288
Series A convertible preferred stock	—	—	5	7	6
Accumulated deficit	(313,000)	(299,294)	(283,883)	(261,143)	(273,868)
Total stockholders' (deficit) equity	(335)	12,769	10,526	17,444	(33)

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

(2) Consolidated financial statements reflect the financial results of our Hybridon Specialty Products Division as a discontinued operation for the year ended December 31, 2001. Reported revenues, expenses and cash flows exclude the operating results of discontinued operations.

(3) Computed on the basis described in Note 11 of notes to consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K.

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, 2005. 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.

	Three Months Ended							
	Dec. 31 2005	Sep. 30 2005	Jun. 30 2005	Mar. 31 2005	Dec. 31 2004	Sep. 30 2004	Jun. 30 2004	Mar. 31 2004
	(In thousands, except per share data)							
Statement of Operations Data:								
Alliance revenues	$ 1,441	$ 544	$ 311	$ 171	$ 131	$ 78	$ 88	$ 645
Operating expenses:								
Research and development	4,457	2,580	3,052	2,599	2,349	2,610	2,541	2,805
General and administrative	919	793	1,013	778	801	1,550	1,025	897
Stock-based compensation from repriced options	(50)	120	(55)	83	(121)	(18)	(257)	(317)
Total operating expenses	5,326	3,493	4,010	3,460	3,029	4,142	3,309	3,385
Loss from operations	(3,885)	(2,949)	(3,699)	(3,289)	(2,898)	(4,064)	(3,221)	(2,740)
Investment income	113	107	83	66	74	57	50	36
Interest expense	(107)	(108)	(37)	—	—	—	—	(29)
Net loss	(3,879)	(2,950)	(3,653)	(3,223)	(2,824)	(4,007)	(3,171)	(2,733)
Accretion of preferred stock dividend	(1)	—	—	—	—	—	—	(2,676)
Net loss applicable to common stockholders	$ (3,880)	$ (2,950)	$ (3,653)	$ (3,223)	$ (2,824)	$ (4,007)	$(3,171)	$(5,409)
Basic and diluted net loss per share applicable to common stockholders	$ (0.03)	$ (0.03)	$ (0.03)	$ (0.03)	$ (0.03)	$ (0.04)	$ (0.03)	$ (0.07)
Shares used in computing basic and diluted loss per common share(1)	111,219	111,115	111,045	110,967	110,911	105,301	98,269	80,972

(1) Computed on the basis described in Note 11 of notes to consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K.

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

We are engaged in the discovery and development of novel therapeutics that modulate immune responses through Toll-like Receptors, or TLRs, for the treatment of multiple diseases. We have developed proprietary DNA- and RNA-based compounds that modulate TLRs and are targeted to TLR7, TLR8 or TLR9. We believe that these immune modulatory oligonucleotide, or IMO™, compounds are broadly applicable to large and growing markets where significant unmet medical needs exist, including oncology, asthma and allergies, infectious diseases and autoimmune diseases. IMO-2055, our lead drug candidate, is a synthetic DNA-based compound, which acts as an agonist for TLR9 and triggers the activation and modulation of the immune system. IMO-2055 is currently in a Phase 2 clinical trial as a monotherapy for renal cell carcinoma and a Phase 1/2 clinical trial in combination with chemotherapy agents for solid tumors. We have selected another TLR9 agonist, IMO-2125, as a lead compound for infectious diseases. We are also collaborating with Novartis to develop treatments for asthma and allergies using other of our TLR9 agonist compounds. Our IMO compounds targeted to TLR7 and TLR8 are in the discovery stage.

Since 2003, we have devoted substantially all of our research and development efforts to our IMO technology and products and expect to continue that focus in future years. Although we were a pioneer in the development of antisense technology and are the owner or licensee of over 500 patents and patent applications in this area, we are no longer developing our antisense technologies in-house and continue to seek additional collaborators to develop our antisense technologies externally.

We have incurred total losses of $313.0 million through December 31, 2005 and expect to incur substantial operating losses in the future. In order to commercialize our therapeutic products, we need to address a number of technological challenges and to comply with comprehensive regulatory requirements. In 2006, we expect that our research and development expenses will be higher than those in 2005 as we continue to advance IMO-2055 through clinical development.

Application of Critical Accounting Policies

This management's discussion and analysis of financial condition and results of operations is based on our consolidated 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 consolidated 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 fit the description of critical accounting estimates.

Revenue Recognition

We recognize revenue in accordance with SEC Staff Accounting Bulletin No. 104, or SAB 104. SAB 104 requires that 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.

We recognize license fees and other upfront fees, not specifically tied to a separate earnings process, ratably over the term of the contract or the term in which we must fulfill an obligation to aid in the research or use of the licensed technology.

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 initiation of clinical trials, filing for approval with regulatory agencies and approvals by regulatory agencies.

Results of Operations

Years ended December 31, 2005, 2004 and 2003

Revenues

Total revenues increased by $1.6 million, or 162%, from $0.9 million in 2004 to $2.5 million in 2005. Total revenues remained fairly constant at $0.9 million for both 2003 and 2004. The difference in revenues between 2005 and 2004 was primarily due to license fees and reimbursed third party expenses we recognized under our collaboration agreement entered into in May 2005 with Novartis. In July 2005, we received from Novartis the $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. Our revenues for 2005, 2004 and 2003 were comprised of payments under various collaboration and licensing agreements for research and development, including reimbursement of third party expenses, and as license fees, sublicense fees, and royalty payments. Revenues for 2004 and 2003 also included milestone payments.

Research and Development Expenses

Research and development expenses increased by approximately $2.4 million, or 23%, from $10.3 million in 2004 to $12.7 million in 2005 and decreased by approximately $0.5 million, or 5%, from $10.8 million in 2003 to $10.3 million in 2004. The increase in 2005 was primarily attributable to (1) costs associated with our Phase 2 clinical trial of IMO-2055, (2) studies leading to the selection of a second lead compound IMO-2125, and (3) manufacturing of IMO-2125. The year 2005 also included costs associated with our collaboration with Novartis. The decrease between 2003 and 2004 was primarily attributable to a decrease in spending on GEM231 and lower salary expenses due to the retirement of one of our officers and a decrease in bonus awards. These decreases were partially offset by an increase in our IMO-2055 manufacturing and clinical related study costs in 2004.

Our current research and development efforts relate primarily to IMO-2055. In 2005, 2004 and 2003, we incurred approximately $3.9, $2.5 and $2.3 million, respectively, in direct expenses in connection with developing IMO-2055. These expenses reflected payments to independent contractors and vendors for clinical

and preclinical studies and drug manufacturing and related costs but exclude internal costs such as payroll and overhead. 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 carcinoma. We originally planned to recruit a minimum of 46 patients who had previously failed one prior therapy, or "second-line" patients, into the first stage of the trial. We also expected to enroll in the first stage of the trial some treatment-naïve patients, although the original protocol did not specify a target enrollment for treatment-naïve patients. On October 19, 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 provides for enrollment of up to 46 treatment-naïve patients in the first stage of 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 up to 92 patients in the first stage of the trial and we plan to continue patient recruitment into the first half of 2006.

On October 26, 2005, we initiated a Phase 1/2 clinical trial of IMO-2055 in combination with the chemotherapy agents gemcitabine, marketed by Eli Lilly and Company as Gemzar®, and carboplatin at the Lombardi Comprehensive Cancer Center at Georgetown University Medical Center. We are seeking to enroll 12 to 18 refractory solid tumor patients in the Phase 1 portion of the trial to evaluate the safety of the combination. If successful, we plan to use Phase 1 data for dose selection for the subsequent Phase 2 portion of the trial as first line treatment of non-small cell lung cancer patients.

Because our IMO-2055 development and our other research and development programs are in the early stage of development and given the technological and regulatory hurdles likely to be encountered in the development and commercialization of our products, the future timing and costs of our various research and development programs are uncertain.

General and Administrative Expenses

General and administrative expenses decreased by approximately $0.8 million, or 18%, from $4.3 million in 2004 to $3.5 million in 2005 and decreased by approximately $2.6 million, or 38%, from $6.9 million in 2003 to $4.3 million in 2004. General and administrative expenses consisted primarily of salary expense, consulting fees and professional legal fees associated with our regulatory filing requirements and business development. These costs were generally consistent from period to period.

The $2.6 million decrease in 2004 from 2003 primarily reflects the one-time expense for the $1.9 million premium paid in repurchasing shares of our common stock in 2003 and other consulting and professional fees related to the repurchase of our common stock in 2003. The 2004 decrease also reflects a decrease in legal expenses due mainly to the winding down of a patent interference proceeding conducted in 2003. The resignation of our former Chief Executive Officer in 2004 resulted in a $0.7 million charge which was the primary reason for the $0.8 million decrease in 2005, as compared to 2004, and partially offset the 2004 decreases mentioned above, as compared to 2003.

Stock-Based Compensation

As a result of our repricing of stock options in September 1999, some of our outstanding stock options have been subject to variable plan accounting which requires us to measure the intrinsic value of the repriced options through the earlier of the date of exercise, cancellation or expiration at each reporting date. In 2005, we incurred stock-based compensation expense of $0.1 million in operating results, which resulted from an increase in the intrinsic value of these options. We recorded a credit to operating results of approximately $0.7 million in 2004 as a result of a decrease in the intrinsic value of these options. In 2003, we incurred stock-based compensation expense of $0.5 million in operating results, which resulted from an increase in the intrinsic value of these options.

As explained in Note 2(l) to the financial statements included in this annual report, on January 1, 2006, we adopted SFAS No. 123(R), *"Share-Based Payment"*, which is a revision of SFAS No. 123, *"Accounting for Stock-Based Compensation"*. SFAS No. 123(R) supersedes APB Opinion No. 25, *"Accounting for Stock Issued to Employees"*, and amends SFAS No. 95, *"Statement of Cash Flows"*. Pursuant to

SFAS No. 123(R), the Statement of Operations will no longer include the effects of marking repriced options to market. The impact of adopting SFAS 123(R) cannot be predicted at this time because it will depend on levels of share-based payments granted in the future. However, had we adopted SFAS 123(R) in a prior period, the impact of applying that standard would have approximated the impact of SFAS 123 as described in the disclosure of pro forma net loss and net loss per share in Note 2(j) to the financial statements included in this annual report, adjusted for estimated forfeitures, if any.

Investment Income, net

Investment income increased by approximately $0.2 million from $0.2 million in 2004 to $0.4 million in 2005 and remained relatively constant at approximately $0.2 million in 2003 and $0.2 million in 2004. The increase from 2004 to 2005 is primarily attributable to higher interest rates.

Interest Expense

Interest expense increased by approximately $223,000 from $29,000 in 2004 to $252,000 in 2005 and decreased by $89,000 from $118,000 in 2003 to $29,000 in 2004. The increase in 2005 consisted of interest on our 4% notes issued in May 2005 and amortization of deferred financing costs associated with these notes. The interest in 2004 and 2003 related to our 9% notes. The decrease from 2003 to 2004 resulted from our 9% notes maturing on April 1, 2004. Upon the maturity of those notes, we paid $1.3 million to the investors, representing the outstanding principal amount of our 9% notes, plus accrued interest.

Gain on Sale of Securities, net

The $104,000 gain on the sale of securities in 2003 represents a gain on the sale of shares of Migenix common stock that were received as payment under our agreement with Migenix. There were no gains on sales of securities during 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 29.41 shares of common stock for each preferred share converted instead of the 23.53 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 preferred stock dividends for each of the three years ended December 31, 2005 were as follows:

	Preferred Stock Dividends		
	2005	2004	2003
Accretion of dividends expected to be paid on Series A Preferred Stock..	$656	$ 503	$3,402,856
Accretion of dividend that would have been paid on April 1, 2004 and reversal since preferred shares were converted in January and February 2004	—	(570,000)	570,000
Market value of 25% additional shares issued upon conversion	—	3,245,492	1,556,000
Total preferred stock dividend	$656	$2,675,995	$5,528,856

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 and during 2003 of $1.6 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 $73.1 million at December 3, 2003 to $0.5 million at December 31, 2003 and $655 at December 31, 2004 and 2005.

All preferred stock dividends are payable, at our election, either in cash or shares of series A convertible preferred stock.

Net Operating Loss Carryforwards

As of December 31, 2005, we had cumulative net operating losses of approximately $266.7 million and tax credit carryforwards of approximately $4.7 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, 2005, have resulted in ownership changes, as defined under the Tax Act, which will limit our ability to utilize all of our available net operating loss and tax credit carryforwards in the future. 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 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 $0.44 per share 22,159,092 shares of common stock and warrants to purchase 16,619,319 shares of common stock. The warrants to purchase common stock have an exercise price of $0.65 per share and will expire if not exercised on or prior to September 24, 2011. The warrants may be exercised by cash payment only and are exercisable any time on or after September 24, 2006. After March 24, 2010, we may redeem the warrants for $0.01 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. We may exercise our right to redeem the warrants by providing 20 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, total approximately $8.9 million. We are required to file a registration statement covering the common stock and the common stock issuable upon exercise of the warrants and to use our best efforts to make the registration statement effective.

In March 2006, we secured a commitment from an investor to purchase up to $9.8 million of our common stock between June 24, 2006 and December 31, 2006. We may require the investor to purchase in up to three drawdowns, which shall be made at our discretion, up to $9.8 million of newly-issued shares of our common stock at a price that is equal to the greater of 80% of the volume weighted average closing price during a five day pricing period preceding the date that we notify the investor of the sale and a floor price of $0.64 per share. Our ability to make drawdowns is conditioned upon (i) the effectiveness of a registration statement covering the resale of the shares to be issued under the commitment, except that we may drawdown up to $2,500,000 prior to such registration statement being declared effective, and (ii) stockholder approval of an increase in our authorized common stock, which we expect to seek at our 2006 annual meeting of stockholders. No drawdown may occur within 45 days of any other drawdown, and no single drawdown may exceed $4.0 million. Based on the floor price, a maximum of 15,234,375 shares of common stock could be issued under the commitment. We are not obligated to sell any of the $9.8 million of common stock available under the commitment and there are no minimum commitments or minimum use penalties. The commitment does not contain any restrictions on our operating activities, automatic pricing resets or minimum market volume restrictions. The agent fees and other costs directly related to securing the commitment amount to approximately $0.9 million. If we elect to sell the entire $9.8 million of our common stock pursuant to the commitment, the net proceeds to us, excluding the proceeds of any future exercise of the warrants, will be approximately $8.9 million. As part of the arrangement, we issued warrants to the investor to purchase 6,093,750 shares of our common stock at an exercise price of $0.74 per share. The warrants are exercisable by cash payment only. The warrants are exercisable beginning on September 24, 2006. The warrants expire if not exercised by September 24, 2011. On or after March 24, 2010, we may redeem the warrants for $0.01 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 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 December 2005, we issued 159,704 shares of common stock as interest based on the market value of our common stock at the time. Holders of the 4% Notes may convert, at any time prior to maturity, the principal amount of the 4% Notes (or any portion thereof) into shares of our common stock at a conversion price of $0.89 per share. We may cause the principal amount of the 4% Notes to be converted into shares of our common stock at the then current conversion price at any time prior to May 24, 2006 if the volume weighted average of the closing sales prices of our common stock for 10 consecutive trading days is equal to at least $1.78 per share or at any time on or after May 24, 2006 if the volume weighted average of the closing sales prices of our common stock for 10 consecutive trading days is equal to at least $1.12 per share. If we conduct a financing resulting in greater than $10.0 million in gross proceeds, we may elect to convert the 4% Notes into shares of our common stock at the then current conversion price if the purchase price paid by the new investors in the financing (on a common stock equivalent basis) is greater than the then current conversion price of the 4% Notes. Holders of the 4% Notes may demand that we redeem the 4% Notes upon a change in control, a merger with an independent company, or a change in our listing status. The net proceeds from the offering totaled approximately $4.6 million.

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 8,823,400 shares of common stock and warrants to purchase 1,764,680 shares of common stock. The warrants to purchase common stock have an

exercise price of $0.67 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 $1.34 per share. The redemption price will be $0.01 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 16,899,800 shares of common stock and warrants to purchase 3,041,964 shares of common stock to institutional and other investors. The warrants to purchase common stock have an exercise price of $1.14 per share and are exercisable at any time on or after October 21, 2004 and on or prior to April 20, 2009. The warrants may be exercised by cash payment only. On or after October 21, 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 ending within 30 days prior to providing notice of redemption is greater than or equal to $2.60 per share. The redemption price will be $0.01 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.

In August 2003, we raised approximately $14.6 million in gross proceeds from a private placement to institutional and accredited investors. In the private placement, we sold 20,053,022 shares of our common stock and warrants to purchase 6,015,934 shares of our common stock. The warrants to purchase common stock have an exercise price of $1.00 per share and will expire if not exercised by August 28, 2008. The warrants may be exercised by paying cash or by invoking a cashless exercise feature. We may redeem the warrants at a price of $0.05 per share of common stock issuable upon exercise of the warrants if the average closing price of our common stock for a ten consecutive trading day period is greater than or equal to $2.00 per share. The net proceeds to us from the placement, excluding the proceeds of any future exercise of the warrants, totaled approximately $13.1 million. As part of this transaction, we issued to selected dealers and placement agents warrants to purchase 2,458,405 shares of common stock at an exercise price of $0.73 per share and warrants to purchase 1,325,342 shares of common stock at an exercise price of $1.00 per share.

In May 2005, we entered into a research collaboration and option agreement and a license, development and commercialization agreement with Novartis International Pharmaceutical, Ltd. 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.

Cash Flows

As of December 31, 2005, we had approximately $8.4 million in cash and cash equivalents and investments, a net decrease of approximately $6.0 million from December 31, 2004. We used $10.5 million of cash in operating activities during 2005, principally to fund our research and development expenses and our general and administrative expenses. The $10.5 million primarily consists of our $13.7 million net loss for the period, as adjusted for the $2.7 million increase in deferred revenue which primarily reflects the unamortized part of the upfront license fee from Novartis and for non-cash expenses including interest, depreciation, amortization and stock-based compensation.

The net cash provided by investing activities during 2005 of $1.8 million reflects our purchase of approximately $19.9 million in securities offset by our sale of $16.9 million of securities and the proceeds of approximately $5.0 million from securities that matured in 2005. The net cash provided by investing activities also reflects our 2005 purchases of laboratory equipment.

The net cash provided by financing activities during 2005, reflects the approximately $5.0 million in net proceeds that we received from the issuance of our 4% notes offset by the expenses associated with their issuance. The net cash provided by financing also reflects $0.1 million in proceeds received from the exercise of stock options.

Funding Requirements

We have incurred operating losses in most fiscal years and had an accumulated deficit of $313.0 million at December 31, 2005. We had cash, cash equivalents and short-term investments of $8.4 million at December 31, 2005. We believe that, based on our current operating plan, our existing cash, cash equivalents and short-term investments, together with the $8.9 million in net proceeds that we raised in March 2006 through the sale of common stock and warrants, less $0.9 million in direct expenses associated with the commitment discussed below, will be sufficient to fund our operations through January 2007. In addition, in March 2006, we entered into an agreement with an investor under which the investor agreed to purchase up to $9.8 million of our common stock upon drawdowns made at our discretion. Our ability to access this commitment and sell common stock to such investor is subject to stockholder approval of an increase in the number of authorized shares of common stock, which we plan to seek at our annual meeting of stockholders in June 2006, and the effectiveness of a registration statement covering the resale of the shares to be sold. If we are able to access the commitment and sell the full $9.8 million under it, we expect to have sufficient cash and investments to be able to pursue our clinical and preclinical development programs and continue operations through mid 2007.

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. As a result in order for us to continue to pursue our clinical and preclinical development programs and continue operations beyond January 2007, or mid-2007 if we drawdown all of the funds pursuant to the commitment, we must raise additional funds in 2006 from debt, equity financings or from collaborative arrangements with biotechnology or pharmaceutical companies. If we do utilize our commitment, we expect to continue to pursue our clinical and preclinical development programs and continue operations through mid 2007. There can be no assurance that the requisite funds will be available in the necessary time frame or on terms acceptable to us. Should we be unable to raise sufficient funds, 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 receptivity of the capital markets to financings by biotechnology companies; and
- our ability to enter into strategic collaborations with biotechnology and pharmaceutical companies and the success of such collaborations.

Contractual Obligations

As of December 31, 2005, our contractual obligations were as follows:

	Payments Due by Period		
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 years**
Lease Commitments	$ 815,000	$ 611,000	$ 204,000
Employment Agreements	2,470,000	1,329,000	1,141,000
Consulting & Collaboration Agreements	253,000	253,000	—
Total	$3,538,000	$2,193,000	$1,345,000

Our only material lease commitment relates to our 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. We may make material leasehold improvement expenditures in 2006 dependant upon whether or not we decide to locate to a new facility.

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, 2005, 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.

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, 2005. 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 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, 2005, 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, 2005 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 7, 2006.

Item 10. *Directors and Executive Officers of Idera Pharmaceuticals*

The response to this item is contained under the following captions in the 2006 Proxy Statement: "Election of Directors", "Section 16(a) Beneficial Ownership Reporting Compliance" and "Board Committees", which sections are incorporated herein by reference. See Part I of this Annual Report on 10-K under the caption "Executive Officers and Key Employees of Idera Pharmaceuticals."

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 which is located at www.iderapharma.com.

Item 11. *Executive Compensation*

The response to this item is contained in the 2006 Proxy Statement under the captions: "Certain 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 2006 Proxy Statement under the caption "Security Ownership of Certain Beneficial Owners and Management" which section is incorporated herein by reference.

Item 13. *Certain Relationships and Related Transactions*

The response to this item is contained in the 2006 Proxy Statement under the captions "Certain 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 2006 Proxy Statement under the caption "Principal Accountant Fees and Services", which section is incorporated herein by reference.

PART IV.

Item 15. ***Exhibits and Financial Statement Schedules***

(a)(1) *Financial Statements.*

(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.

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 27th day of March 2006.

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 27, 2006
/s/ SUDHIR AGRAWAL Sudhir Agrawal, D. Phil	Chief Executive Officer, Chief Scientific Officer and Director (Principal Executive Officer)	March 27, 2006
/s/ ROBERT W. KARR Robert W. Karr, M.D.	President and Director	March 27, 2006
/s/ ROBERT G. ANDERSEN Robert G. Andersen	Chief Financial Officer and Vice President of Operations, Treasurer and Secretary (Principal Financial and Accounting Officer)	March 27, 2006
/s/ YOUSSEF EL-ZEIN Youssef El-Zein	Director	March 27, 2006
/s/ C. KEITH HARTLEY C. Keith Hartley	Director	March 27, 2006
/s/ WILLIAM S. REARDON William S. Reardon, C.P.A.	Director	March 27, 2006
/s/ ALISON TAUNTON-RIGBY Alison Taunton-Rigby, Ph.D., OBE	Director	March 27, 2006
/s/ PAUL C. ZAMECNIK Paul C. Zamecnik, M.D.	Director	March 27, 2006

IDERA PHARMACEUTICALS, INC.

INDEX TO FINANCIAL STATEMENTS
December 31, 2005

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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

We have audited the accompanying consolidated balance sheets of Idera Pharmaceuticals, Inc. and subsidiaries as of December 31, 2005 and 2004, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2005. 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 audit 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 consolidated financial position of Idera Pharmaceuticals, Inc. and subsidiaries at December 31, 2005 and 2004, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2005, in conformity with U.S. generally accepted accounting principles.

/s/ ERNST & YOUNG LLP

Boston, Massachusetts
February 24, 2006, except for Notes 1 and 16
as to which the date is March 24, 2006

IDERA PHARMACEUTICALS, INC.

BALANCE SHEETS

	December 31, 2005	Pro Forma December 31, 2005 Note 16 (Unaudited)	December 31, 2004
ASSETS			
Current assets:			
Cash and cash equivalents	$ 984,766	$ 9,034,766	$ 5,021,860
Short-term investments	7,390,903	7,390,903	9,391,140
Receivables	175,905	175,905	293,113
Prepaid expenses and other current assets	498,347	498,347	333,316
Total current assets	9,049,921	17,099,921	15,039,429
Property and equipment, net	418,684	418,684	351,791
Deferred financing costs	520,692	520,692	—
Total Assets	$ 9,989,297	$ 18,039,297	$ 15,391,220
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Accounts payable	$ 536,371	$ 536,371	$ 354,736
Accrued expenses	1,338,048	1,338,048	1,332,150
Current portion of capital lease	6,519	6,519	—
Current portion of deferred revenue	2,171,287	2,171,287	171,287
Total current liabilities	4,052,225	4,052,225	1,858,173
Non-current portion of accrued expenses	—	—	240,000
Long term 4% convertible notes payable	5,032,750	5,032,750	—
Capital lease	10,321	10,321	—
Deferred revenue, net of current portion	1,229,451	1,229,451	523,655
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, 2005 and 2004, respectively			
Liquidation value — $655 at December 31, 2005	7	7	7
Common stock, $0.001 par value			
Authorized — 200,000,000 and 185,000,000 shares at December 31, 2005 and 2004, respectively			
Issued and outstanding — 111,421,051, 133,580,143 and 110,931,529 shares at December 31, 2005 actual, December 31, 2005 pro forma and December 31, 2004 actual, respectively	111,421	133,580	110,932
Additional paid-in capital	312,632,499	320,660,340	311,988,467
Accumulated deficit	(313,000,200)	(313,000,200)	(299,293,785)
Accumulated other comprehensive loss	(11,341)	(11,341)	(14,989)
Deferred compensation	(67,836)	(67,836)	(21,240)
Total stockholders' (deficit) equity	(335,450)	7,714,550	12,769,392
Total Liabilities and Stockholders' (Deficit) Equity	$ 9,989,297	$ 18,039,297	$ 15,391,220

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

IDERA PHARMACEUTICALS, INC.

STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2005	2004	2003
Alliance revenue	$ 2,467,021	$ 942,598	$ 896,572
Operating expenses:			
Research and development	12,687,562	10,305,292	10,817,288
General and administrative	3,502,680	4,273,009	6,923,899
Stock-based compensation from repriced options (1)	99,721	(713,074)	542,666
Total operating expenses	16,289,963	13,865,227	18,283,853
Loss from operations	(13,822,942)	(12,922,629)	(17,387,281)
Other income (expense):			
Investment income, net	369,245	217,064	190,178
Interest expense	(252,062)	(29,385)	(117,540)
Gain on sale of securities, net	—	—	103,585
Net loss	(13,705,759)	(12,734,950)	(17,211,058)
Accretion of preferred stock dividends	(656)	(2,675,995)	(5,528,856)
Net loss applicable to common stockholders	$(13,706,415)	$(15,410,945)	$(22,739,914)
Basic and diluted net loss per share	$ (0.12)	$ (0.13)	$ (0.34)
Basic and diluted net loss per share applicable to common stockholders	$ (0.12)	$ (0.16)	$ (0.45)
Shares used in computing basic and diluted net loss per common share	111,087,058	98,913,927	51,053,415
(1) The following summarizes the allocation of stock based compensation from repriced options			
Research and development	$ 71,192	$ (516,809)	$ 403,310
General and administrative	28,529	(196,265)	139,356
Total	$ 99,721	$ (713,074)	$ 542,666

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

IDERA PHARMACEUTICALS, INC.

STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

	Series A Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Deferred Compensation	Total Stockholders' Equity (Deficit)
	Number of Shares	$0.01 Par Value	Number of Shares	$0.001 Par Value					
Balance, December 31, 2002	678,362	$ 6,784	47,944,857	$ 47,945	$278,578,678	$(261,142,926)	$ (1,944)	$(44,407)	$ 17,444,130
Sale of common stock	—	—	20,053,022	20,053	13,031,797	—	—	—	13,051,850
Repurchase of common stock	—	—	(4,643,034)	(4,643)	(3,477,632)	—	—	—	(3,482,275)
Exercise of common stock options and warrants	—	—	173,860	174	91,963	—	—	—	92,137
Issuance of stock options and stock for services	—	—	75,882	76	82,288	—	—	—	82,364
Amortization of deferred compensation	—	—	—	—	—	—	—	7,045	7,045
Preferred stock dividends	44,777	447	—	—	5,528,409	(5,528,856)	—	—	—
Conversion of preferred into common stock	(233,934)	(2,339)	6,877,983	6,878	(4,539)	—	—	—	—
Stock-based compensation from repriced options	—	—	—	—	542,666	—	—	—	542,666
Comprehensive income:									
Unrealized loss on marketable securities	—	—	—	—	—	—	(1,051)	—	(1,051)
Net loss	—	—	—	—	—	(17,211,058)	—	—	(17,211,058)
Total comprehensive loss	—	—	—	—	—	—	—	—	(17,212,109)
Balance, December 31, 2003	489,205	4,892	70,482,570	70,483	294,373,630	(283,882,840)	(2,995)	(37,362)	10,525,808
Sale of common stock	—	—	25,723,200	25,723	15,377,566	—	—	—	15,403,289
Exercise of common stock options and warrants	—	—	246,175	246	154,497	—	—	—	154,743
Issuance of stock options and stock for services	—	—	109,844	110	129,338	—	—	—	129,448
Amortization of deferred compensation	—	—	—	—	—	—	—	16,122	16,122
Preferred stock dividends	20	—	—	—	2,675,995	(2,675,995)	—	—	—
Conversion of preferred into common stock	(488,570)	(4,885)	14,369,740	14,370	(9,485)	—	—	—	—
Stock-based compensation from repriced options	—	—	—	—	(713,074)	—	—	—	(713,074)
Comprehensive income:									
Unrealized loss on marketable securities	—	—	—	—	—	—	(11,994)	—	(11,994)
Net loss	—	—	—	—	—	(12,734,950)	—	—	(12,734,950)
Total comprehensive loss	—	—	—	—	—	—	—	—	(12,746,944)
Balance, December 31, 2004	655	7	110,931,529	110,932	311,988,467	(299,293,785)	(14,989)	(21,240)	$ 12,769,392
Exercise of common stock options and warrants	—	—	266,788	267	124,163	—	—	—	124,430
Issuance of stock and warrants for services and interest	—	—	222,734	222	347,492	—	—	—	347,714
Issuance of stock options	—	—	—	—	72,000	—	—	(72,000)	—
Amortization of deferred compensation	—	—	—	—	—	—	—	25,404	25,404
Preferred stock dividends	—	—	—	—	656	(656)	—	—	—
Stock-based compensation from repriced options	—	—	—	—	99,721	—	—	—	99,721
Comprehensive income:									
Unrealized loss on marketable securities	—	—	—	—	—	—	3,648	—	3,648
Net loss	—	—	—	—	—	(13,705,759)	—	—	(13,705,759)
Total comprehensive loss	—	—	—	—	—	—	—	—	(13,702,111)
Balance, December 31, 2005	655	$ 7	111,421,051	$111,421	$312,632,499	$(313,000,200)	$(11,341)	$(67,836)	$ (335,450)

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

IDERA PHARMACEUTICALS, INC.

STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2005	2004	2003
Cash Flows from Operating Activities:			
Net loss	$(13,705,759)	$(12,734,950)	$(17,211,058)
Adjustments to reconcile net loss to net cash used in operating activities —			
Loss from disposition of assets	2,134	—	—
Realized gain on marketable securities	—	—	(103,585)
Stock repurchase expense	—	—	1,857,214
Stock-based compensation	99,721	(713,074)	542,666
Depreciation and amortization expense	170,876	288,464	280,596
Issuance of stock options and stock for services	36,177	129,448	82,364
Amortization of deferred compensation	25,404	16,122	7,045
Amortization of deferred financing costs	130,173	—	—
Non cash interest expense	100,976	—	—
Changes in operating assets and liabilities —			
Receivables	117,208	(90,177)	203,377
Prepaid expenses and other current assets	(165,031)	(231,619)	90,073
Accounts payable and accrued expenses	(61,290)	127,903	139,565
Deferred revenue	2,705,796	(83,787)	(266,771)
Net cash used in operating activities	(10,543,615)	(13,291,670)	(14,378,514)
Cash Flows from Investing Activities:			
Purchases of available-for-sale securities	(19,853,754)	(18,635,747)	(17,681,672)
Proceeds from sale of available-for-sale securities	16,850,000	12,300,000	15,343,377
Proceeds from maturities of available-for-sale securities	5,000,000	2,850,000	—
Proceeds from maturities of held-to-maturity securities	—	—	14,080,000
Purchases of property and equipment	(212,709)	(60,410)	(53,943)
Net cash provided by (used in) investing activities	1,783,537	(3,546,157)	11,687,762
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	—	15,403,289	13,051,850
Repurchase of common stock	—	—	(5,339,489)
Issuance costs from financing	(431,480)	—	—
Proceeds from exercise of common stock options and warrants	124,430	154,743	92,137
Payments on debt	—	(1,306,000)	—
Payments on capital lease	(2,716)	—	(33,591)
Net cash provided by financing activities	4,722,984	14,252,032	7,770,907
Net (decrease) increase in cash and cash equivalents	(4,037,094)	(2,585,795)	5,080,155
Cash and cash equivalents, beginning of period	5,021,860	7,607,655	2,527,500
Cash and cash equivalents, end of period	$ 984,766	$ 5,021,860	$ 7,607,655

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

(1) Organization

Idera Pharmaceuticals, Inc. ("Idera" or the "Company") (AMEX: IDP) is a biotechnology company engaged in the discovery and development of novel therapeutics that modulate immune responses through Toll-like Receptors (TLRs) for the treatment of multiple diseases. The Company has developed proprietary DNA- and RNA- based compounds that modulate TLRs and are targeted to TLR7, TLR8, or TLR9. The Company believes that these immune modulatory oligonucleotide (IMO™) compounds are broadly applicable to large and growing markets where significant unmet medical needs exist, including oncology, asthma and allergies, infectious diseases and autoimmune diseases. The Company's lead drug candidate is IMO-2055, which is also referred to as HYB2055 or IMOxine®. IMO-2055 is a synthetic DNA-based compound, which acts as an agonist for TLR9 and triggers the activation and modulation of the immune system. IMO-2055 is currently in a Phase 2 clinical trial as a monotherapy in renal cell carcinoma and in a Phase 1/2 clinical trial in combination with chemotherapy agents for solid tumors. The Company has selected another TLR9 agonist, IMO-2125, as a lead compound for infectious disease. The Company is also collaborating with Novartis International Pharmaceuticals, Ltd., or Novartis, to develop treatments for asthma and allergies using other of its TLR9 agonist compounds. The Company's IMO compounds targeted to TLR7 and TLR8 are in the discovery stage.

The Company has incurred operating losses in most fiscal years and had an accumulated deficit of $313.0 million at December 31, 2005. The Company had cash, cash equivalents and short-term investments of $8.4 million at December 31, 2005. Based on its current operating plan, the Company believes that these funds, together with the $8.9 million in net proceeds that it raised in March 2006, through the sale of common stock and warrants less the $0.9 million in direct expenses associated with the financing commitment discussed below, will be sufficient to fund operations through January 2007. In addition, in March 2006, the Company secured a commitment from an investor to purchase up to $9.8 million of the Company's common stock upon drawdowns made at the Company's discretion. The Company's ability to make drawdowns is conditioned upon (i) the effectiveness of a registration statement covering the resale of the shares to be issued under the commitment, except that the Company may drawdown up to $2.5 million prior to such registration being declared effective, and (ii) stockholder approval of an increase in the number of authorized shares of common stock, which the Company plans to seek at its 2006 annual meeting of stockholders. If the Company elects to sell the full $9.8 million of its common stock, the Company expects to have sufficient cash and investments to be able to pursue its clinical and preclinical development programs and continue operations through mid 2007. Therefore, the accompanying financial statements have been prepared assuming that the Company will continue as a going concern. The Company's actual cash requirements will depend on many factors, including particularly the scope and pace of its research and development efforts and its success in entering into strategic alliances.

The Company does not expect to generate significant additional 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 addition, it has no committed external sources of funds. As a result, in order for the Company to continue to pursue its clinical and preclinical development programs and continue its operations beyond January 2007, or mid 2007 if it draws down all of the funds pursuant to the commitment mentioned above, the Company must raise additional funds from debt or equity financings or from collaborative arrangements with biotechnology or pharmaceutical companies. If the Company draws upon its commitment, the Company expects to have sufficient cash, cash equivalents and investments to fund operations through mid 2007. There can be no assurance that the requisite funds will be available in the necessary time frame or on terms acceptable to the Company. If the Company is unable to raise sufficient funds, the Company may be required to delay, scale back or significantly curtail its operating plans and possibly relinquish rights to portions of the Company's technology or products. In addition, increases in expenses or delays in clinical development may adversely impact the Company's cash

position and require further cost reductions. No assurance can be given that the Company will be able to operate profitably on a consistent basis, or at all, in the future.

On September 12, 2005, the Company changed its name from Hybridon, Inc. to Idera Pharmaceuticals, Inc. On September 13, 2005, Idera's American Stock Exchange ticker symbol changed from "HBY" to "IDP".

(2) Summary of Significant Accounting Policies

(a) Use of Estimates

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) 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, 2005 and 2004 consist of cash and money market funds.

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.* Management determines the appropriate classification of marketable securities at the time of purchase. In accordance with SFAS No. 115, investments that the Company has the positive intent and ability to hold to maturity are classified as "held to maturity" and reported at amortized cost, adjusted for amortization of premiums and accretion of discounts to maturity, which approximates fair market value. Such amortization is included in "Investment income, net" on the accompanying consolidated statements of operations. 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 consolidated balance sheet. The amortization of premiums and accretion of discounts and interest and dividends are included in "Investment income, net" on the accompanying consolidated statements of operations for all securities. Any realized gains and losses and declines in value judged to be other than temporary are included in "Gain on sale of securities, net". The cost of securities sold is based on the specific identification method. The Company recorded approximately $104,000 of realized gains in "Gain on sale of securities, net" on the accompanying consolidated statement of operations from available-for-sale securities sold in 2003. There were no realized gains from available-for-sale securities in 2004 or 2005. For the years ended December 31, 2005, 2004 and 2003, there were no realized losses or permanent declines in value included in "Gain on sale of securities, net" for any securities.

The Company had no long-term investments as of December 31, 2005 and 2004. Available for sale securities are classified as short-term regardless of the maturity date if the Company plans to use them to fund operations within one year of the balance sheet date. Auction securities are highly liquid equity and debt 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. At December 31, 2005 and 2004, the Company's short-term investments consisted of the following all of which are classified as available-for-sale securities:

	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

	December 31, 2004			
	Cost	Gross Unrealized Losses	Gross Unrealized Gains	Estimated Fair Value
Corporate bonds due in one year or less	$2,006,129	$ 1,979	$—	$2,004,150
Government bonds due in one year or less	3,000,000	13,010	—	2,986,990
Auction securities	4,400,000	—	—	4,400,000
Total	$9,406,129	$14,989	$—	$9,391,140

Although unrealized losses exist as of December 31, 2005, the Company does not believe they are other-than-temporary based on the nature of the investment and the lack of any adverse events.

(c) 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

(d) Reclassification and Additional Disclosures

Certain amounts in the prior years consolidated financial statements have been reclassified and certain additional disclosures have been made to such financial statements.

(e) 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 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 term of the contract or the term in which the Company must fulfill an obligation to aid in the research or use of the licensed technology.

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.

(f) 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, 2005 and 2004, respectively. The estimated fair values have been determined through information obtained from market sources and management estimates. As of December 31, 2005 and 2004, the Company does not have any derivatives or any other financial instruments as defined by SFAS No. 133, *Accounting for Derivative and Hedging Instruments.*

(g) 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, 2005, 2004 and 2003 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 consolidated balance sheet.

(h) Net Loss per Common Share

The Company applies SFAS No. 128, *Earnings per Share.* 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, 2005, 2004 and 2003 as the effects of the Company's potential common stock equivalents are antidilutive (see Note 11).

(i) Segment Reporting

SFAS No. 131, *Disclosures About Segments of an Enterprise and Related Information*, 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. 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, 2005 and 2004, all assets were located in the United States.

(j) Stock-Based Compensation

The Company applies the disclosure only provisions of SFAS No. 123, *Accounting for Stock-Based Compensation*, as amended by the disclosure requirements of FASB Statement No. 148, *Accounting for Stock-Based Compensation — Transition and Disclosure*. The Company continues to account for employee stock compensation at intrinsic value, in accordance with Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees* and related interpretations, with disclosure of the effects of fair value accounting on net income or net loss and related per share amounts on a pro forma basis.

The Company has 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, 2005, 2004, and 2003 are as follows:

	2005	2004	2003
Average risk free interest rate	4.23%	4.18%	3.30%
Expected dividend yield	—	—	—
Expected lives	6 years	6 years	6 years
Expected volatility	75%	90%	90%
Weighted average grant date fair value of options granted during the period (per share)	$ 0.40	$ 0.40	$ 0.79

For the years ended December 31, 2005, 2004 and 2003, 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
2005 Option Grants			
Weighted average grant date fair value of options granted during the period	$0.38	$0.40	$0.54
Weighted average exercise price of options granted during the period	$0.56	$0.72	$0.56
2004 Option Grants			
Weighted average grant date fair value of options granted during the period	$0.41	$0.36	$ —
Weighted average exercise price of options granted during the period	$0.54	$0.52	$ —
2003 Option Grants			
Weighted average grant date fair value of options granted during the period	$0.79	$ —	$ —
Weighted average exercise price of options granted during the period	$1.05	$ —	$ —

The table includes certain options that were granted 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.

The pro forma effect of applying SFAS No. 123 for the three years ended December 31, 2005 would be as follows:

	2005	2004	2003
Net loss applicable to common stockholders, as reported	$(13,706,415)	$(15,410,945)	$(22,739,914)
Less: stock-based compensation expense (income) included in reported net loss	99,721	(713,074)	542,666
Add: stock-based employee compensation expense determined under fair value based method for all awards	(993,336)	(1,711,953)	(1,078,898)
Pro forma net loss applicable to common stockholders, as adjusted for the effect of applying SFAS No. 123	$(14,600,030)	$(17,835,972)	$(23,276,146)
Basic and diluted net loss per common share —			
As reported	$ (0.12)	$ (0.16)	$ (0.45)
Pro forma	$ (0.13)	$ (0.18)	$ (0.46)

The effects on years ended December 31, 2005, 2004 and 2003 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 and the potential for issuance of additional stock options in future years.

(k) 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, 2005, approximately 99% of the Company's cash, cash equivalents, and investments are held at one financial institution.

(l) New Accounting Pronouncement

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *"Share-Based Payment"*, which is a revision of SFAS No. 123, *"Accounting for Stock-Based Compensation"*. SFAS No. 123(R) supersedes APB Opinion No. 25, *"Accounting for Stock Issued to Employees"*, and amends SFAS No. 95, *"Statement of Cash Flows"*. Generally, the approach in SFAS No. 123(R) is similar to the approach described in SFAS No. 123. However, SFAS No. 123(R) requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative. Under SFAS 123(R), the income statement will no longer include the effects of marking to market repriced options discussed in Note 7(e). The new standard will be effective for the Company in the quarter beginning January 1, 2006. In addition, the Securities and Exchange Commission ("SEC") has issued Staff Accounting Bulletin 107 ("SAB 107") which specifies the SEC's requirements for implementing SFAS 123(R), including the assumptions on which the fair values are based.

As permitted by SFAS 123, the Company currently accounts for share-based payments to employees using APB 25's intrinsic value method and, as such, generally, except for marking to market the repriced options discussed in Note 7(e), the Company recognizes no compensation cost for employee stock options. Accordingly, the adoption of SFAS 123(R)'s fair value method may have a material impact on the Company's results of operations, although the Company does not expect the adoption to have any impact on its overall financial position. The impact of adopting SFAS 123(R) cannot be predicted at this time because it will depend on levels of share-based payments granted in the future. However, had the Company adopted SFAS 123(R) in a prior period, the impact of applying that standard would have approximated the impact of SFAS 123 as described in the disclosure of pro forma net loss and net loss per share in Note 2(j) to these financial statements, adjusted for estimated forfeitures, if any. The Company is currently evaluating the impact of adopting of SFAS 123(R) on its financial position and results of operations, including the valuation methods and support for the assumptions that underlie the valuation of the awards. The Company has determined that it will continue to utilize the Black-Scholes option-pricing model to determine the fair value of employee stock options granted under SFAS 123(R). The fair value of options granted before January 1, 2006 will approximate the fair value utilized in the pro form footnote disclosures shown in Note 2(j), adjusted for estimated forfeitures, if any. The fair value of options granted after December 31, 2005 will be based on assumptions determined under SFAS 123(R) and SAB 107. The fair value of all employee stock options will be amortized over the applicable vesting period and recorded in the statement of operations.

(3) Accrued Expenses

At December 31, 2005 and 2004, accrued expenses consist of the following:

	December 31, 2005	December 31, 2004
Payroll and related costs	$ 455,427	$ 527,000
Clinical trial expenses	277,259	306,596
Other	605,362	498,554
	$1,338,048	$1,332,150

(4) Property and Equipment

At December 31, 2005 and 2004, net property and equipment at cost consists of the following:

	December 31, 2005	December 31, 2004
Leasehold improvements	$ 424,500	$ 424,500
Laboratory equipment and other	1,927,950	1,804,799
Total property and equipment, at cost	2,352,450	2,229,299
Less: Accumulated depreciation and amortization	1,933,766	1,877,508
Property and equipment, net	$ 418,684	$ 351,791

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

Depreciation expense, which includes amortization of assets recorded under capital leases, was approximately $163,000, $145,000 and $152,000 in 2005, 2004 and 2003, respectively.

In 2005, the Company wrote off unused property and equipment that had a gross cost of approximately $109,000 resulting in a loss of approximately $2,000.

(5) Debt

(a) 4% Convertible Notes Payable

On May 24, 2005, Idera sold approximately $5.0 million in principal amount of 4% convertible subordinated notes due April 30, 2008 (the 4% Notes). The Company agreed to pay interest on the 4% Notes in arrears on December 15, 2005 for the period from the issuance to that date, and thereafter 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. In December 2005, the Company issued 159,704 shares of common stock as interest based on the market value of our common stock at the time. Holders of the 4% Notes may convert, at any time prior to maturity, the principal amount of the 4% Notes (or any portion thereof) into shares of the Company's common stock at a conversion price of $0.89 per share. The Company may cause the principal amount of the 4% Notes to be converted into shares of the Company's common stock at the then current conversion price at any time prior to May 24, 2006 if the volume weighted average of the closing sales prices of the Company's common stock for 10 consecutive trading days is equal to at least $1.78 per share or at any time on or after May 24, 2006 if the volume weighted average of the closing sales prices of the Company's common stock for 10 consecutive trading days is equal to at least $1.12 per share. If the Company conducts a

financing resulting in greater than $10.0 million in gross proceeds, the Company may elect to convert the 4% Notes into shares of the Company's common stock at the then current conversion price if the purchase price paid by the new investors in the financing (on a common stock equivalent basis) is greater than the then current conversion price of the 4% Notes. Holders of the 4% Notes may demand that the Company redeem the 4% Notes upon a change in control, a merger with an independent company, or a change in the Company's listing status.

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

(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.

(6) Collaboration and License Agreements

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

On May 31, 2005, the Company entered into a research collaboration and option agreement and a license, development and commercialization agreement with Novartis International Pharmaceutical Ltd. 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 the Company a $4,000,000 license fee in July 2005. In addition to the $4,000,000 upfront payment, Novartis agreed to fund substantially all research activities and make milestone payments to Idera upon the achievement of clinical development, regulatory approval and cumulative net sales milestones. If Novartis elects to exercise its option to develop and commercialize licensed IMOs in the initial collaboration disease areas, Novartis is potentially obligated to pay the Company up to $132,000,000 in milestone payments. Novartis is also obligated to pay the Company a royalty on net sales of all products, if any, commercialized by Novartis, its affiliates and sublicensees. The Company is recognizing the $4,000,000 upfront payment as revenue over the two-year term of the research collaboration. If specific conditions are met, Novartis may choose to expand the collaboration to use identified immune modulatory oligonucleotides for additional human diseases, other than oncology and infectious diseases, which will be subject to agreed upon milestone payments.

(b) Collaboration and License Agreement with The Immune Response Corporation

On October 8, 2003, the Company entered into a collaboration and license agreement with The Immune Response Corporation, or IRC, to use Amplivax in combination with IRC's REMUNE vaccine candidate for the prevention and treatment of HIV-1. Under the terms of the agreement, the Company granted IRC, during an exclusivity period which is now expired, a worldwide license to use Amplivax in combination with REMUNE. The Company is also entitled to reimbursement for time and materials and amounts payable to third parties for contracted services at cost plus an additional contractually stated percentage. In addition, the Company may receive certain specified fees, royalties on sales of the REMUNE vaccine combined with Amplivax and a percentage of sublicense income received by IRC.

(c) Collaboration and License Agreement with Isis Pharmaceuticals, Inc.

On May 24, 2001, the Company and Isis Pharmaceuticals, Inc. (Isis) entered into a Collaboration and License Agreement (the Isis Agreement). Under the Isis Agreement, the Company granted Isis a license, with the right to sublicense, to the Company's antisense chemistry and delivery patents and patent applications and retained the right to use the patents and patent applications in its own drug discovery and development efforts and in collaboration with third parties. In addition to payments made by Isis to the Company during 2001, Isis agreed to pay the Company a portion of the income it receives from specified types of sublicenses of the Company's patents and patent applications. Isis granted the Company a license to use specified antisense patents and patent applications, principally Isis' suite of RNase H patents. The Company has the right under the Isis Agreement to use these patents and patent applications in its drug discovery and development efforts and in specified types of collaborations with third parties. In addition to a payment made by the Company to Isis during 2002, the Company also agreed to pay Isis a nominal annual maintenance fee and a modest royalty on sales of antisense products covered by specified patents and patent applications sublicensed to the Company by Isis.

(d) Collaboration and License Agreement with VasGene Therapeutics, Inc.

On October 29, 2004, the Company and VasGene Therapeutics Inc. entered into reciprocal Collaboration and License Agreements pursuant to which both parties agreed to collaborate on the research and development of VEGF antisense products. The Company has the right to pursue the treatment of ophthalmologic and other non-cancer diseases that are susceptible to treatment based on localized administration under one agreement, and VasGene has the right to pursue the treatment of cancer and other non-ophthalmologic diseases that are susceptible to treatment through systemic administration under the other agreement. The Company is entitled to receive milestone payments, royalties, and sublicensing payments. Additionally, the Company may be entitled to reimbursement of research services performed in accordance with the terms of the agreement at the request of VasGene. The Company may have to pay VasGene royalties and sublicensing payments. VasGene may also be entitled to reimbursement of research services that it performs under the agreement at the Company's request. The milestones, if fully achieved, could result in payments to the Company of $8.0 million for each non-cancer VEGF antisense product developed by VasGene. Milestone payments would be triggered by the achievement of specific events in the development and commercial launch process.

(e) Collaboration and License Agreement with Alnylam Pharmaceuticals, Inc.

On August 2, 2004, the Company and Alnylam Pharmaceuticals, Inc. entered into a collaboration and license agreement pursuant to which the Company granted to Alnylam an exclusive license to a series of patents and patent applications relating to the therapeutic use of oligonucleotides that inhibit the production of the protein Vascular Endothelial Growth Factor (VEGF). Under the license, Alnylam's rights are limited to targeting VEGF for ocular indications with RNAi molecules. The Company is entitled to receive an up-front payment, annual license fees, milestone payments, royalties and sublicensing payments from Alnylam under the terms of the agreement. The up-front payment, license fees and milestone payments payable to the Company under the agreement could total approximately $4.4 million if all the milestones are achieved. Milestone payments are triggered by the achievement of specific events in the development process.

(f) Collaboration and License Agreement with Aegera Therapeutics Inc.

On September 13, 2002, the Company and Aegera Therapeutics Inc. entered into a Collaboration and License Agreement (the Collaboration) to research, develop, and optimize a 2nd generation antisense drug targeted to the XIAP gene, a gene which has been implicated in the resistance of cancer cells to

chemotherapy. In addition, Idera Pharmaceuticals licensed to Aegera, on a non-exclusive basis, rights to the Company's portfolio of 2nd generation antisense chemistries and oral antisense delivery intellectual property owned or licensed by the Company. In consideration for research, development and optimization work to be performed by the Company under the Collaboration and the license of technology by the Company, Aegera paid the Company an upfront license fee and a prepaid milestone. In addition, Aegera agreed to pay the Company additional research payments, milestone payments upon the achievement of specified development milestones, and royalties on product sales and sublicensing, if any. Future anticipated payments under the Collaboration could total approximately $7.7 million if all of the milestones are achieved. Aegera is responsible for the development costs of the drug candidate.

(g) Collaboration and License Agreement with Migenix Inc.

On September 11, 2002, the Company and Migenix Inc. (formerly Micrologix Biotechnology, Inc.) entered into a Collaboration and License Agreement to develop an antisense drug candidate (MBI1121) for the treatment of human papillomavirus (HPV). The Company licensed Migenix the exclusive worldwide rights to a family of patents, claims of which cover a number of antisense oligonucleotides targeted to the HPV genome and non-exclusive rights to a portfolio of antisense chemistries owned or licensed by the Company. In consideration, Migenix agreed to pay the Company a license fee, paid in two installments, milestone payments upon the achievement of specified milestones, and royalties on product sales and sublicensing, if earned. The total license fee and milestone payments could amount to approximately $5.8 million, if all the milestones are achieved.

As part of the collaboration and license agreement, the Company and Migenix entered into a stock purchase agreement relating to the payment of the remaining portion of the license fee and certain future milestone payments under which Migenix issued to the Company shares of preferred stock of Migenix. Under the terms of the agreement, upon a specified date or the achievement of a milestone, a portion of the shares of preferred stock would, at the option of Migenix, either (i) be converted into common stock of Migenix at a conversion rate based on an average market price or (ii) be redeemed by Migenix for a cash amount equal to the payment due in respect of such date or milestone. The Company became entitled to receive the final installment of the license fee on April 17, 2003 and was issued 379,139 shares of Migenix common stock upon conversion of a portion of the preferred stock. The Company classified the common stock as available-for-sale. In the second quarter of 2003, the Company sold all the shares it received from Migenix for approximately $343,000 and recorded a realized gain of approximately $103,000. License fee revenue is being recorded over the current estimated development term of the drug candidate, MBI1121.

(h) License Agreement with University of Massachusetts Medical Center

The Company has a licensing agreement with the University of Massachusetts Medical Center (UMass), under which the Company has received exclusive licenses to technology in specified patents and patent applications. The Company is required to make royalty payments based on future sales of products employing the technology or falling under claims of a patent, as well as a specified percentage of sublicense income received related to the licensed technology. Additionally, the Company is required to pay an annual maintenance fee through the life of the patents.

(7) 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 9,597,476 shares of common stock (the "Put Shares") at a price of $2.00 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 $4.00 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.

In February 2003, the Company repurchased 2,415,880 Put Shares (see Note 14). As of December 31, 2005, 1,087,124 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 6,094,472 Put Shares have terminated.

(b) Warrants

The Company has the following warrants outstanding and exercisable for the purchase of common stock at December 31, 2005:

Expiration Date	Shares	Weighted Exercise Price Per Share
March 31, 2006	500,000	$0.50
January 1, 2007	100,000	1.65
August 28, 2008	2,368,629	0.73
August 28, 2008	7,308,684	1.00
April 20, 2009	3,041,964	1.14
August 27, 2009	2,197,200	0.67
May 24, 2010	565,478	0.89
	16,081,955	
Weighted average exercise price per share		0.93

The warrants that expire in 2008, 2009 and 2010 are described in Notes 8(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, 2005, options to purchase a total of 506,123 shares of common stock remained outstanding under the 1995 Stock Option Plan.

Under the 1995 Director Stock Option Plan, a total of 800,000 shares of common stock may be issued upon the exercise of options. Under the terms of the Director Plan options to purchase 3,750 shares of common stock are granted to each non-employee director on the first day of each calendar quarter and options to purchase 25,000 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, 2005, options to purchase a total of 360,750 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 13,500,000 shares of common stock may be issued upon the exercise of options granted under the plan. The maximum number of shares with respect to which options may be granted during any calendar year to any employee under the 1997 Stock Incentive Plan is determined by dividing 1,500,000 by the fair market value of a share of the Company's common stock at the time of grant, and may not exceed an overall per participant annual limit of 5,000,000 shares. 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, 2005, options to purchase a total of 10,479,112 shares of common stock remained outstanding under the 1997 Stock Incentive Plan.

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 5,000,000 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 1,000,000 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, 2005, options to purchase a total of 2,800,000 shares of common stock remained outstanding under the 2005 Stock Incentive Plan.

As of December 31, 2005, options to purchase 3,376,393 shares of common stock remain available for grant under the 1995 Director Plan, the 1997 Stock Incentive Plan and the 2005 Stock Incentive Plan.

Stock option activity for the years ended December 31, 2005, 2004, and 2003 is summarized as follows:

	Number of Shares	Exercise Price Per Share	Weighted Average Price Per Share
Outstanding, December 31, 2002	14,307,260	$ 0.50 – $2.00	$0.77
Granted	596,000	0.70 – 1.15	1.05
Exercised	(96,841)	0.50 – 0.56	0.50
Terminated	(86,500)	0.50 – 2.00	0.87
Outstanding, December 31, 2003	14,719,919	0.50 – 2.00	0.78
Granted	2,084,750	0.52 – 1.14	0.53
Exercised	(85,784)	0.50 – 0.82	0.59
Terminated	(159,178)	0.50 – 1.54	1.13
Outstanding, December 31, 2004	16,559,707	0.50 – 2.00	0.75
Granted	4,984,500	0.48 – 0.72	0.57
Exercised	(122,420)	0.50 – 0.52	0.50
Terminated	(1,036,509)	0.48 – 1.12	0.58
Outstanding, December 31, 2005	20,385,278	$ 0.48 – $2.00	$0.71
Exercisable, December 31, 2003	10,357,565	$ 0.50 – $2.00	$0.75
Exercisable, December 31, 2004	12,883,125	$ 0.50 – $2.00	$0.76
Exercisable, December 31, 2005	14,000,721	$ 0.50 – $2.00	$0.77

	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
$ 0.48 – 0.50	2,238,038	2.80	$0.50	2,196,398	$0.50
0.51 – 0.53	3,681,874	9.44	0.52	471,873	0.52
0.56	3,517,192	6.50	0.56	2,613,859	0.56
0.57 – 0.67	1,250,250	9.79	0.61	70,750	0.61
0.70 – 0.79	1,504,000	7.16	0.74	1,122,667	0.74
0.82 – 0.84	5,491,250	5.57	0.83	4,989,375	0.83
0.93 – 1.10	1,465,487	4.80	1.06	1,465,487	1.06
1.12 – 2.00	1,237,187	5.65	1.23	1,070,312	1.25
	20,385,278	6.45	0.71	14,000,721	0.77

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*, the Company recognizes the fair value of non-employee options as they vest using the Black-Scholes option pricing model. The Company had no compensation expense related to grants to non-employees in 2005. The Company has recorded compensation expense of $1,082 in each of the years 2004 and 2003 related to grants to non-employees.

(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 500,000 shares of common stock may be issued to participating employees of the Company, as defined, 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 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 2005, 2004 and 2003, the Company issued 144,368, 92,215 and 58,179 shares of common stock, respectively, under the Stock Purchase Plan.

(e) Repricing

In September 1999, the Company's Board of Directors authorized the repricing of options to purchase 5,251,827 shares of common stock to $0.50 per share, which represented the market value on the date of the repricing. These options are subject to variable plan accounting, as defined in FASB Interpretation No. 44 (FIN 44). The Company has remeasured the intrinsic value of the repriced options, through the earlier of the date of exercise, cancellation or expiration, at each reporting date. For the years ended December 31, 2005 and 2003, the Company recognized approximately $100,000 and $543,000 as stock compensation expense from 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 of December 31, 2005, options to purchase 2,046,766 shares are subject to variable plan accounting. As explained in Note 2(l), on January 1, 2006, the Company will be adopting SFAS No. 123(R), *"Share-Based Payment"*, which is a revision of SFAS No. 123, *"Accounting for Stock-Based Compensation"*. SFAS No. 123(R) supersedes APB Opinion No. 25, *"Accounting for Stock Issued to Employees"*, and amends SFAS No. 95, *"Statement of Cash Flows"*. Pursuant to SFAS No. 123(R), the Statement of Operations will no longer include 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 which is described below in Note (7)(g). As of December 31, 2005 and 2004,

there were 655 shares of Series A convertible preferred stock outstanding. As discussed in Note (13), 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, 2005 and 2004.

(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 shareholders could receive approximately 29.41 shares of common stock for each share of Series A convertible preferred stock converted instead of the stated conversion rate of 23.53 shares.

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 (cumulative)	—	6,868,288	21,238,028
Common stock outstanding	63,595,442	70,482,570	84,900,627
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		
	2005	2004	2003
Accretion of dividends expected to be paid on Series A Preferred Stock	$ 656	$ 503	$3,402,856
Accretion of dividend that would have been paid on April 1, 2004 and reversal since preferred shares were converted in January and February 2004	—	(570,000)	570,000
Market value of 25% additional shares issued upon conversion	—	3,245,492	1,556,000
Total preferred stock dividend	$ 656	$2,675,995	$5,528,856

As shown above, $1.6 million of the 25% additional shares issued during the sixty-day conversion period was recorded as additional dividends (a) in the calculation of net loss applicable to common stockholders in the 2003 statement of operations and (b) in the 2003 statement of stockholders' equity. The remaining $3.2 million of the 25% additional shares were 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. 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 $4.25 per share, subject to adjustment as defined.

(8) Commitments and Contingencies

(a) Lease Commitments

The Company leases its headquarters facility on Vassar Street in Cambridge, Massachusetts, under a lease that has a 10-year term, which commenced on May 1, 1997. Future minimum commitments as of December 31, 2005, under existing lease agreements through the lease term, are approximately:

December 31,	Operating Leases
2006	611,000
2007	204,000
	$815,000

During 2005, 2004, and 2003, facility rent expense for continuing operations, net of sublease income, was approximately $269,000, $282,000 and $397,000, respectively.

(b) External Collaborations

The Company funds research efforts of various academic collaborators and consultants in connection with its research and development programs. Total future fixed commitments under these agreements are estimated at approximately $253,000 for 2006.

In July 2004, the Company signed an agreement with PAREXEL International (PAREXEL) to manage the Phase 2 clinical trial of IMO-2055 in patients with renal cell carcinoma. Under the agreement and the subsequent change in scope, the Company may pay PAREXEL up to $4.8 million in connection with this trial. During the years ended December 31, 2005 and 2004, the Company paid approximately $0.9 million and $0.7 million, respectively, to PAREXEL under the agreement and expensed approximately $1.2 million and $0.4 million, respectively, in "Research and development" on the accompanying statement of operations.

(c) Contract Obligations

In August 2004, Dr. Sudhir Agrawal, the Company's President and Chief Scientific Officer, was appointed to the additional position of Chief Executive Officer, replacing Stephen R. Seiler who resigned as CEO and a director of the Company. During 2004, the Company expensed approximately $0.7 million for amounts to be paid to Mr. Seiler through September 1, 2006 under his employment agreement. In December 2005, Robert W. Karr, M.D., a director, was appointed President of the Company.

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

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 565,478 shares of common stock at an exercise price of $0.89 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 (Note 5(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 432,520 shares of common stock at an exercise price of $0.67 per share. These warrants have a Black-Scholes value of approximately $155,000. Optima Life Sciences Limited purchased 2,768,100 shares of common stock and warrants to purchase 553,620 additional shares of common stock at an exercise price of $0.67 per share in the financing.

In 2003, the Company paid Pillar S.A. and Pillar Investment Ltd. a total of $550,000 for (i) consulting services relating to international investor relations (ii) consulting services related to the repurchase of the Company's common stock from certain stockholders and (iii) commissions relating to the Company's August 2003 private placement. In conjunction with the private placement, the Company also issued Pillar Investment Ltd., as additional compensation for services provided as a placement agent in the private placement, warrants to purchase 587,709 shares of common stock at an exercise price of $1.00 per share. The amounts payable to Pillar in cash and warrants for the August 2003 private placement were less on a percentage basis than the comparable fees paid to the other placement agent involved in the private placement. Optima Life Sciences Limited purchased 5,500,381 shares of common stock and warrants to purchase 1,650,114 additional shares of common stock in the private placement.

Drs. James Wyngaarden and Paul Zamecnik, Chairman of the Board of Directors and a director of the Company, respectively, participated in the August 2003 private placement offering under the same terms as other investors. Dr. Wyngaarden purchased 34,246 shares of common stock and warrants to purchase 10,274 shares of common stock at an exercise price of $1.00 per share; Dr. Zamecnik purchased 68,493 shares of common stock and warrants to purchase 20,548 shares of common stock at an exercise price of $1.00 per share.

In addition to the fees described above, the Company also paid other directors consulting fees of $30,000, $35,875 and $65,000 in 2005, 2004 and 2003, respectively.

(e) Contingencies

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. The Company is not practicing nor does it intend to practice any of the intellectual property that was associated with these interference proceedings.

(9) 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. At December 31, 2005, the Company had cumulative net operating loss and tax credit carryforwards for federal income tax purposes of approximately $266.7 million and $4.7 million, respectively, available to reduce federal taxable income and federal income taxes, respectively. These carryforwards expire through 2025. 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, 2005, have resulted in ownership changes in excess of 50%, as defined under the Act and which will 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 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, 2005 and 2004, the components of the deferred tax assets are approximately as follows:

	2005	2004
Operating loss carryforwards	$ 107,411,567	$ 101,946,064
Tax credit carryforwards	4,709,020	4,603,431
Other	624,561	679,106
	112,745,148	107,228,601
Valuation allowance	(112,745,148)	(107,228,601)
	$ —	$ —

The Company has provided a valuation allowance for its deferred tax asset due to the uncertainty surrounding the ability to realize this asset.

(10) 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 $72,000, $82,000, and $74,000 of 401(k) benefits were charged to continuing operations during 2005, 2004, and 2003, respectively.

(11) Income (Loss) Per Share

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

	Years Ended December 31,		
	2005	2004	2003
Numerator:			
Net loss	$(13,705,759)	$(12,734,950)	$(17,211,058)
Accretion of preferred stock dividend	(656)	(2,675,995)	(5,528,856)
Numerator for basic and diluted net loss applicable to common shareholders	$(13,706,415)	$(15,410,945)	$(22,739,914)
Denominator for basic and diluted net loss per share	111,087,058	98,913,927	51,053,415
Net loss per share — basic and diluted			
Net loss	$ (0.12)	$ (0.13)	$ (0.34)
Accretion of preferred stock dividends	—	(0.03)	(0.11)
Net loss per share applicable to common stockholders	$ (0.12)	$ (0.16)	$ (0.45)

For the years ended December 31, 2005, 2004 and 2003 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 42,137,420 and 32,091,596 at December 31, 2005 and 2004, respectively, and consist of stock options, warrants, and convertible preferred stock. Antidilutive securities for the year ended December 31, 2005 also includes convertible debt instruments (on an as-converted basis).

(12) Supplemental Disclosure of Cash Flow Information

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

	Years Ended December 31,		
	2005	2004	2003
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 20,912	$ 58,770	$ 117,540
Supplemental disclosure of non cash financing and investing activities:			
Accretion (reversal) of Series A preferred stock dividends	$ (656)	$ (569,497)	$3,972,856
Dividend from induced conversion of Series A preferred stock	$ —	$3,245,492	$1,556,000
Issuance of stock options and stock for services	$ 36,177	$ 129,448	$ 82,364
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	$ 6,878
Cashless exercise of stock warrants	$ —	$ 7	$ 19
Deferred compensation relating to issuance of stock options	$ 72,000	$ —	$ —
Equipment acquired under capital lease	$ 19,556	$ —	$ —

(13) 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. The rights will automatically trade with the underlying common stock and ordinarily will not be exercisable. The rights will only become exercisable 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.

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 newly created Series C junior participating preferred stock for an exercise price of $13.00. If a 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.

(14) Repurchase of Common Shares

On February 14, 2003, the Company repurchased 4,643,034 shares of its common stock at a price of $1.15 per share. The fair market value of the common stock was $0.75 per share on the date of the transaction resulting in a premium of approximately $1,857,000 in the aggregate. The Company charged this premium to general and administrative expense in 2003. The repurchased stock was retired on March 13, 2003.

(15) Equity Financings

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 8,823,400 shares of common stock and warrants to purchase 1,764,680 shares of common stock. The warrants to purchase common stock have an exercise price of $0.67 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 $1.34 per share. The redemption price will be $0.01 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.

In April 2004, the Company raised approximately $11.8 million in gross proceeds through a registered direct offering. In the offering, the Company sold 16,899,800 shares of common stock and warrants to purchase 3,041,964 shares of common stock to institutional and other investors. The warrants to purchase common stock have an exercise price of $1.14 per share and are exercisable at any time on or after October 21, 2004 and on or prior to April 20, 2009. The warrants may be exercised by cash payment only. On or after October 21, 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 within 30 days prior to providing advance notice of redemption is greater than or equal to $2.60 per share. The redemption price will be $0.01 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.

In August 2003, the Company raised approximately $14.6 million in gross proceeds from a private placement to institutional and accredited investors. In the private placement, the Company sold 20,053,022 shares of common stock and warrants to purchase 6,015,934 shares of common stock. The warrants to purchase common stock have an exercise price of $1.00 per share and will expire if not exercised by August 28, 2008. The warrants may be exercised by paying cash or by invoking a cashless exercise feature. The Company may redeem the warrants at a price of $0.05 per share of common stock issuable upon exercise of the warrants if the average closing sales price of the common stock for a ten consecutive trading day period is greater than or equal to $2.00 per share. The net proceeds to the Company from the offering, excluding the proceeds of any future exercise of the warrants, totaled approximately $13.1 million. In addition, the Company issued warrants to selected dealers and placement agents which assisted with the private placement. These include warrants to purchase 2,458,405 shares of common stock at an exercise price of $0.73 per share and warrants to purchase 1,325,342 shares of common stock at an exercise price of $1.00 per share. These warrants have a Black-Scholes value of $2.8 million and will expire if not exercised by August 28, 2008. These warrants may be exercised by paying cash or through a cashless exercise feature. The Company does not have the right to redeem these warrants.

(16) Pro Forma Balance Sheet (unaudited)

(a) Private Financing

On March 24, 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 $0.44 per share 22,159,092 shares of common stock and warrants to purchase 16,619,319 shares of common stock. The warrants to purchase common stock have an exercise price of $0.65 per share and will expire if not exercised on or prior to September 24, 2011. The warrants may be exercised by cash payment only and are exercisable any time on or after September 24, 2006. After March 24, 2010, the Company may redeem the warrants for $0.01 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, total approximately $8.9 million. The Company is required to file a registration statement covering the common stock and the common stock issuable upon exercise of the warrants and to use its best efforts to make the registration statement effective. Under the Registration Rights Agreement, the Company is subject to liquidated damages equal to 1% of the aggregate purchase price of the securities purchased in the private financing and then held by the purchasers for each 30 day period (i) after April 23, 2006 and prior to the date a registration statement is filed with the Securities and Exchange Commission registering the resale of such securities by the purchasers, (ii) after July 22, 2006 and prior to the date such registration statement is declared effective by the Securities and Exchange Commission, and (iii) during which sales of such securities cannot be made pursuant to such registration statement after it has been declared effective, in each case subject to specified exemptions and to an overall maximum of 10% of the purchase price of the securities.

The unaudited pro forma balance sheet as of December 31, 2005 reflects the receipt of approximately $8.9 million of net proceeds from the private placement as if this transaction had occurred on December 31, 2005.

(b) Financing Commitment

On March 24, 2006, the Company secured a commitment from an investor to purchase up to $9.8 million of the Company's common stock between June 24, 2006 and December 31, 2006. The Company may require the investor to purchase in up to three drawdowns, which shall be made at its discretion, up to $9.8 million of newly-issued shares of the Company's common stock at a price that is equal to the greater of 80% of the volume weighted average closing price during a five day pricing period preceding the date that the Company notifies the investor of the sale and a floor price of $0.64 per share. The Company's ability to make drawdowns is conditioned upon (i) the effectiveness of a registration statement covering the resale of the shares to be issued under the commitment, except that the Company may drawdown up to $2.5 million prior to such registration statement being declared effective, and (ii) stockholder approval of an increase in the Company's authorized common stock, which the Company expects to seek at its 2006 annual meeting of stockholders except for approximately $1.0 million which the Company could issue without seeking shareholder approval. No drawdown may occur within 45 days of any other drawdown, and no single drawdown may exceed $4.0 million. Based on the floor price, a maximum of 15,234,375 shares of common stock could be issued under the commitment. The Company is not obligated to sell any of the $9.8 million of common stock available under the commitment and there are no minimum commitments or minimum use penalties. The commitment does not contain any restrictions on the Company's operating activities, automatic pricing resets or minimum market volume restrictions. If the Company elects to sell the entire $9.8 million of its common stock pursuant to the commitment, the net proceeds to the Company, excluding the proceeds of any future exercise of the warrants, will be approximately $8.9 million. As part of the arrangement, the Company issued warrants to the investor to purchase 6,093,750 shares of common stock at an exercise price of $0.74 per share. The warrants are exercisable by cash payment only. The warrants are exercisable beginning September 24, 2006. The warrants expire if not exercised by September 24, 2011. On or after March 24, 2010, Idera may redeem the warrants for $0.01 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 connection with the commitment, the Company agreed to pay one of the Company's directors a commission equal in value to 5% of the amount available to the Company under the purchase agreement. The Company has paid $262,500 of such commission and is negotiating the form of payment for the remaining $225,000.

The unaudited pro forma balance sheet as of December 31, 2005 does not reflect the $9.8 million gross proceeds from the commitment but does reflect the $0.9 million in expected costs that are directly related to the commitment.

(c) Amendment to Rights Agreement

On March 24, 2006, in connection with the Private Financing, the Company entered into an amendment ("Amendment No. 2") to the Rights Agreement, dated as of December 10, 2001, as amended (the "Rights Agreement"), between the Company and Mellon Investor Services LLC, as Rights Agent. Amendment No. 2 modifies the definition of Exempted Persons that are excluded from the definition of Acquiring Person under the Rights Agreement to provide that Baker Brothers, together with its affiliates and associates (the "Baker Entities"), will be an Exempted Person under the Rights Agreement until such time as the Baker Entities beneficially own more than 35,000,000 shares of the Company's common stock (subject to adjustment) or less than 14% of the common stock then outstanding.

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 9, 2005	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	Indenture dated as of March 26, 1997 between Forum Capital Markets LLC and Idera Pharmaceuticals, Inc.		8-K	April 14, 1997	000-27352
4.3	Rights Agreement dated December 10, 2001 by and between Idera Pharmaceuticals, Inc. and Mellon Investor Services LLC, as rights agent, as amended.		S-2	October 10, 2003	333-109630
4.4	Amendment No. 1 to Rights Agreement dated as of August 27, 2003 between the Company and Mellon Investor Services LLC, as amended.		8-K	August 29, 2003	000-27352
4.5	Amendment No. 2 to Rights Agreement dated as of March 24, 2006 between the Company and Mellon Investor Services LLC, as amended.		8-K	March 29, 2006	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†	Patent License Agreement effective as of October 13, 1994 between Idera Pharmaceuticals, Inc. and McGill University.		S-1	November 6, 1995	33-99024
10.3†	License Agreement effective as of October 25, 1995 between Idera Pharmaceuticals, Inc. and the General Hospital Corporation.		S-1	November 6, 1995	33-99024
10.4†	License Agreement dated as of October 30, 1995 between Idera Pharmaceuticals, Inc. and Yoon S. Cho-Chung.		S-1	November 6, 1995	33-99024

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.5	Registration Rights Agreement dated as of February 21, 1990 between Idera Pharmaceuticals, Inc., University of Massachusetts Medical Center and Paul C. Zamecnik.		S-1	November 6, 1995	33-99024
10.6††	2005 Stock Incentive Plan.		8-K	June 21, 2005	001-31918
10.7††	1995 Stock Option Plan.		S-1	November 6, 1995	33-99024
10.8††	1995 Director Stock Option Plan.		S-1	November 6, 1995	33-99024
10.9††	1995 Employee Stock Purchase Plan.		S-1	November 6, 1995	33-99024
10.10††	Employment Agreement dated October 19, 2005 between Idera Pharmaceuticals, Inc. and Dr. Sudhir Agrawal.		10-Q	November 9, 2005	001-31918
10.11††	Consulting Agreement dated as of October 19, 2005 between Idera Pharmaceuticals, Inc. and Dr. Paul C. Zamecnik.		10-K	March 31, 2003	000-27352
10.12†	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
10.13†	Licensing Agreement dated March 12, 1999 by and between Idera Pharmaceuticals, Inc. and Integrated DNA Technologies, Inc.		10-K	April 15, 1999	000-27352
10.14†	Licensing Agreement dated September 7, 1999 by and between Idera Pharmaceuticals, Inc. and Genzyme Corporation.		10-Q	November 15, 1999	000-27352
10.15	License Agreement dated September 20, 2000 by and between Idera Pharmaceuticals and Boston Biosystems, Inc.		S-1/A	December 29, 2000	333-69649
10.16	Assignment of Coexclusive License dated September 20, 2000 by and between Idera Pharmaceuticals and the Public Health Service.		S-1/A	December 29, 2000	333-69649
10.17	Oligonucleotide Purification Patent License Agreement dated September 20, 2000 by and between Idera Pharmaceuticals and Boston Biosystems, Inc.		S-1/A	December 29, 2000	333-69649

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.18	Asset Purchase Agreement dated June 29, 2000 by and between Idera Pharmaceuticals and Boston Biosystems, Inc.		Schedule 14A	August 15, 2000	000-27352
10.19†	Assignment of Patent Rights dated September 20, 2000 by and between Idera Pharmaceuticals and Boston Biosystems, Inc.		S-1/A	December 29, 2000	333-69649
10.20†	PNT Monomer Patent License and Option Agreement dated September 20, 2000 by and between Idera Pharmaceuticals and Boston Biosystems, Inc.		S-1/A	December 29, 2000	333-69649
10.21†	Agreement Relating to Patents Forming Part of Acquired Assets but to be Licensed Back to Idera Pharmaceuticals for the Purposes of OriGenix Agreements dated September 20, 2000 by and between Idera Pharmaceuticals and Boston Biosystems, Inc.		S-1/A	December 29, 2000	333-69649
10.22	Agreement and Mutual Release between Idera Pharmaceuticals and MethylGene, Inc. dated March 21, 2001.		10-K	April 13, 2001	000-27352
10.23††	Amended and Restated 1997 Stock Incentive Plan.		10-Q	May 15, 2001	000-27352
10.24†	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
10.25	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
10.26	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
10.27††	Employment Agreement by and between Stephen R. Seiler and Idera Pharmaceuticals, Inc. effective as of July 25, 2001.		10-Q	November 14, 2001	000-27352

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.28††	Amendment to Employment Agreement, dated August 20, 2004, by and between Idera Pharmaceuticals, Inc. and Stephen R. Seiler.		10-Q	November 12, 2004	001-31918
10.29	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
10.30††	Employment Agreement dated April 1, 2002 between Idera Pharmaceuticals, Inc. and Robert G. Andersen.		10-Q	May 14, 2002	000-27352
10.31††	Executive Stock Option Agreement for 3,150,000 Options effective as of July 25, 2001 between Idera Pharmaceuticals, Inc. and Stephen R. Seiler.		10-Q	August 14, 2002	000-27352
10.32††	Executive Stock Option Agreement for 490,000 Options effective as of July 25, 2001 between Idera Pharmaceuticals, Inc. and Stephen R. Seiler.		10-Q	August 14, 2002	000-27352
10.33††	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
10.34††	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
10.35††	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
10.36	Consulting Agreement effective as of October 1, 2002 between Idera Pharmaceuticals, Inc. and Pillar, S.A.		10-Q	October 24, 2002	000-27352
10.37†	License Agreement by and between Louisiana State University and Idera Pharmaceuticals, Inc., dated July 1, 1998.		10-K	March 31, 2003	000-27352

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.38	Engagement Letter, dated as of April 18, 2003, by and among Idera Pharmaceuticals, Inc., Pillar Investment Limited and PrimeCorp Finance S.A.		S-2	October 10, 2003	333-109630
10.39	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
10.40	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
10.41	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
10.42	Engagement Letter, dated as of August 27, 2004, by and among Idera Pharmaceuticals, Inc. and Pillar Investment Limited.		10-Q	November 12, 2004	001-31918
10.43	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
10.44	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
10.45	Amendment to the License Agreement dated as of October 30, 1995 by and between Idera Pharmaceuticals, Inc. and Yoon S. Cho-Chung, M.D., Ph.D. dated February 4, 2005.		10-K	March 25, 2005	001-31918
10.46	Summary of Director Compensation of Idera Pharmaceuticals, Inc.		10-K	March 25, 2005	001-31918
10.47	Non-Employee Director Nonstatutory Stock Option Agreement Granted under 1997 Stock Incentive Plan.		10-K	March 25, 2005	001-31918

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.48	Form of Incentive Stock Option Agreement Granted Under the 2005 Stock Incentive Plan.		8-K	June 21, 2005	001-31918
10.49	Form of Nonstatutory Stock Option Agreement Granted Under the 2005 Stock Incentive Plan.		8-K	June 21, 2005	001-31918
10.50	Research Collaboration and Option Agreement by and between Idera Pharmaceuticals, Inc. and Novartis International Pharmaceutical Ltd.		10-Q	August 9, 2005	001-31918
10.51	License, Development and Commercialization Agreement by and between Idera Pharmaceuticals, Inc and Novartis International Pharmaceutical Ltd.		10-Q	August 9, 2005	001-31918
10.52	Engagement letter, dated May 20, 2005, by and among Idera Pharmaceuticals, Inc. and Pillar Investment Limited.		10-Q	August 9, 2005	001-31918
10.53	4% Convertible Subordinated Notes Due 2008 Noteholders Agreement by and among Idera Pharmaceuticals, Inc. and Noteholders.		10-Q	August 9, 2005	001-31918
10.54††	Employment Agreement dated December 5, 2005 by and between Robert W. Karr, M.D. and Idera Pharmaceuticals, Inc.	X			
10.55	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
10.56	Common Stock Purchase Warrant issued to Pillar Investment Limited in connection with the May 20, 2005 Financing.		10-Q	August 9, 2005	001-31918
10.57	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
10.58	Registration Rights Agreement, dated March 24, 2006, by and among the Company and the Investors named therein.		8-K	March 29, 2006	001-31918
10.59	Form of Warrant issued to Investors in the Company's March 24, 2006 Private Financing.		8-K	March 29, 2006	001-31918

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form or Schedule	Filing Date with SEC	SEC File Number
10.60	Common Stock Purchase Agreement, dated March 24, 2006, by and between the Company and Biotech Shares Ltd.		8-K	March 29, 2006	001-31918
10.61	Engagement Letter, dated March 24, 2006, between the Company and Youssef El Zein.		8-K	March 29, 2006	001-31918
10.62	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
10.63	Warrant issued to Biotech Shares Ltd. on March 24, 2006.		8-K	March 29, 2006	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			
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.

BOARD OF DIRECTORS

James B. Wyngaarden, M.D.
Chairman, Idera Pharmaceuticals, Inc.
Former Director, Human Genome Organization
Former Director, National Institutes of Health

Youssef El Zein
Vice Chairman, Idera Pharmaceuticals, Inc.
Chairman and Chief Executive Officer,
Qatar Investment Limited

Sudhir Agrawal, D. Phil.
Chief Executive Officer and
Chief Scientific Officer, Idera Pharmaceuticals, Inc.

Robert W. Karr, M.D.
President, Idera Pharmaceuticals, Inc.

J. Keith Hartley
President
Hartley Capital Advisors

William S. Reardon, CPA
Retired Audit Partner
PricewaterhouseCoopers, LLP

Alison Taunton-Rigby, Ph.D., O.B.E.
Founder, President, Chief Executive Officer and Director
AlboNovix, Inc.

Paul C. Zamecnik, M.D.
Professor of Oncologic Medicine Emeritus
Harvard Medical School
Senior Scientist
Massachusetts General Hospital

MANAGEMENT

Sudhir Agrawal, D. Phil.
Chief Executive Officer and
Chief Scientific Officer

Robert W. Karr, M.D.
President

Robert G. Andersen
Chief Financial Officer,
Vice President - Operations,
Treasurer and Secretary

Timothy M. Sullivan, Ph.D.
Vice President, Development Programs

Kambar R. Kandimalla, Ph.D.
Senior Director, Research

David M. Lough, Ph.D.
Director, Business Development

Steven J. Ritter, Ph.D., JD
Intellectual Property Counsel

Frank Whalen
Controller

STOCKHOLDERS' MEETING

The 2006 Annual Meeting of Stockholders will be held at the Hotel @ MIT, 20 Sidney Street, Cambridge, MA on June 7, 2006 at 10:00 a.m. A notice of the meeting, proxy statement and proxy voting card have been mailed to stockholders with this Annual Report.

INVESTOR RELATIONS

Additional copies of this Annual Report, including the Company's Annual Report on Form 10-K for the year ended December 31, 2005, as filed with the Securities and Exchange Commission, are available upon request to:

Investor Relations
Idera Pharmaceuticals, Inc.
345 Vassar Street
Cambridge, MA 02139

Company information is available at:
www.iderapharma.com or 617-679-5500

REGISTRAR & TRANSFER AGENT

Mellon Investor Services LLC
480 Washington Boulevard
Jersey City, NJ 07310-1900
Web: www.melloninvestor.com

Toll Free Number: 1-800-288-9541

TDD Hearing Impaired: 1-800-231-5469

Foreign Shareowners: 1-201-680-6578

TTD Foreign Shareowners: 1-201-680-6610

OUTSIDE LEGAL COUNSEL

WilmerHale
60 State Street
Boston, MA 02109

INDEPENDENT AUDITORS

Ernst & Young, LLP
200 Clarendon Street
Boston, MA 02116

COMMON STOCK SYMBOL

AMEX: IDP

Any statements that we may make in this Annual Report about future expectations, plans and prospects for the Company constitute forward-looking statements for purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by these forward-looking statements as a result of various important factors, including the risks set forth under the caption "Risk Factors" in Idera's Annual Report on Form 10-K for the year ended December 31, 2005. Idera disclaims any intention or obligation to update any forward-looking statements.

idera Pharmaceuticals, Inc.
345 Vassar Street
Cambridge, MA 02139
Company information is available at:
www.iderapharma.com or 617-679-5500