FORM 10-K

AGENUS INC - AGEN

Filed: March 31, 2005 (period: December 31, 2004)

Annual report with a comprehensive overview of the company

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

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

For the fiscal year ended December 31, 2004

or

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

For the transition period from to

Commission File Number: 000-29089

Antigenics Inc.

(exact name of registrant as specified in its charter)

Delaware	**06-1562417**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

630 Fifth Avenue, Suite 2100, New York, New York 10111
(Address of principal executive offices including zip code)

Registrant's telephone number, including area code:
(212) 994-8200

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

None	**None**
(Title of each Class)	*(Name of each exchange on which registered)*

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $.01 Par Value

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

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 126-2 of the Exchange Act). Yes ☑ No ☐

The aggregate market value of voting stock held by non-affiliates of the registrant as of June 30, 2004 was: $385,949,454. There were 45,564,652 shares of the registrant's Common Stock outstanding as of March 24, 2005.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement for the registrant's 2005 Annual Meeting of Stockholders to be held on June 1, 2005, which definitive proxy statement will be filed with the Securities and Exchange Commission not later than 120 days after the registrant's fiscal year of December 31, 2004, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements, including statements regarding the broad applicability and commercial potential of our heat shock protein product candidates, our ability to develop new compounds that are more efficacious and less toxic than conventional therapies, that we will successfully develop a "next generation" Oncophage® that relies on much smaller tumor tissue samples, that a personalized vaccination approach to cancer is required to generate a more robust and targeted immune response, that our heat shock protein technology can be applied without a personalized vaccination approach to diseases that are not highly variable among patients, the timing of commencing final analysis of data from our C-100-12 clinical trial, the plans for and timing of clinical trials, the safety and efficacy of our product candidates, our future research and development activities, estimates of the potential markets for our products, estimates of the capacity of manufacturing and other facilities to support our products, our expected future revenues, operations and expenditures, and projected cash needs. These statements are subject to risks and uncertainties that could cause our actual results to differ materially from those that are projected in these forward-looking statements. These risks and uncertainties include, among others:

- our ability to successfully complete pre-clinical and clinical development of our product candidates, which includes enrolling sufficient patients in our clinical trials and demonstrating the safety and efficacy of our product candidates in such trials;
- our ability to manufacture sufficient amounts of our products for clinical trials and commercialization activities;
- our ability to obtain, maintain and successfully enforce adequate patent and other proprietary rights protection of our product candidates;
- the content and timing of submissions to and decisions made by the US Food and Drug Administration, also known as the FDA, and other regulatory agencies, including demonstrating to the satisfaction of the FDA the safety and efficacy of our product candidates;
- our ability to develop a sales and marketing staff and the success of their selling efforts;
- the accuracy of our estimates of the size and characteristics of the markets to be addressed by our product candidates;
- our ability to obtain reimbursement for our products from third-party payers, and the extent of such coverage; and
- our ability to raise additional funds in the capital markets, through arrangements with corporate partners, or from other sources.

We have included more detailed descriptions of these risks and uncertainties and other risks and uncertainties applicable to our business under "Factors that May Impact Future Results" in Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operation of this Form 10-K. We encourage you to read those descriptions carefully. We caution investors not to place significant reliance on forward-looking statements contained in this document; such statements need to be evaluated in light of all the information contained in this document. Furthermore, the statements speak only as of the date of this document, and we undertake no obligation to update or revise these statements.

PART I

Item 1. *Business*

Our Business

Overview

We are a biotechnology company developing technology and products to treat cancers, infectious diseases and autoimmune disorders, primarily based on immunological approaches. Our most advanced product candidate is Oncophage®, a personalized therapeutic cancer vaccine being tested in several types of cancer, including in Phase 3 clinical trials for the treatment of renal cell carcinoma, the most common type of kidney cancer, and metastatic melanoma. Our product candidate portfolio also includes (1) AG-858, a personalized therapeutic cancer vaccine in a Phase 2 clinical trial for the treatment of chronic myelogenous leukemia, (2) AG-702/AG-707, a therapeutic vaccine program in Phase 1 clinical development for the treatment of genital herpes, and (3) Aroplatin™, a liposomal chemotherapeutic currently completing pre-clinical reformulation and testing. Our related business activities include research and development, regulatory and clinical affairs, clinical manufacturing, business development, marketing and administrative functions that support these activities.

Our Products Under Development

Introduction

Heat shock proteins, our founding technology platform, form the basis for our most advanced product candidate, Oncophage, and for our AG-858 and AG-702/AG-707 product candidates. We have observed clinical activity in Phase 1, Phase 1/2 and Phase 2 trials of Oncophage in terms of improvement or stabilization of disease in multiple cancer types. This includes data demonstrating complete disappearance (a complete response) or substantial shrinkage (a partial response) of tumor lesions in a portion of patients with renal cell carcinoma, melanoma and lymphoma. Additionally, in a portion of patients who were rendered disease-free by surgery, we have observed signs of positive impact on disease such as disease free survival in resectable pancreatic cancer and increased survival in a subset population in stage IV colon cancer. In our studies to date, the vaccine has shown that it may have a favorable safety profile. The most common side effects have been mild to moderate injection site reactions and transient low-grade fevers. We believe that this human data further supports the broad applicability and corresponding commercial potential of our heat shock protein candidates.

Oncophage is a personalized therapeutic cancer vaccine that is based on a heat shock protein called gp96, and it is currently in Phase 3 clinical trials for renal cell carcinoma and metastatic melanoma. Oncophage has received Fast Track designation and Orphan Drug designation from the US Food and Drug Administration, also known as the FDA, for both renal cell carcinoma and metastatic melanoma.

AG-858 is a personalized therapeutic cancer vaccine based on a different heat shock protein called HSP70, which is being tested in combination with Gleevec™ (imatinib mesylate, Novartis) in a Phase 2 clinical trial for the treatment of chronic myelogenous leukemia, a cancer of the blood system in which too many white blood cells are produced in the bone marrow.

AG-702/AG-707 is our therapeutic vaccine program for the treatment of genital herpes. While AG-702 consists of a heat shock protein (Hsc70) associated with a single synthetic peptide from the herpes simplex virus-2, AG-707 is a multivalent vaccine (a type of vaccine that addresses multiple components of the virus) that contains multiple herpes simplex virus-2 homologous peptides. We initiated a proof-of principle Phase 1 trial for AG-702 in the fourth quarter of 2001. We plan to file an investigational new drug application

(IND) during the first half of 2005 for AG-707 and we plan to initiate a Phase 1 clinical trial of AG-707 shortly thereafter. We have experienced delays in the animal experiments performed to support the basis of clinical development and an IND filing. Delays in animal experiments are common in the biotechnology industry. We continue to work towards achieving an effective formulation from our animal studies and expect to complete these studies in the first half of 2005.

Our other product candidates and clinical programs include Aroplatin, a novel liposomal third-generation platinum chemotherapeutic that has been studied in two Phase 1 trials of patients with colorectal cancer and other solid tumors. Platinum chemotherapeutics are cancer drugs containing the metallic element platinum, which has been shown to have some anti-cancer effects. In the case of Aroplatin, the active platinum drug component is encapsulated in a liposome, which is a spherical particle of phospholipids that are components of human cell membranes. Our technologies also include QS-21, an adjuvant, or companion compound, studied in both therapeutic and prophylactic vaccines to improve the quality of immune response.

Through our preclinical research programs, we intend to develop additional novel compounds to treat cancer and infectious diseases that are designed to be more efficacious and safer than conventional therapies. Our lead preclinical program is focused on a “next-generation” Oncophage vaccine, which incorporates several important innovations. With these advances, we expect to be able to manufacture sufficient quantities of a personalized cancer vaccine for patient treatment from much smaller tumor tissue samples. We are also studying pathways through which heat shock proteins activate the immune system and plan on initiating combination therapy studies with Oncophage and other immunomodulators and chemotherapeutics during 2005.

Heat Shock Protein Technology

Heat shock proteins, also known as HSPs, are also called stress proteins. HSPs are a group of proteins that are induced when a cell undergoes various types of environmental stresses like heat, cold and oxygen deprivation. HSPs are present in all cells in all life forms from bacteria to mammals, and their structure and function are similar across these diverse life forms. Under normal conditions, heat shock proteins play a major role in transporting fragments of proteins called peptides, including antigenic peptides, within a cell, and are thus called “chaperones.” Antigenic peptides are those portions of a protein that stimulate immune response when recognized by the immune system. Because HSPs chaperone peptides within the cell, they bind a broad array of antigenic peptides and facilitate their recognition by the immune system. Thus, HSPs help present the antigenic “fingerprint” of the cell to the immune system.

Although heat shock proteins are normally found inside cells, they also serve an important purpose when found extracellularly, meaning outside of cells. When they are found outside of cells, it indicates that a cell has undergone necrosis, a type of rupturing cell death caused by disease, mutation or injury whereby a cell’s contents are spilled into the body tissue. Extracellular HSPs are a powerful “danger signal” to the immune system and they therefore are capable of generating a targeted immune response against the infection or disease responsible for the necrotic cell death.

Combined, the intracellular and extracellular functions of heat shock proteins form the basis of our technology. The “chaperoning” nature of heat shock proteins allows us to produce vaccines containing all the antigenic peptides of a given disease. In the case of cancer, the vaccines are personalized, consisting of heat shock proteins purified from a patient’s tumor cells which remain bound, or complexed, to the broad array of peptides produced by that patient’s tumor. These heat shock protein-peptide complexes, also known as HSPPCs, when injected into the skin, have the ability to stimulate a powerful T-cell-based immune response capable of targeting and killing the cancer cells from which these complexes were derived. Because cancer is a highly variable disease from one patient to another, we believe that a personalized vaccination approach is required to generate a more robust and targeted immune response.

For diseases that are not highly variable from one patient to another, such as genital herpes, we do not believe that a personalized vaccination approach is required. For example, in our AG-702/AG-707 program for the treatment of genital herpes, we complex, or bind, one or several defined antigenic herpes peptides to a heat shock protein (Hsc70) that we genetically engineer creating an HSPPC. This HSPPC, when injected into the skin, is designed to elicit a T-cell-based immune response to the synthetic peptides carried by the heat shock protein.

Product Development Portfolio

Below is a table showing the clinical status of our lead product candidates under development.

	Status		
Product	**Phase 3(1)**	**Phase 2**	**Phase 1/2**
Oncophage	Renal cell carcinoma(2) Melanoma(2)	Colorectal cancer(2) Non-Hodgkin's lymphoma(2) Gastric cancer(2) Metastatic renal cell carcinoma Lung Cancer	Pancreatic cancer(2)
AG-858		Chronic myelogenous leukemia	
AG-702			Genital herpes
Aroplatin		Colorectal cancer(2)	Solid tumors

(1) These are multi-center trials being conducted in the US as well as internationally.

(2) These trials are closed to enrollment.

Oncophage

Introduction

Oncophage, our most advanced product candidate, is a personalized therapeutic cancer vaccine that is based on heat shock protein gp96 and is currently in Phase 3 clinical trials for the treatment of renal cell carcinoma and metastatic melanoma. Each Oncophage vaccine is made from a patient's tumor tissue. After a surgeon removes a patient's tumor, a portion of that tumor tissue is frozen and shipped overnight to our manufacturing facility in Massachusetts. In our current Phase 3 trials, we generally require at least seven grams of tumor tissue to yield a sufficient amount of Oncophage for a typical course of treatment.

Using a proprietary manufacturing process that takes approximately eight to ten hours per individual patient lot, we isolate the heat shock protein peptide complexes, also known as HSPPCs, from the tumor tissue. Through this isolation process, the HSPPCs are extracted and purified from the tumor tissue, then formulated in sterile saline solution and packaged in standard single injection vials. After the performance of quality control testing, including sterility testing, we ship Oncophage frozen back to the hospital pharmacy for administration after a patient has recovered from surgery, which is usually four to six weeks later. A medical professional administers Oncophage by injecting the product into the skin weekly for four weeks and every other week thereafter until that patient's supply of Oncophage is depleted.

Although we believe that our technology is applicable to all cancer types, our initial focus with Oncophage is on cancers that have poor or no available treatment options and that typically yield larger quantities of tumor tissue from the surgical procedure.

We filed an investigational new drug application, also known as an IND, for Oncophage in November 1996 that the FDA allowed on December 20, 1996. We started enrolling patients in our first clinical trial at

Memorial Sloan-Kettering Cancer Center in New York, New York in November 1997. To date, we have treated over 700 cancer patients with Oncophage in our clinical trials.

We believe that the collective results from these clinical trials show that Oncophage has a favorable safety profile. We also believe that these results demonstrate that treatment with Oncophage can generate immunological and anti-tumor responses.

Oncophage Clinical Programs

Renal cell carcinoma

Background. Renal cell carcinoma is the most common type of kidney cancer. The American Cancer Society estimates that there will be approximately 36,160 new cases of kidney cancer in the United States in 2005, and about 12,660 people will die from the disease in 2005. Renal cell carcinoma accounts for about 85 percent of all kidney tumors. By the time renal cell carcinoma is diagnosed in these patients, about one-third of them will have developed metastatic disease.

The current standard of care for patients with non-metastatic renal cell carcinoma consists of a nephrectomy, meaning the surgical removal of the kidney, followed by observation. For patients with metastatic disease, the only FDA approved treatment is intravenous high-dose interleukin-2, or IL-2, a human cytokine, which is a hormone-like protein that facilitates communication between cells of the immune system. The response rate, which includes partial responses and complete responses, of patients who are treated with high-dose interleukin-2 is approximately 15 percent. Treatment with high-dose interleukin-2 often causes severe adverse side effects. These side effects often can lead to discontinuation of treatment. Unlike for metastatic renal cell carcinoma noted above, there is no FDA approved treatment for non-metastatic renal cell carcinoma at the present time.

Clinical Trials. In a Phase 1/2 trial conducted at M.D. Anderson Cancer Center, in Houston, Texas, the investigator enrolled patients with metastatic renal cell carcinoma. The trial was opened for enrollment on February 4, 1998, and 38 patients with renal cell carcinoma were treated in the study. Of the 38 treated patients, the investigator reported that one patient had a complete response and two patients had a partial response. Another seven patients showed no substantial change in their disease status, which is referred to as disease stabilization. The reported median time from surgery to worsening or progression of disease (time to progression) was 2.9 months and the reported median time from surgery to death (survival) was 13 months from date of surgery. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. No serious adverse events were reported with treatment with Oncophage.

A Phase 2 trial for patients with metastatic renal cell carcinoma was initiated at M.D. Anderson Cancer Center in March 1999. Findings from this trial were presented at the 39th annual meeting of the American Society of Clinical Oncology, also known as ASCO, in June 2003. At the ASCO meeting, the clinical investigators reported preliminary data on 61 patients with metastatic renal cell carcinoma treated with at least one dose of Oncophage. One patient was reported to have had a complete response, two additional patients were reported to have had partial responses and eighteen patients were reported to have had disease stabilization. Final results of the study are being evaluated. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. In this trial patients were treated with Oncophage until progression and IL-2 after progression. No significant toxicity was observed to be associated with Oncophage treatment.

Oncophage received Fast Track designation for the treatment of renal cell carcinoma from the FDA in October 2001. Oncophage is the first personalized therapeutic cancer vaccine to receive Fast Track designation. Oncophage also received Orphan Drug status in renal cell carcinoma from the FDA in May 2002.

We initiated a Phase 3, multicenter, international trial for non-metastatic renal cell carcinoma, identified as Study C-100-12, in 2000 into which the first patient was randomized in February 2001. We did not submit a special protocol assessment to the FDA for this trial as the guidance for such was not finalized until May 2002. Such an assessment would generally seek confirmation that the FDA would consider the clinical trial protocol acceptable for purposes of product approval. We are conducting this trial at sites located in the following countries — USA, Canada, Belgium, Germany, France, Austria, Sweden, Switzerland, Norway, Spain, UK, Netherlands, Israel, Russia and Poland. On September 2, 2003, the FDA imposed a partial clinical hold on our Phase 3 clinical trials because of inadequate data to support specifications for product purity, identity, potency, and pH. The FDA provided comments and requested additional information. During the pendency of the partial clinical hold, we could not enroll any additional patients in our Phase 3 trials in renal cell carcinoma and melanoma. Patients who were already enrolled or in the screening process for enrollment were allowed to continue with the study procedures including therapy with Oncophage. We produced information in response to the FDA comments mentioned above in a submission on October 22, 2003. On November 24, 2003, we announced that the FDA had lifted the partial clinical hold. The FDA had additional comments suggesting that we should attempt to reduce the variability among assay readings, that we should use patients' full names rather than initials on the vaccine tubes, that we should comment on the use of different formulations for the melanoma and renal cell carcinoma Oncophage trials, and, finally, that we should use SAS rather than EXCEL as our statistical computer program. The FDA did not impose any conditions or limitations when it lifted the partial clinical hold in November 2003. After the clinical hold was lifted, we submitted, during 2004, our validation package to the FDA for the qualified potency assays and we are awaiting the FDA's response.

Validation of the assays refers, in general terms, to establishing the robustness and reproducibility of the assays on an ongoing basis and under various different conditions to demonstrate that the qualified potency assays, accepted by the FDA for continuation of the clinical trial, work consistently.

In late December 2003, we announced achievement of what we view as a major milestone of this trial. A planned interim analysis of the data from our Phase 3 renal cell carcinoma trial was conducted. Based on its review of the safety data, efficacy data and other information regarding the trial, the independent Data Monitoring Committee, also known as the DMC, a panel of cancer specialists who are reviewing the safety and conduct of the trial at regular intervals but are not otherwise involved in the study, recommended that the trial proceed as planned and advised that there was no need to change the number of patients we planned to enroll in this trial. The DMC also declared the design and conduct of the trial to be sound and raised no safety concerns. We remain blinded to the efficacy data from the trial. The members of the DMC are only affiliated with us through this DMC relationship. We pay the members $2,000 per meeting pursuant to individual contracts.

This trial was closed to enrollment during the quarter ended September 30, 2004. The final analysis of part I of the trial will be triggered once a pre-specified number of events occur. An event is defined as a recurrence of a patient's renal cell carcinoma or death of a patient. Events are reviewed and confirmed, on a blinded basis, by an independent Clinical Events Committee comprised of expert radiologists and an expert oncologist. Based on the overall trend of events in this trial to date, we estimate that the earliest time by which the final analysis for this trial will be triggered is mid- 2005. The final analysis for the endpoint of recurrence-free survival in trial C-100-12 is a prospectively defined statistical analysis, which will occur at a time when a pre-defined number of patients in the study have had re-occurrence (recurrence) of their disease. It is termed final analysis because it is set up to be the last analysis performed in the study for that endpoint and its results will determine the success of the trial with respect to that endpoint.

On July 20, 2004, we held a meeting with the FDA medical review team for Oncophage in renal cell carcinoma. The medical review team is specifically focused on the review of patient safety, product efficacy, clinical protocols and clinical development plan-related issues. This compares to the product review team,

which is focused on the review of non-clinical issues such as product features, chemistry, manufacturing, and formulation. The purpose of the meeting with the medical review team was to address issues surrounding the clinical development plan for product registration of Oncophage in renal cell carcinoma. This was a “Type A” meeting; such meetings are typically held to review critically important issues for the development of a product and are scheduled within 30 days of the meeting request. The FDA expressed agreement with our overall proposed registration plan. This plan includes using the current Phase 3 trial as part of our product registration strategy and dividing the study into two parts. We commenced enrollment activities in a part II Phase 3 trial in February 2005 having received approval from the FDA and anticipate recruiting patients in the near term. Following the final analysis of our current Phase 3 clinical trial, part I, we intend to consult with the FDA and present additional data and rationale to determine if a biologics license application (BLA) filing could be achieved while part II of the trial is still ongoing. In the event such a determination is made, we would complete preparation and submission of a BLA. We would expect that the FDA review process of such application would take approximately 6 months from the date of filing if accelerated review is granted and that commercialization will commence if approval is granted.

The FDA has indicated that, by itself, part I of our ongoing Phase 3 clinical trial in renal cell carcinoma is not sufficient to support a BLA filing. As noted above, we have expanded our clinical development and registration plan by initiating a second part to this Phase 3 trial in a similar patient population. The FDA has approved this registration plan, which comprises two components — part I and part II. The FDA considers part II of the trial as potentially providing the definitive evidence of safety and efficacy; however, we expect that part I will be accepted as part of the BLA filing. While the FDA has expressly excluded the possibility that part I of our renal cell carcinoma trial alone can support a BLA filing, we intend to complete part I, which is a large, controlled study, perform final analysis, and review the data closely. Should the results from the first part of the trial be clearly positive in terms of clinical outcomes, we plan to submit the data to the FDA and request that the agency reconsider its position regarding the use of the data from part I of the trial alone to support a BLA filing, while part II of the study is continuing. We expect to support this position with data which may demonstrate that Oncophage used in part I of the study should be considered sufficiently characterized. We would expect to derive that data from additional tests we plan to perform on frozen portions of the administered product using our potency assays. We plan on commencing these additional tests and have them completed in time for any BLA filing. We believe that the FDA is unlikely to reverse its position unless part I of the trial demonstrates significant benefit to patients. We believe that demonstration of efficacy might be persuasive given (1) part I of our Phase 3 renal cell carcinoma trial is designed to show that patients being treated with Oncophage have a statistically significant benefit in recurrence-free survival over patients in the observation arm, which we believe would be regarded as a substantial benefit in this patient population, (2) Oncophage has a favorable safety profile, particularly when compared with the toxicity associated with many cancer drugs, (3) part I of the trial represents the largest single randomized trial to date in this patient population and was designed to show statistically significant results, and (4) the patients with the stage of renal cell carcinoma addressed in this trial have no approved post-surgical treatment options. Other companies have submitted BLAs, and obtained approvals, based on data from non-definitive Phase 2 and Phase 3 studies while they complete confirmatory studies. We are not aware of a situation in which the FDA has reconsidered its position that a clinical trial could not be considered pivotal, and therefore would not support licensure, because of its determination that the product candidate was insufficiently characterized. However, as noted previously, we plan to perform additional tests of Oncophage product samples produced prior to December 2003 and attempt to demonstrate that our product should be considered sufficiently characterized. There is no assurance that we will be successful in demonstrating that our product is sufficiently characterized or that the FDA would accept such a strategy.

Melanoma

Background. Melanoma is the most serious form of skin cancer. According to the American Cancer Society, melanoma accounts for only about four percent of skin cancer cases, yet it causes about 79 percent of skin cancer deaths. The American Cancer Society also estimates that physicians will diagnose about 59,580 new cases of melanoma in the United States in 2005 and that the disease will kill approximately 7,770 people in 2005. The incidence of melanoma is growing at a rate of approximately three percent per year based on a report from the American Cancer Society.

Oncologists treat advanced or metastatic melanoma, also known as stage III or IV, with surgery, radiation therapy, immunotherapy, or chemotherapy, depending on the case. Approximately 15% of all melanoma patients at the time of their first diagnosis have stage III or stage IV disease. Existing treatments have not significantly improved overall survival of patients with melanoma. The median survival of patients with stage III melanoma varies widely according to published literature. According to published literature, the median survival of patients with late stage III melanoma is about 24 months and patients with stage IV melanoma have a median survival of about seven months. Although oncologists use various treatments, the only FDA approved therapies for patients with metastatic melanoma are high-dose intravenous interleukin-2 and alpha interferon, another human cytokine.

Clinical Trials. We have treated 36 patients in a Phase 1/2 clinical trial, evaluating Oncophage as a treatment for late stage III and early stage IV metastatic melanoma, as well as 45 patients in a Phase 2 clinical trial for patients with stage IV disease. In the phase 1/2 study (C-100-02), which evaluated HSPPC-96 vaccination in patients with advanced non-metastatic or limited metastatic melanoma (Stage III N2 or Stage IV), 13 of 20 patients (65%) treated with vaccine and who also had complete surgical removal of all cancer are still alive after 4.5 years compared to one of 16 (6%) patients that still had some cancer left after surgery and is still alive after 3.5 years. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. The investigator reported data from the Phase 2 trial (C-100-06) that showed that 28 patients had residual disease after surgery and, of these patients, five patients responded favorably to Oncophage, including one who was reported to have achieved a complete response for more than five years. The investigators also reported that Oncophage vaccination generated anti-melanoma immune responses in about one-half of the patients. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. Results of this Phase 2 trial were presented by the investigators at the American Society of Clinical Oncologists, also known as ASCO, meeting in May 2001 and the American Association for Cancer Research, also known as AACR, meeting in October 2001 where it was selected by the conference organizers as one of six presentations out of over 800 to be highlighted and presented to the press. In October 2002, the results from this trial were published in the Journal of Clinical Oncology, the official journal of ASCO.

Oncophage received Fast Track designation for the treatment of metastatic melanoma in February 2002. Oncophage also received Orphan Drug status in metastatic melanoma from the FDA in July 2002. In February 2002, we initiated a multicenter, international Phase 3 trial in metastatic melanoma identified as Study C-100-21. We are conducting this trial at sites located in the following countries — USA, UK, Italy, Poland, Sweden, Hungary, Australia, Russia and Ukraine. On September 2, 2003, the FDA imposed a partial clinical hold on our Phase 3 clinical trials because of inadequate data to support specifications for our product purity, identity, potency, and pH. The FDA provided comments and requested additional information in a letter received October 1, 2003. During the pendency of the partial clinical hold, we could not enroll any additional patients in our Phase 3 trials in renal cell carcinoma and melanoma. Patients, who were already enrolled or in the screening process for enrollment, were allowed to continue with the study procedures including therapy with Oncophage. We produced information in response to the FDA comments mentioned above in a submission on October 22, 2003. On November 21, 2003 the FDA lifted the partial clinical hold

because the issues raised had been satisfactorily addressed. The FDA did not impose any conditions or limitations when it lifted the partial clinical hold in November 2003. At that time, the FDA requested further information regarding Oncophage and the established potency assay. The FDA had additional minor comments suggesting that we should try to reduce the variability among assay readings, that we should use patients' full names rather than initials on the vaccine tubes, that we should comment on the use of different formulations for the metastatic melanoma and renal cell carcinoma Oncophage trials, and finally, that we should use SAS rather than EXCEL as our statistical computer program. This trial is closed to enrollment. We believe this study will not qualify as registrational due to the relatively high failure rate in vaccine manufacturing. The vaccine could not be produced for approximately 30% of patients in this study. We have not had detailed discussions or formally asked the FDA if our overall product approval strategy for Oncophage in melanoma is acceptable. We did not cover these issues during our July 20, 2004 Type A meeting with the FDA, since that meeting focused on our clinical trial in renal cell carcinoma. We anticipate achieving the required number of events to trigger final analysis of this trial during the second half of 2005.

Other Cancers

Oncophage has also been studied in other cancers, including colorectal cancer, non-Hodgkin's lymphoma, pancreatic cancer and gastric cancer. Recent data from some of these trials is summarized below. During the second quarter of 2004, we initiated an additional Oncophage Phase 1/2 trial for lung cancer and plan to begin enrollment in a Phase 1/2 trial for breast cancer in the second half of 2005.

Colorectal. Results from a Phase 2 clinical trial in patients with metastatic colorectal cancer were published as a featured article in the August 15, 2003 issue of Clinical Cancer Research. The paper presented data on 29 patients with stage IV colorectal cancer that had spread to the liver who had undergone complete resection, or surgical removal, of their metastasized disease. The paper also showed that in the trial, patients who responded immunologically to the vaccine (52 percent of study subjects) had a statistically significant survival advantage compared with patients who did not respond immunologically. Responders demonstrated a two-year overall survival rate of 100 percent, compared with 50 percent for nonresponders, and a disease-free survival rate of 51 percent, compared with 8 percent among nonresponders. These results were statistically significant. This trial has been closed to enrollment.

Non-Hodgkin's Lymphoma. Findings from a Phase 2, open-label, single-arm study for newly diagnosed or relapsed low-grade, indolent, or slow-growing, non-Hodgkin's lymphoma were presented by the principal investigator from the trial at the ASCO meeting in June 2003. The study was conducted at M. D. Anderson Cancer Center. Of the 10 patients who received Oncophage in the Phase 2 trial up to that point in time, there were responses reported in six: one partial response, two minor responses and three disease stabilizations. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. These findings were updated at the American Society of Hematology, or ASH, 45th annual meeting in December 2003. The study's lead investigator reported indications of clinical activity in eight out of 14 evaluable patients treated up to that point in time in the trial, including one partial response, two minor responses and five disease stabilizations. Oncophage was reported to be well tolerated and without significant adverse effects in this study. To date, 17 patients have been treated with Oncophage and there are two patients still in the follow-up stage of the study. This trial has been closed to enrollment.

Gastric. Data from a Phase 1/2 clinical trial evaluating Oncophage as a treatment for metastatic gastric cancer was presented at the ASCO meeting in 2002. The investigators reported preliminarily data for 15 patients with gastric cancer (stage II to stage IV) who underwent surgery, then Oncophage vaccination. At 32 months post-surgery, three were still disease-free, nine had survived, and the mean disease-free and overall survival rates were seven months and over 16 months, respectively. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. No toxicity was observed to be associated

with Oncophage treatment. This trial was conducted with clinical investigators at the Johannes Gutenberg-University Hospital in Mainz, Germany, Technical University of Munich in Germany, and the Russian Oncology Research Center in Moscow, Russia.

Pancreatic. In early 1999, we conducted a pilot Phase 1 clinical trial evaluating Oncophage as a treatment for resectable pancreatic cancer. We conducted the trial with clinical investigators at the Memorial Sloan-Kettering Cancer Center. Initially, five patients were treated. Subsequently, five more patients were treated. Updated data from this pilot study were presented at the 12th annual European Cancer Conference, also known as ECCO, in September 2003. These data were highlighted in a press release issued by the Federation of European Cancer Societies during the ECCO conference. In this trial, which included 10 evaluable patients, the manufacture of Oncophage was feasible and no toxicity associated with vaccination was observed. Recent follow-up data from patients in this Phase 1 trial of Oncophage indicates a median overall survival of over 26 months, with one patient still alive and disease-free after more than five years and two other patients alive and disease-free 2.7 and 2.6 years after treatment. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. This trial has been closed to enrollment.

Manufacturing

Oncophage is manufactured in a new 162,000 square-foot manufacturing and research and development facility in Lexington, Massachusetts. We are currently leasing approximately 94,000 square-feet of this facility and plan to expand to 132,000 square feet on or before August 2005 with a second planned expansion to 162,000 square feet on or before March 2006. We estimate that the facility's current capacity, for Oncophage and AG-858 combined, is approximately 10,000 patient courses per year, expandable to between 40,000 and 50,000 patient courses per year. On average, it takes eight to ten hours of direct processing time to manufacture a patient batch of Oncophage. We currently have 26 employees in our manufacturing department. Until March 2004, Oncophage had been manufactured in a portion of a 58,725 square foot facility in Woburn, Massachusetts.

After manufacturing, Oncophage is tested and released by our quality systems staff. The quality control organization, consisting of 19 employees, performs a series of release assays designed to ensure that the product meets all applicable specifications. Our quality assurance staff, consisting of 13 employees, also review manufacturing and quality control records prior to batch release in an effort to assure conformance with current Good Manufacturing Practices, also known as cGMP, as mandated by the FDA and foreign regulatory agencies.

Our Oncophage manufacturing staff is rigorously trained and routinely evaluated for conformance to manufacturing procedures and quality standards. This oversight is intended to ensure compliance with FDA regulations and to provide consistent vaccine output. Our quality control and quality assurance staff is similarly trained and evaluated as part of our effort to ensure consistency in the testing and release of the product, materials, equipment and facilities.

AG-858

AG-858 is a personalized therapeutic cancer vaccine based on our heat shock protein technology for the treatment of chronic myelogenous leukemia, also known as CML, a type of cancer characterized by the proliferation of abnormal white blood cells. AG-858 consists of purified HSPPCs based on a specific heat shock protein called HSP70. Because CML is a cancer of the blood, these HSPPCs are purified from a patient's white blood cells, which are obtained through leukapheresis, a method of blood filtration through a machine whereby white blood cells are removed and other blood cell types are returned to the donor.

Background. The American Cancer Society estimates that there will be about 34,810 new cases of all types of leukemia in 2005 in the United States. Of these, about 4,600 cases will be diagnosed as chronic myelogenous leukemia. The current standard of care for CML is treatment with Gleevec®(imatinib mesylate, Novartis).

Clinical Trials. In December 2002, interim data was reported from a pilot trial conducted at the University of Connecticut School of Medicine. This pilot trial studied the feasibility of using purified HSP70 and its associated antigens, also known as HSPPC-70, in combination with Gleevec for the treatment of CML. In this exploratory trial, the investigators reported that five out of the five evaluable patients showed a clinical response that could be objectively verified by reproducible criteria such as the measurable reduction of quantity of tumor cells present in the patient's blood. Updated data were subsequently presented as an oral presentation at the ASCO meeting in June 2003. The investigators reported that seven of the eight patients evaluated achieved a clinical response. Further data on this HSPPC-70 study were presented at the ASH meeting in December 2003. Of the 17 evaluable patients, 11 experienced a reduction in levels of disease as determined either by cytogenetic or molecular tests which measure, respectively, the number or presence of leukemia causing CML cells in the patient's blood. Because this was a single-arm study without a comparator arm, statistical significance is not calculable for any of these results. HSPPC-70 vaccines were successfully prepared for all patients and were well tolerated in the clinical trial.

In April 2003, we initiated an international, multi-center Phase 2 trial combining AG-858 with Gleevec. In May 2004, we voluntarily placed enrollment of this study on hold to modify the cell collection procedure. The study resumed on July 24, 2004. The trial will evaluate the safety and cytogenetic response (changes in the amount of tumor cells in the patient's blood) of this combination treatment in up to 40 patients with chronic phase CML who are currently receiving Gleevec treatment but are cytogenetically positive. We expect to complete enrollment in this trial by mid 2005 and to release the data from this trial approximately 12-15 months after completion of enrollment.

Manufacturing

We transferred the manufacture of AG-858 to our facility in Lexington, Massachusetts during the first quarter of 2004. The facility's initial capacity, for Oncophage and AG-858 combined, is approximately 10,000 patient courses per year, expandable to between 40,000 and 50,000 patient courses per year. On average, it takes 20 to 25 hours of direct processing time to manufacture a patient batch of AG-858. We are developing a revised manufacturing process for AG-858 to reduce this processing time. All patient doses of HSPPC-70 for the pilot study were manufactured at the University of Connecticut, where the study is being conducted.

The manufacturing process for AG-858 is based on similar principles as those used for Oncophage. After manufacturing, AG-858 is tested and released by our quality systems staff. The quality control organization performs a series of release assays designed to ensure that the product meets all applicable specifications. Our quality assurance staff also review manufacturing and quality control records prior to batch release in an effort to assure conformance with cGMP as mandated by the FDA and key foreign regulatory agencies.

Our AG-858 manufacturing staff is trained and routinely evaluated for conformance to manufacturing procedures and quality standards. This oversight is intended to ensure compliance with FDA regulations and to provide consistent vaccine output. Our quality control and quality assurance staff is similarly trained and evaluated as part of our effort to ensure consistency in the testing and release of the product, materials, equipment and facilities.

AG-702/AG-707

AG-702/AG-707 is our therapeutic vaccine program based on our heat shock protein technology for the treatment of genital herpes, a chronic disease caused by herpes simplex virus-2, or HSV-2. AG-702 consists of HSPPCs that we manufacture by complexing, or binding, a heat shock protein to a single synthetic peptide of HSV-2 homology and is referred to as a monovalent vaccine. In theory, this monovalent vaccine would only address approximately 40 percent of the patient population due to variances in patients' genetic makeup. AG-707 is a multivalent vaccine (a type of vaccine that addresses multiple targets) containing multiple HSV-2 homologous peptides. The multivalent AG-707 is therefore designed to address HSV-2 infection in a broad population of patients (up to 90 percent of those affected). AG-707 is designed to be an off-the-shelf product because the antigenic profile of HSV-2 is similar in all patients so personalization of the products is not required. The most common side effects of AG-702/AG-707 have been injection site reactions or transient low-grade fevers. Laboratory experiments to characterize and formulate AG-707 have demonstrated specific immune responses to the homologous peptides using human donor blood and reduced disease severity in animals treated with product prior to exposure to HSV-2 virus. Furthermore, the final formulation is currently undergoing stability testing and pre-clinical safety assessment necessary for filing an IND.

Background. The US Centers for Disease Control and Prevention estimated in surveys from 1997 that about one in five people in the United States ages 12 or older is infected with HSV-2. The World Health Organization estimated in 1995 that approximately 21 million people worldwide are infected each year. Genital herpes is currently treated with palliative topical drugs or antiviral agents that reduce further replication of the virus during the period of treatment.

Clinical Trials. We initiated a Phase 1 clinical trial of AG-702 as a proof-of-principle study in the fourth quarter of 2001 at The University of Washington. This is a dose-escalation study in both healthy volunteers and genital herpes patients. We expect to file an Investigational New Drug application, also known as an IND, for AG-707, our multivalent product candidate, for the treatment of genital herpes in the first half of 2005 and, assuming allowance of the IND by the FDA, we would expect to begin clinical studies shortly thereafter. We do not anticipate further developing AG-702, given that AG-707 should be beneficial to a larger number of patients with genital herpes.

Manufacturing

The synthetic peptide components used in AG-702/ AG-707 are manufactured for us by a contract manufacturer. The recombinant Hsc70 used in AG-702 was also produced by a contract manufacturer. We plan to continue using contract manufacturers to produce the recombinant Hsc70 and the synthetic peptides for AG-707. We expect that the purification of recombinant Hsc70 complexing with synthetic peptides, fill and finish operations will be performed in our Lexington, Massachusetts facility.

Aroplatin

Aroplatin is a novel liposomal formulation of a third-generation platinum chemotherapeutic structurally similar to oxaliplatin, a recently approved treatment for colorectal cancer. Although structural similarity does not guarantee similar clinical benefit, laboratory studies comparing Aroplatin to oxaliplatin showed that Aroplatin suppressed tumor growth, caused a reduction in tumor size, and provided a 50% increase in survival as compared to control animals. This data represents a five-fold improvement to results seen from the oxaliplatin arm of the study. Laboratory studies also indicate that Aroplatin has considerable anti-tumor activity, which is the ability to kill cancer cells. This anti-tumor activity has been demonstrated in over ten tumor cell lines with results that are at least three fold, or better, than those of cisplatin and/or carboplatin, two other approved platinum chemotherapeutic agents. Platinum chemotherapeutics are cancer drugs

containing the metallic element platinum, which has been shown to have some anti-cancer effects. Platinum chemotherapeutics have shown the ability to shrink solid tumors and, often in combination with non-platinum anti-cancer agents, have demonstrated moderate ability to slow the spread of several types of solid tumor cancers. Published results that demonstrate activity of Aroplatin against tumors cells resistant to cisplatin and carboplatin suggest that Aroplatin may be useful in cancers that are already resistant to platinum agents. Aroplatin is also encapsulated in liposomes, a round shell of phospholipids, which are basic components of human cell membranes. Liposome encapsulation has been shown to increase drug bioavailability, or the amount of time and specific distribution within the body, which can extend the treatment effect. In some cases, liposomal drugs have been shown to accumulate at the site of a tumor, delivering higher concentrations of the drug to a disease target. The liposomal delivery system can also help to reduce the damaging effects of some drugs on healthy tissues. Aroplatin has the safety profile of a chemotherapeutic agent; the most common side effect being suppression of formation of new red or white blood cells and platelets in the bone marrow. Thus, based on its chemical structure that makes it active against platinal resistant tumors and its liposomal formulation, we believe that Aroplatin will have some advantages for the treatment of certain cancers when compared with current platinum-based chemotherapeutics such as carboplatin and cisplatin. We have developed a new formulation of Aroplatin and a bridging Good Laboratory Practice toxicology study comparing the old and new formulations of Aroplatin was initiated in January 2005 and is on schedule to be completed during the second quarter of 2005. The results from this study and studies describing characterization of the new formulation will form the basis of an IND amendment that is expected to be filed with the FDA during the second quarter of 2005.

Clinical Trials

We initiated a Phase 2 trial for advanced colorectal cancer unresponsive to medical treatment (refractory) in 2002. This single-arm, open-label trial, conducted at the Arizona Cancer Center, was designed to evaluate the effect of Aroplatin alone in patients whose disease is not responsive to standard first-line cancer treatments (5-fluorouracil/leucovorin or capecitabine and irinotecan). In September 2003, the investigators presented findings from this trial at ECCO. One out of the 15 evaluable patients demonstrated a partial clinical response and two experienced disease stabilization. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. In addition, researchers observed that Aroplatin appears well tolerated in this pretreated patient population. This trial is closed to enrollment.

In January 2003, we also initiated at the John Wayne Cancer Center, in Santa Monica, California, a Phase 1/2 trial of Aroplatin for a variety of advanced solid tumors amenable to platinum therapy. This study is closed to enrollment.

During 2005, we plan on initiating a Phase 1 trial of the new formulation of Aroplatin in solid malignancies if our IND is accepted by the FDA.

Manufacturing

Aroplatin has been manufactured for us by contract manufacturers. These contract manufacturers also produce drug products for other pharmaceutical companies at clinical and commercial scale and are periodically inspected and qualified by US and foreign regulatory agencies.

QS-21

Introduction

QS-21 is an adjuvant, or a substance added to vaccines and other immunotherapies that is designed to enhance the body's immune response to the antigen contained within the treatment. QS-21 is best known for

its ability to stimulate antibody, or humoral, immune response, and has also been shown to activate cellular immunity. A natural product, QS-21 is a triterpene glycoside, or saponin, a natural compound purified from the bark of a South American tree called Quillaja saponaria. It is sufficiently characterized with a known molecular structure, thus distinguishing it from other adjuvant candidates, which are typically emulsions, polymers or biologicals.

QS-21 has been tested in more than 90 clinical trials involving, in aggregate, over 3,100 patients in a variety of cancer indications and infectious diseases. These studies have been carried out by academic institutions predominantly located in the United States and by global pharmaceutical companies at more than 20 international sites. A number of these studies have shown QS-21 to be significantly more effective in stimulating antibody responses than aluminum hydroxide or aluminum phosphate, the only adjuvants used in approved vaccines in the United States today. None of these QS-21 trials have been pivotal.

Partnered QS-21 Programs

We are actively pursuing a strategy of commercializing QS-21 through licensing to other pharmaceutical and biotechnology companies. A number of pharmaceutical and biotechnology companies have licensed QS-21 for a variety of human diseases. Companies with QS-21 programs are GlaxoSmithKline, P.L.C., Progenics Pharmaceuticals, Inc., Elan Corporation, plc., Advanced Bioscience Laboratories, Inc. and Pharmexa A/S. In January 2005, Pharmexa announced it had licensed QS-21 for use with a vaccine entering Phase 2 clinical trials. In return for rights to use QS-21, these companies have agreed to pay us license fees, milestone payments, and royalties on product sales. We have retained worldwide manufacturing rights and have the right to subcontract manufacturing for QS-21. In addition to these companies, we have developed a number of academic collaborations to test new vaccine concepts and products containing QS-21. Currently, there are no pivotal trials ongoing with QS-21. GlaxoSmithKline, P.L.C., however, has recently released data on a proof of concept study in malaria that may form the basis for Phase 3 trials utilizing QS-21.

Elan Corporation, plc., a sponsor that had been investigating a product candidate for Alzheimer's disease, notified us of patients who were reported to show clinical signs consistent with inflammation of the central nervous system. The investigators reported "possible" causality with the study drug. We do not have details regarding these events. To our knowledge, however, there is no report of a causal connection between QS-21 and development of inflammation of the central nervous system. In one study investigating the product candidate for Alzheimer's disease, no events involving inflammation of the central nervous system have been reported from the study arm in which only QS-21 was administered. Additionally, no events of inflammation of the central nervous system have been reported to us from any other studies of drugs containing adjuvant QS-21.

Manufacturing

We have entered into a supply agreement as of March 2004 for the production of QS-21. Since we have inventoried sufficient quantities of QS-21 for the immediate future, to date, we have not purchased any product under this agreement. The manufacturer is capable of producing up to 2 million doses per batch at its facility. We have retained worldwide manufacturing rights and have the right to subcontract manufacturing for QS-21.

Preclinical Activities

"Next-Generation" Oncophage

Our lead preclinical program is focused on a "next-generation" Oncophage vaccine, which incorporates several important innovations. In this next generation Oncophage, the binding of heat shock proteins to

peptides occurs artificially in a test tube rather than naturally, as in our first generation Oncophage. This should allow us to prepare larger quantities of product than the original Oncophage. We expect to be able to manufacture sufficient quantities of a personalized cancer vaccine from much smaller tumor tissue samples. This approach would be designed to treat patients with earlier stages of disease in a broader array of cancers. Clinical trials conducted with first generation Oncophage will not need to be repeated, as the first generation would continue to be used for treatment of cancers in which it is currently being used for in Phase 3 clinical trials.

HSP Combinations

During 2004, we launched a preclinical program to evaluate Oncophage in combination with other compounds such as other biologic and chemotherapeutic products. Some of these combination experiments will be conducted in collaboration with prospective pharmaceutical partners who have expressed an interest in studying certain of their compounds in combination with Oncophage.

During 2005, we plan on commencing a number of clinical studies using Oncophage in combination with other oncology drug products and/or experimental therapies. We are currently planning these studies.

Intellectual Property Portfolio

We devote significant resources to protecting and expanding our intellectual property portfolio. We seek to protect our core technologies through a combination of patents, trade secrets and know-how. We currently have exclusive rights to 80 issued United States patents and 112 foreign patents. We also have rights to 70 pending United States patent applications and 199 pending foreign patent applications. Our issued patents cover our core technologies including (i) HSPs such as Oncophage and AG-858 for treatment of cancers; (ii) HSPs such as AG-707 for treatment of infections; (iii) HSPs for treatment of autoimmune disorders; (iv) saponin adjuvants such as QS-21; and (v) liposomal drugs, including Aroplatin. In addition, several patent applications are related to technology based on HSP receptors, including CD91, one of our preclinical programs. The following tables provide detailed information regarding the United States patents and patent applications relating to our product candidates and technologies and their uses. The tables encompass less than all of our 192 issued patents and 269 pending patent applications because a substantial portion of our patent portfolio is directed to alternative and/or non-core technologies.

Products or Technologies	Oncophage® & AG-858	AG-707	HSPs in Autoimmune Disorders	HSP Receptors
Number of issued US patents	12	9	1	1
Expiration range	2015 — 2018	2015 — 2017	2017	2019
Number of pending US patent applications	4	3	0	5
Number of issued foreign patents	6	3	2	0
Expiration range	2015 — 2018	2015 — 2016	2018	—
Number of pending foreign patent applications	11	8	4	9

We also have rights to 32 issued US patents and 37 US patent applications, 30 issued foreign patents and 87 foreign patent applications directed to various other HSP technologies. With the exception of one patent

application that we own outright, all of our patent applications relating to Oncophage®, AG-858 and AG-707 are licensed exclusively to us.

Products or Technologies	QS-21	Aroplatin
Number of issued US patents	4	3
Expiration range	2008 — 2018	2010 — 2020
Number of pending US patent applications	4	1
Number of issued foreign patents	37	11
Expiration range	2007 — 2017	2006 — 2012
Number of pending foreign patent applications	21	5

All patents and applications relating to QS-21 are owned by Antigenics. All of the foreign patents and one foreign patent application relating to Aroplatin™ and all of the US patents and US patent applications relating to Aroplatin™ are licensed exclusively to us. We own four foreign applications relating to Aroplatin™.

It is worth noting that:

- patent applications in the United States are currently maintained in secrecy until they are published, generally 18 months after they are first filed in any country;
- patent applications in other countries, likewise, generally are not published until 18 months after they are first filed in any country;
- publication of technological developments in the scientific or patent literature often lags behind the date of these developments; and
- searches of prior art may not reveal all relevant prior inventions.

In addition to our patents, we rely on our trade secrets and know-how to provide a competitive advantage and we intend to continue to develop and protect this proprietary information. We take active measures to control access to know-how and trade secrets through confidentiality agreements, which we generally require all of our employees, consultants and scientific collaborators to execute upon the commencement of an employment or consulting relationship with us. These agreements generally provide that all confidential information developed or made known to the individual by us during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees and consultants, the agreements generally provide that all inventions conceived by the individual in the course of rendering services to us are assigned to us and become our exclusive property.

With the exception of one patent application that we own outright, all of our heat shock protein patents and patent applications relating to Oncophage, AG-858, and AG-702/707 have been exclusively licensed to us by the following academic institutions:

Mount Sinai School of Medicine

In November 1994, we entered into a patent license agreement with the Mount Sinai School of Medicine. Through the Mount Sinai agreement, we obtained an exclusive worldwide license to patent rights relating to the heat shock protein technology that resulted from the research and development performed by Dr. Pramod Srivastava, our founding scientist and one of our directors. We agreed to pay Mount Sinai a royalty on the net sales of products covered by the licensed patent rights and also provided Mount Sinai with a 0.45% equity interest in the company (approximately 62,000 shares) valued at approximately $90,000 at the time of issuance. The term of the Mount Sinai agreement ends when the last of the licensed patents expires (2018) or becomes no longer valid. If we fail to pay royalties that are due under the agreement, Mount Sinai

may issue written notice to us. If we continue to fail to pay royalties after 60 days of the written notice, Mount Sinai can terminate the agreement. The Mount Sinai agreement requires us to use due diligence to make the products covered by the licensed patent rights commercially available, including a requirement for us to use best efforts to reach a number of developmental milestones, which have been achieved. If we fail to comply with the due diligence provisions of the agreement, Mount Sinai could take actions to convert our exclusive license to a non-exclusive license after six months written notice. The Mount Sinai Agreement does not contain any milestone payment provisions.

Fordham University

During 1995, Dr. Srivastava moved his research to Fordham University. We entered into a sponsored research and technology license agreement with Fordham in March 1995 relating to the continued development of the heat shock protein technology and agreed to make payments to Fordham to sponsor Dr. Srivastava's research. Through the Fordham agreement, we obtained an exclusive, perpetual, worldwide license to all of the intellectual property, including all the patent rights, which resulted from the research and development performed by Dr. Srivastava at Fordham. We also agreed to pay Fordham a royalty on the net sales of products covered by the Fordham agreement through the last expiration date on the patents under the agreement (2018) or when the patents become no longer valid. The agreement does not contain any milestone payment provisions or any diligence provisions. Dr. Srivastava moved his research to the University of Connecticut Health Center during 1997 and, accordingly, the parts of the agreement related to payments for sponsored research at Fordham terminated in mid-1997. During the term of this agreement, we paid Fordham approximately $2,374,000.

University of Connecticut

Research Agreement

In February 1998, we entered into a research agreement with the University of Connecticut Health Center, or UConn, and Dr. Srivastava relating to the continued development of heat shock protein technology. The research agreement provides us with an option to license inventions stemming from the research that we sponsor at UConn and provides certain pre-determined royalty rates for licensed inventions. The research agreement had an initial term of five years and called for minimum payments to UConn totaling $5,000,000, payable quarterly at a rate of $250,000 (contingent upon the continuing employment of Dr. Srivastava by UConn). The research agreement was amended during 2002 and again on December 31, 2003 to: (1) extend the term of the research agreement to December 31, 2003 and then to December 31, 2008, and (2) provide for an annual payment of $1,200,000 payable quarterly at the rate of $300,000 during 2003 and then an annual payment of $1,350,000 payable quarterly at the rate of $337,500 from 2004 to 2008. UConn may terminate the research agreement upon 60 days written notice if it is unable to fulfill the terms of the research agreement. We can terminate the research agreement by giving 30 days written notice in the event that Dr. Srivastava terminates his employment by UConn or is otherwise unable to continue his research at UConn.

License Agreement

In May 2001, we entered into a license agreement with UConn. Through the license agreement, we obtained an exclusive worldwide license to patent rights resulting from inventions discovered under the research agreement. The term of the license agreement ends when the last of the licensed patents expires (2019) or becomes no longer valid. UConn may terminate the agreement: (1) if, after 30 days written notice for breach, we continue to fail to make any payments due under the License Agreement, or (2) we cease to carry on our business related to the patent rights or if we initiate or conduct actions in order to declare bankruptcy. We may terminate the agreement upon 90 days written notice. The license agreement contains

aggregate milestone payments of approximately $1.2 million for each product we develop covered by the licensed patent rights. These milestone payments are contingent upon regulatory filings, regulatory approvals, and commercial sales of products. We have also agreed to pay UConn a royalty on the net sales of products covered by the license agreement as well as annual license maintenance fees beginning in May 2006. Royalties otherwise due on the net sales of products covered by the license agreement may be credited against the annual license maintenance fee obligations. As of December 31, 2004, we have paid approximately $55,000 to UConn under the license agreement. The license agreement gives us complete discretion over the commercialization of products covered by the licensed patent rights but also requires us to use commercially reasonable diligent efforts to introduce commercial products within and outside the United States. If we fail to meet these diligence requirements, UConn may be able to terminate the license agreement.

Amendment Agreement

In March 2003, we entered into an amendment agreement that amended certain provisions of both the research agreement and the license agreement. The amendment agreement provides that any time we elect to exercise our option to license inventions discovered or developed as a result of research we sponsor at UConn, such inventions will be automatically covered under the terms of our existing license agreement with UConn. In consideration for execution of the amendment agreement and for the license of additional patent rights, we agreed to pay UConn an up-front payment and to make future payments for each patent or patent application with respect to which we exercise our option under the research agreement. As of December 31, 2004, we have paid approximately $94,000 to UConn under the amendment agreement.

With the exception of four patent applications that we own outright, all of our Aroplatin patents and patent applications have been exclusively licensed to us by the following corporation and institution:

Sumitomo Pharmaceuticals Co., Ltd.

In December 2000, Aronex Pharmaceuticals Inc., a company we acquired in July 2001, entered into a license agreement with Sumitomo Pharmaceuticals Co., Ltd. In September 2003, this agreement was amended and restated. The license agreement grants us the exclusive right to an issued US patent application that contains certain claims that relate to Aroplatin. Except for the treatment of hepatoma, the license agreement gives us the exclusive right to make, use, develop, import and sell Aroplatin in the United States. The term of the license agreement ends when the licensed patent expires in 2020. Either party may terminate the license agreement by giving written notice to the other party upon the occurrence of the following events: (1) if the other party makes an assignment for the benefit of creditors, is the subject of bankruptcy proceedings, or has a trustee or receiver appointed for substantially all of its assets, (2) if the other party becomes insolvent, or (3) if the other party materially defaults in its performance under the license agreement. Prior to our acquisition of Aronex Pharmaceuticals Inc., Sumitomo received a $500,000 up-front payment in 2001 from Aronex Pharmaceuticals Inc. and will receive subsequent milestone payments from us in the aggregate of up to $3.5 million if regulatory filings, regulatory approval and sales in connection with Aroplatin occur. We agreed to pay Sumitomo royalties on the net sales of Aroplatin in the United States upon commercialization of the product. The license agreement does not contain any diligence provisions.

University of Texas Board of Regents/University of Texas M.D. Anderson Cancer Center

In June 1988, a predecessor to Aronex Pharmaceuticals Inc. entered into an exclusive license agreement with: (1) The Board of Regents of The University of Texas System, and (2) The University of Texas System Cancer Center, collectively referred to as the “University of Texas”. As amended, the exclusive license agreement grants us the exclusive, worldwide license to patents containing claims that relate to Aroplatin. The term of the exclusive license agreement expires when the last licensed patent expires (2010). Either party may

terminate the agreement upon 60 days written notice if the other party materially breaches any material term of the exclusive license agreement. The agreement requires that we meet certain diligence provisions, specifically the conduct of ongoing and active research, developmental activities, marketing, clinical testing, or a licensing program, directed towards the production and sale of Aroplatin. If we fail to comply with these diligence provisions, the University of Texas may be able to terminate the exclusive license agreement upon 90 days written notice. The University of Texas also has the right terminate the exclusive license agreement in the event that: (1) we discontinue our business, (2) we have a receiver or trustee appointed for our assets, or (3) we are the subject of a bankruptcy proceeding. We agreed to pay the University of Texas royalties on the net sales of Aroplatin. The applicable royalty percentage is dependent on the level of net sales of Aroplatin. We have also agreed to make a $200,000 milestone payment to the University of Texas if the FDA approves a new drug application for Aroplatin. To date, we have not made any payments to the University of Texas under the license agreement.

Regulatory Considerations

Governmental authorities in the United States and other countries extensively regulate the preclinical and clinical testing, manufacturing, labeling, storage, record keeping, advertising, promotion, export, marketing and distribution, among other things, of our investigational product candidates. In the United States, the FDA under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act and other federal statutes and regulations, subject pharmaceutical products to rigorous review.

In order to obtain approval of a new product from the FDA, we must, among other requirements, submit proof of safety and efficacy as well as detailed information on the manufacture and composition of the product. In most cases, this proof entails extensive preclinical, clinical, and laboratory tests. The FDA may also require confirmatory trials, post-marketing testing and extra surveillance to monitor the effects of approved products or place conditions on any approvals that could restrict the commercial applications of these products.

The first stage of the FDA approval process for a new biologic or drug involves completion of preclinical studies and the submission of the results of these studies to the FDA. This, together with proposed clinical protocols, manufacturing information, analytical data and other information, in an investigational new drug application, or IND, must become effective before human clinical trials may commence. Preclinical studies involve laboratory evaluation of product characteristics and animal studies to assess the efficacy and safety of the product. The FDA regulates preclinical studies under a series of regulations called the current “Good Laboratory Practices” regulations. If the sponsor violates these regulations, in some cases, the FDA may invalidate the studies and require that the sponsor replicate those studies.

After the IND becomes effective, a sponsor may commence human clinical trials. The sponsor typically conducts human clinical trials in three sequential phases, but the phases may overlap. In Phase 1 trials, the sponsor tests the product in a small number of patients or healthy volunteers, primarily for safety at one or more doses. Phase 1 trials in cancer are often conducted with patients that are not healthy who have end-stage or metastatic cancer. In Phase 2, in addition to safety, the sponsor evaluates the efficacy of the product in a patient population somewhat larger than Phase 1 trials. Phase 3 trials typically involve additional testing for safety and clinical efficacy in an expanded population at geographically dispersed test sites. The sponsor must submit to the FDA a clinical plan, or “protocol,” accompanied by the approval of the institutions participating in the trials, prior to commencement of each clinical trial. The FDA may order the temporary or permanent discontinuation of a clinical trial at any time.

The sponsor must submit to the FDA the results of the preclinical and clinical testing, together with, among other things, detailed information on the manufacture and composition of the product, in the form of a new drug application or, in the case of a biologic, like Oncophage or AG-858, a biologics license application.

In a process which can take a year or more, the FDA reviews this application and, when and if it decides that adequate data is available to show that the new compound is both safe and effective for a particular indication and that other applicable requirements have been met, approves the drug or biologic for marketing. The amount of time taken for this approval process is a function of a number of variables, including the quality of the submission and studies presented, the potential contribution that the compound will make in improving the treatment of the disease in question, and the workload at the FDA.

Congress enacted the Food and Drug Administration Modernization Act of 1997 in part to ensure the availability of safe and effective drugs, biologics, and medical devices by expediting the FDA review process for new products. The Modernization Act establishes a statutory program for the approval of Fast Track products, including biologics. A Fast Track product is defined as a new drug or biologic intended for the treatment of a serious or life-threatening condition that demonstrates the potential to address unmet medical needs for this condition. Under the Fast Track program, the sponsor of a new drug or biologic may request the FDA to designate the drug or biologic as a Fast Track product at any time during the clinical development of the product. This designation assures access to FDA personnel for consultation throughout the development process and provides an opportunity to request accelerated review of a marketing application providing a six-month review timeline for the designated product. Our most advanced product, Oncophage, has been designated by the FDA as a Fast Track product in renal cell carcinoma and metastatic melanoma. We cannot predict whether these designations will impact the timing or likelihood of FDA approval of Oncophage.

The Modernization Act specifies that the FDA must determine if the product qualifies for Fast Track designation within 60 days of receipt of the sponsor's request. The FDA can base approval of a marketing application for a Fast Track product on an effect on a clinical endpoint or on another endpoint that is reasonably likely to predict clinical benefit. The FDA may subject approval of an application for a Fast Track product to:

- post-approval studies to validate the surrogate endpoint or confirm the effect on the clinical endpoint; and
- prior review of all promotional materials.

In addition, the FDA may withdraw its approval of a Fast Track product on a number of grounds, including the sponsor's failure to conduct any required post-approval study with due diligence.

If a preliminary review of the clinical data suggests that a Fast Track product may be effective, the FDA may initiate review of sections of a marketing application for a Fast Track product before the sponsor completes the application. This rolling review is available if the applicant provides a schedule for submission of remaining information and pays applicable user fees. However, the time periods specified under the Prescription Drug User Fee Act concerning timing goals to which the FDA has committed in reviewing an application, do not begin until the sponsor submits the complete application.

The Orphan Drug Program provides a mechanism for the FDA to acknowledge that a product is designed to treat a disease with limited prevalence in the United States. An Orphan Drug designation bestows certain advantages including extending marketing exclusivity if the product is ultimately approved for marketing, considerations in trial size and design based on the actual patient population, and tax credits for some research and development expenses. We hold orphan drug designations for Oncophage in renal cell carcinoma and in metastatic melanoma.

The FDA may, during its review of a new drug application or biologics license application, ask for additional test data. If the FDA does ultimately approve a product, it may require post-marketing testing, including potentially expensive Phase 4 studies, and extra surveillance to monitor the safety and effectiveness

of the drug. In addition, the FDA may in some circumstances impose restrictions on the use of the drug that may be difficult and expensive to administer, and may require prior approval of promotional materials.

Before approving a new drug application or biologics license application, the FDA will inspect the facilities at which the product is manufactured and will not approve the product unless the manufacturing facilities appear to be in compliance with cGMP. In order to accomplish this inspection, a local field division of the FDA is responsible for completing this inspection and providing a recommendation for or against approval. We are in communication with the field division of the FDA regarding our manufacturing facilities. This effort is intended to assure appropriate facility and process design to avoid potentially lengthy delays in product approvals due to inspection deficiencies.

Following approval, the manufacture, holding, and distribution of a product must be in compliance with cGMP. Manufacturers must expend time, money, and effort in the area of production and quality control and record keeping and reporting to ensure full compliance with those requirements. The labeling, advertising, promotion, marketing, and distribution of a drug or biologic product must be in compliance with FDA regulatory requirements. Failure to comply with applicable requirements can lead to the FDA demanding that production and shipment cease, and, in some cases, that the manufacturer recall products, or to enforcement actions that can include seizures, injunctions, and criminal prosecution. These failures can also lead to FDA withdrawal of approval to market a product.

We are also subject to regulation by the Occupational Safety and Health Administration, also known as OSHA, and the Environmental Protection Agency, also known as EPA, and to regulation under the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other regulatory statutes, and may in the future be subject to other federal, state or local regulations. OSHA and/or the EPA may promulgate regulations that may affect our research and development programs.

Sales of pharmaceutical products outside the United States are subject to foreign regulatory requirements that vary widely from jurisdiction to jurisdiction. Whether or not we have obtained FDA approval, we must obtain approval of a product by comparable regulatory authorities of foreign jurisdictions prior to the commencement of marketing the product in those jurisdictions. The time required to obtain this approval may be longer or shorter than that required for FDA approval.

Competition

Competition in the pharmaceutical and biotechnology industries is intense. Many pharmaceutical or biotechnology companies have products on the market and are actively engaged in the research and development of products for the treatment of cancer, infectious diseases, and autoimmune disorders. In addition, many competitors focus on immunotherapy as a treatment for cancer, infectious diseases, and autoimmune disorders. In particular, some of these companies are developing cancer vaccines produced from a patient's own cells or tissue. Others are focusing on developing heat shock protein products. We compete for funding, access to licenses, personnel, and third-party collaborations. In addition, many competitors have substantially greater financial, manufacturing, marketing, sales, distribution, and technical resources, and more experience in research and development, clinical trials and regulatory matters, than we do. A competing company developing, or acquiring rights to, a more efficacious therapeutic product for the same diseases we are targeting, or one which offers significantly lower costs of treatment, could render our products noncompetitive or obsolete.

Academic institutions, governmental agencies, and other public and private research institutions conduct significant amounts of research in biotechnology, medicinal chemistry, and pharmacology. These entities have become increasingly active in seeking patent protection and licensing revenues for their research results. They also compete with us in recruiting and retaining skilled scientific talent.

We are aware of certain programs and products under development by others that may compete with our programs and products. Several companies, including Biomira Inc., CancerVax Corporation, Cell Genesys Inc., Corixa Corporation, Dendreon Corporation, Genzyme Corporation, Oxford Biomendica PLC, LipoNova, and Intracel Corporation, are developing treatments for cancer based on modulation of the immune system, including cancer vaccines. In addition, several companies, including Pfizer Inc, Bristol Myers-Squibb, Genentech, Roche, Merck, Schering-Plough, AstraZeneca, GlaxoSmithKline, Novartis and Wyeth, have expertise in, and are developing products for the treatment of cancer, infectious diseases, and autoimmune disorders. We are aware of one competitor, Dendreon Corporation, who received Fast Track designation for Provenge, an autologous cancer vaccine for the treatment of prostate cancer.

Certain companies to which we have licensed QS-21 have also licensed vaccine adjuvants from direct competitors, such as Coley Pharmaceutical Group, Corixa Corporation and Avant Immunotherapeutics. The existence of products developed by these and other competitors, or other products of which we are not aware or which other companies may develop in the future, may adversely affect the marketability of products we develop.

Employees

As of March 4, 2005, we had 273 employees, of whom 36 have PhDs and six have MDs. None of our employees are subject to a collective bargaining agreement. We believe that we have good relations with our employees.

Corporate History

Antigenics L.L.C. was formed as a Delaware limited liability company in 1994 and was converted to Antigenics Inc., a Delaware corporation, in February 2000.

Availability of Periodic SEC Reports

Our Internet website address is *www.antigenics.com*. We make available free of charge through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the SEC. The contents of our website are not part of, or incorporated into, this document.

Item 1A. ***Directors and Executive Officers of the Registrant***

Set forth below is certain information regarding our executive officers and directors, including their age, as of March 1, 2005:

Name	Age	Title
Garo H. Armen, Ph.D.	52	Chairman of the Board and Chief Executive Officer
Pramod K. Srivastava, Ph.D.	49	Director, Founding Scientist and Chairman of the Scientific and Medical Advisory Board
Russell H. Herndon	46	President, Commercial Operations
Peter Thornton	40	Senior Vice President and Chief Financial Officer
Renu Gupta, MD	49	Senior Vice President, Development
Roman M. Chicz, Ph.D.	42	Senior Vice President, Research and Pre-Clinical Development
Noubar Afeyan, Ph.D.(1)	42	Director
Frank V. AtLee III(3)(4)	64	Director
Gamil G. de Chadarevian(2)	53	Director
Tom Dechaene(2)	45	Director
Margaret Eisen(1)(2)	51	Director
Wadih (Bill) Jordan(1)	70	Director
Mark Kessel(4)	63	Director
Alastair J. J. Wood, MD(3)	58	Director

(1) Member of the Compensation Committee

(2) Member of the Audit and Finance Committee

(3) Member of the Corporate Governance Committee

(4) Member of the Litigation Committee

GARO H. ARMEN, PH.D. co-founded Antigenics in 1994 and has been the Chairman of the Board and Chief Executive Officer since inception. He currently serves as a director of Elan Corporation, plc and a director of Color Kinetics Inc. Dr. Armen is also the founder and president of the Children of Armenia Fund. Since 1990, Dr. Armen has been the managing general partner of Armen Partners, L.P., an investment partnership specializing in public and private healthcare and biotechnology investments.

PRAMOD K. SRIVASTAVA, PH.D. co-founded Antigenics in 1994, and is the Chairman of our Scientific and Medical Advisory Board. Dr. Srivastava is the Director of the Center for Immunotherapy of Cancer and Infectious Diseases at the University of Connecticut and is a Professor of Immunology at the University of Connecticut. He has held positions at Fordham University and the Mount Sinai School of Medicine. Dr. Srivastava serves on the Scientific Advisory Council of the Cancer Research Institute, New York. Dr. Srivastava is a director of CambriaTech Holding S.A.

RUSSELL H. HERNDON has served as our President of Commercial Operations since November 2003. Prior to this position, Mr. Herndon served as our President from January 2002 and as our Chief Operating Officer from January 2001. Mr. Herndon was with Genzyme Corporation from 1989 through 2000,

holding various management positions including, most recently, President of the Genzyme Tissue Repair Division and, from 1997 to 1999, Senior Vice President of Genzyme. During his tenure at Genzyme, Mr. Herndon identified and organized major programs to streamline and improve operations, implement cost reductions and flexibly and efficiently expand production capacity. Mr. Herndon received a Bachelor's Degree in biology from Barton College and attended Harvard Business School for its Program in Management and Development.

PETER THORNTON has served as our Senior Vice President and Chief Financial Officer since June 2004. His professional experience includes 17 years of financial and operating experience in the United States and Europe. Mr. Thornton joined the company from the global biopharmaceutical company Elan Corporation, plc., having held senior management positions in accounting, finance and operations. He was most recently Elan's senior vice president of business operations, focusing on general management and operational leadership of several business units, and restructuring and divestiture activities. Prior to joining Elan in 1994, Mr. Thornton worked at the international accounting firm of KPMG in Ireland and France for approximately seven years. Mr. Thornton is a director of CyDex, Inc. Mr. Thornton earned his bachelor's degree in commerce from University College, Cork, Ireland, and is a fellow of the Institute of Chartered Accountants in Ireland.

RENU GUPTA, MD joined Antigenics as Senior Vice President of Development in November 2003. During the period 2001 through 2003, Dr. Gupta worked as a self-employed consultant for a range of bio-pharmaceutical companies. During the years 2000 to 2001, Dr. Gupta was employed at Novartis where she was the vice president and head of US clinical research and development. Dr. Gupta also spent 1998 through 2000 at Covance as Vice President, and head of Medical, Safety and Therapeutics and from 1989 through 1998 at Bristol-Myers Squibb, where she was responsible for high-level global marketing strategy, clinical research and business development. Dr. Gupta received her bachelor and medical degrees from the University of Zambia and completed her medical training at Albert Einstein Medical Center in Philadelphia and the University of Pennsylvania's Children's Hospital of Philadelphia.

ROMAN M. CHICZ, PH.D. joined Antigenics as Senior Vice President of Research and Pre-Clinical Development in July 2004. Prior to this position Dr. Chicz was a co-founder and Vice President of Discovery Research at ZYCOS Inc. from its inception in 1996 until its acquisition in 2004. During his tenure at ZYCOS, Dr. Chicz was responsible for the identification and validation of novel anti-viral and oncology drugs, product development support and management of the Aventis Pasteur oncology alliance. He also played a key role in business development and private financing of the company. Prior to ZYCOS, Dr. Chicz served as a principal scientist and postdoctoral fellow at Harvard University. Dr. Chicz received his Bachelor's degree in chemistry from Occidental College and his doctorate in biochemistry from Purdue University.

NOUBAR AFEYAN, PH.D. has been a director since 1998. Dr. Afeyan is Managing Partner and CEO of Flagship Ventures a leader in creating, funding and developing new ventures in both life science and information technology sectors. He is also a Senior Lecturer at the Massachusetts Institute of Technology's Sloan School of Management. In addition, he is a member of the Board of Governors of Boston University Medical School, the Board of Advisors for the Whitehead Institute at MIT, and the Advisory Council of the McGowan Institute for Regenerative Medicine. Dr. Afeyan also serves on the board of Color Kinetics, Inc.

FRANK V. ATLEE III has been a director since July 2002. Mr. AtLee is a director of Monsanto Company since 2000. From December 2002 to May 2003, Mr. AtLee was Interim CEO and President, as well as the Chairman of the Board of Directors of Monsanto Company. Mr. AtLee is also on the board of Nereus Pharmaceuticals Inc.

GAMIL G. de CHADAREVIAN has been a director since 1995 and served as our Executive Vice President International from 1998 to 2001. Until April 1998, Mr. de Chadarevian was Managing Director of

Special Projects at Alza International and the Vice President of Corporate Development for Corange London Limited, two pharmaceutical companies. Prior to 1992, he held positions at Pasfin Servizi Finanziara SpA, GEA Consulenza and Credit Suisse. Mr. de Chadarevian is the founder and Lead Director of OphthalmoPharma Ltd. and a co-founder of Ikonisys Inc. and CambriaTech Holding SA. He serves on the advisory board of Syntek Capital AG and Venture Valuation AG and is a non-executive board member of Friends of San Patrignano, Inc., a charitable organization. In Italy, he is an advisor for biotechnology to Sviluppo Italia, a government agency dedicated to promoting Italian investment opportunities, and to Lay Line Genomics SpA, a biotechnology company. Mr. de Chadarevian received his degree from the University of Zurich in Switzerland.

TOM DECHAENE has been a director since 1999. Mr. Dechaene is a partner at Anchor Partners, a London-based advisory boutique focusing on Telecoms, Media & technology clients. From 2000 to 2002, Mr. Dechaene was the Chief Financial Officer of SurfCast, Inc., a software development company. He was with Deutsche Bank from 1991 through 1999, most recently as a director in the Principal Investments Group within the Equity Capital Markets division. Mr. Dechaene holds a law degree from Ghent University, Belgium, a degree in Applied Economics from the University of Antwerp and a MBA from INSEAD, France.

MARGARET EISEN has been a director since March 2003. Ms. Eisen joined Harbor Hills Capital in July 2003 as Chief Investment Officer and subsequently formed EAM International, LLC to provide corporate finance and asset management services to entrepreneurs and wealthy individuals. Before forming EAM International, from 2001 to 2002, Ms Eisen was Managing Director of an investment bank specializing in mergers and acquisitions of investment management firms. From 1995 to 2001, Ms. Eisen was Managing Director of North American Equities of General Motors Investment Management Corporation, a registered investment advisor. Ms. Eisen is a member of the Board of Trustees of the Acorn family of mutual funds of Wagner Asset Management and a Trustee of the Lehman Brothers/First Trust Income Opportunity Fund and the Lehman Liquid Assets Trust. Ms. Eisen is a Director of Global Financial Group, a venture capital fund of funds, and is a member of the Investment Committee of the Board of Trustees of Smith College. Ms. Eisen previously served as Chair of the Institute for Financial Markets. Ms. Eisen received a bachelor's degree in government from Smith College, a master's in education from Lesley College, and a MBA from Babson College. She also holds the Chartered Financial Analyst designation.

WADIH (BILL) JORDAN has been a director since March 2003. Mr. Jordan has served as president of NearEast Pharma since 1996, before which he spent 20 years at Cyanamid International.

MARK KESSEL has been a director since March 2003. Mr. Kessel is Chief Executive Officer and managing director of Symphony Capital LLC, a firm which manages a private equity fund which invests in the clinical development of biopharmaceutical products that he co-founded in 2002. From 1979 to 2001, Mr. Kessel was a partner at the international law firm of Shearman & Sterling and served as the firm's managing partner from 1990 to 1994.

ALASTAIR J.J. WOOD, MD, has been a director since September 2004. He is an associate dean, attending physician and tenured professor of medicine and pharmacology at Vanderbilt Medical School in Nashville, Tenn., where he has been a faculty member for more than 20 years. A 2002 nominee for commissioner of the US Food and Drug Administration (FDA), Dr. Wood served as a member of the FDA's cardiovascular and renal advisory committee and is currently a member of the agency's nonprescription drug advisory committee. He has also been a member and chairman of the National Institutes of Health study sections, and served in a similar capacity for various philanthropic grant-giving bodies, having acted as consultant to several pharmaceutical companies, investors, venture capital funds and major academic institutions.

Item 2. ***Properties***

We signed a lease agreement, effective August 2003, for a 162,000 square-foot facility in Lexington, Massachusetts, which terminates in August 2013. We have an option to renew this lease for two additional ten-year periods. We began occupying approximately 94,000 square-feet of this new facility, beginning in October 2003. We expect to expand to 132,000 square feet on or before August 2005 with a second expansion to 162,000 square feet on or before March 2006.

We also lease approximately 40,000 square feet of laboratory, office and manufacturing space in Framingham, Massachusetts under a lease agreement that terminates in September 2010. We have an option to renew the lease for two additional five-year periods. We have sublet this entire facility.

In addition, we lease approximately 30,000 square feet of laboratory and office space in The Woodlands, Texas, a suburb of Houston, under a lease that expires in January 2008. We are not actively using this facility and have sublet the majority of this facility to other tenants.

We maintain our executive offices in New York, New York, in an office building in which we lease approximately 10,000 square feet. Our New York lease terminates in December 2006.

The Company believes substantially all of its property and equipment is in good condition and that it has sufficient capacity to meet its current operational needs. We do not anticipate experiencing significant difficulty in retaining occupancy of any of our manufacturing or office facilities and will do so through lease renewals prior to expiration or through replacing them with equivalent facilities.

Item 3. ***Legal Proceedings***

Antigenics, our Chairman and Chief Executive Officer Garo Armen, and two investment banking firms that served as underwriters in our initial public offering have been named as defendants in a civil class action lawsuit filed on November 5, 2001 in the Federal District Court for the Southern District of New York on behalf of a class of purchasers of our stock between February 3, 2000 and December 6, 2000. Similar complaints were filed against about 300 other issuers, their underwriters, and in many instances directors and officers. These cases have been coordinated under the caption *In re Initial Public Offering Securities Litigation*, Civ. No. 21 MC 92 (SAS), by order dated August 9, 2001. The suit against Antigenics and Dr. Armen alleges that the brokerage arms of the investment banking firms charged secret excessive commissions to certain of their customers in return for allocations of our stock in the offering. The suit also alleges that shares of our stock were allocated to certain of the investment banking firms' customers based upon agreements by such customers to purchase additional shares of our stock in the secondary market. The complaint alleges that Antigenics is liable under Section 11 of the Securities Act of 1933, as amended, and Dr. Armen is liable under Sections 11 and 15 of the Securities Act because our registration statement did not disclose these alleged practices. On April 19, 2002, the plaintiffs in this action filed an amended class action complaint, which contains new allegations. Similar amended complaints were filed with respect to about 300 companies. In addition to the claims in the earlier complaint, the amended complaint alleged that Antigenics and Dr. Armen violated Sections 10(b) and 20 of the Securities Exchange Act and SEC Rule 10b-5 by making false and misleading statements and/or omissions in order to inflate our stock price and conceal the investment banking firms' alleged secret arrangements. The claims against Dr. Armen, in his individual capacity, have been dismissed without prejudice. On July 15, 2002, Antigenics and Dr. Armen joined the Issuer Defendants' Motion to Dismiss the Consolidated Amended Complaints. By order of the Court, this motion set forth all "common issues," i.e., all grounds for dismissal common to all or a significant number of Issuer Defendants. The hearing on the Issuer Defendant's Motion to Dismiss and the other Defendants' motions to Dismiss was held on November 1, 2002. On February 19, 2003, the Court issued its opinion and order on the Issuer Defendants' Motion to Dismiss. The Court granted Antigenics' motion to dismiss the Rule 10b-5 and Section 20 claims with leave to amend and denied our motion

to dismiss the Section 11 and Section 15 claims. On June 14, 2004, papers formalizing a proposed settlement among the plaintiffs, Issuer Defendants, and issuers were presented to the Federal District Court for the Southern District of New York, and Antigenics anticipates that a settlement will be reached without incurring significant out-of-pocket costs, after considering insurance. Accordingly, an accrual has not been recorded at December 31, 2004.

We currently are a party to other legal proceedings as well. While our management currently believes that the ultimate outcome of any of these proceedings will not have a material adverse effect on our consolidated financial position, results of operations, or liquidity, litigation is subject to inherent uncertainty. Litigation also consumes both cash and management attention.

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

No matters were submitted to stockholders for a vote during the fourth quarter of 2004.

PART II

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

Our common stock has been traded on The NASDAQ National Market under the symbol "AGEN" since February 4, 2000.

The following table sets forth, for the periods indicated, the high and low sale prices per share of our common stock as reported on the NASDAQ National Market.

	High	Low
2003		
First Quarter	11.87	7.08
Second Quarter	16.00	7.75
Third Quarter	15.70	10.40
Fourth Quarter	13.75	9.22
2004		
First Quarter	12.46	9.21
Second Quarter	11.61	7.01
Third Quarter	8.75	5.94
Fourth Quarter	11.38	4.51
2005		
First Quarter (through March 17, 2005)	10.24	6.10

As of March 15, 2005, there were approximately 2,600 holders of record and approximately 41,500 beneficial holders of our common stock.

We have never paid cash dividends on our common stock and we do not anticipate paying any cash dividends in the foreseeable future. We currently intend to retain future earnings, if any, for the future operation and expansion of our business. Any future payment of dividends on our common stock will be at the discretion of our board of directors and will depend upon, among other things, our earnings, financial condition, capital requirements, level of indebtedness and other factors that our board of directors deem relevant.

Securities Authorized For Issuance Under Equity Compensation Plans

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights(1)	Weighted-average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance under Equity Compensation Plan (Excluding Securities Reflected in Column(a))(2)
	(a)	(b)	(c)
Equity compensation plans approved by security holders	5,633,358	$ 9.53	4,121,509
Equity compensation plans not approved by security holders	—		—
Total	5,633,358		4,121,509

(1) Includes (i) 2,197 options outstanding at a weighted average exercise price of $68.91 assumed in connection with our merger with Aronex Pharmaceuticals, Inc. in July 2001; (ii) 53,604 options outstanding at a weighted average exercise price of $11.74 assumed in our merger with Aquila Biopharmaceuticals Inc. in November 2000.

(2) Includes 204,980 shares that may be issued under our 1999 Employee Stock Purchase Plan.

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

We have derived the consolidated balance sheet data set forth below as of December 31, 2004 and 2003, and the consolidated statement of operations data for each of the years in the three-year period ended December 31, 2004, from our audited consolidated financial statements included elsewhere in this annual report. The consolidated balance sheet data as of December 31, 2002, 2001, 2000 and the consolidated statement of operations data for the years ended December 31, 2001 and 2000, is unaudited. It is based on audited data for the relevant periods as adjusted for discontinued operations accounting treatment related to the sale of manufacturing rights to our feline leukemia virus vaccine and certain other assets in March 2004, which adjustments have not been audited as of these dates or for these years.

You should read the selected consolidated financial data in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the notes to those consolidated financial statements included elsewhere in this report.

Given our history of incurring operating losses, management believes that it is more likely than not that any deferred tax assets, net of deferred tax liabilities, will not be realized. Therefore, there is no income tax benefit in the consolidated financial statements for periods ended after February 2000 because of a loss before income taxes and the need to recognize a valuation allowance on net deferred tax assets (see (3) below).

Changes in cash, cash equivalents and short-term investments, total current assets, total assets, and stockholders’ equity in the periods presented below include the effects of the receipt of net proceeds from our equity offerings, the exercise of stock options and warrants, and employee stock purchases that totaled approximately $54.6 million, $92.5 million, $56.7 million, $0.9 million, and $66.8 million in 2004, 2003, 2002, 2001, and 2000, respectively.

	For the Year Ended December 31,				
	2004	2003	2002	2001	2000
	(In thousands, except per share data)				
				(Unaudited)	
Consolidated Statement of Operations Data:					
Revenue	$ 707	$ 985	$ 784	$ 2,949	$ 79
Operating Expenses:					
Cost of sales	(5)	—	—	—	—
Research and development	(41,718)	(46,264)	(37,478)	(31,259)	(17,563)
General and administrative	(25,784)	(21,682)	(20,673)	(13,762)	(9,189)
Acquired in-process research and development(1)	(2,888)	—	—	(34,596)	(25,800)
Loss from operations	(69,688)	(66,961)	(57,367)	(76,668)	(52,473)
Interest income, net	929	919	1,225	2,684	5,756
Non-operating income	8	—	—	—	—
Loss from continuing operations	(68,751)	(66,042)	(56,142)	(73,984)	(46,717)
Income (loss) from discontinued operations, net of tax of $617 in 2004 (including gain before tax on disposal of $14,132 in 2004)(2)	12,589	108	264	443	(12)
Net loss	(56,162)	(65,934)	(55,878)	(73,541)	(46,729)
Dividends on series A convertible preferred stock	(790)	(224)	—	—	—
Net loss attributable to common stockholders(3)(4)(5)	$ (56,952)	$ (66,158)	$ (55,878)	$ (73,541)	$ (46,729)
Loss from continuing operations per common share, basic and diluted	$ (1.56)	$ (1.70)	$ (1.71)	$ (2.63)	$ (1.90)
Income (loss) from discontinued operations, per common share, basic and diluted	$ 0.28	$ —	$ 0.01	$ 0.02	$ —
Net loss attributable to common stockholders per common share, basic and diluted	$ (1.27)	$ (1.70)	$ (1.70)	$ (2.61)	$ (1.90)
Weighted average number of shares outstanding, basic and diluted	44,685	38,989	32,905	28,143	24,659

	December 31,				
	2004	2003	2002	2001	2000
			(In thousands) (Unaudited)	(Unaudited)	(Unaudited)
Consolidated Balance Sheet Data:					
Cash, cash equivalents and short-term investments	$ 86,921	$ 87,978	$ 57,720	$ 60,868	$ 99,139
Total current assets	92,604	91,821	62,395	63,987	101,593
Total assets	133,058	140,080	89,063	93,546	127,966
Total current liabilities	19,204	22,105	9,971	16,208	8,611
Long-term debt, less current portion	4,512	10,245	12	194	2,643
Stockholders' equity	106,443	105,246	77,757	75,925	116,703

(1) We recorded charges to operations for the write-off of in-process research and development acquired with the purchase of intellectual property from Mojave Therapeutics Inc. in July 2004, in our merger with Aronex Pharmaceuticals Inc. in July 2001 and in our merger with Aquila Biopharmaceuticals Inc. in November 2000.

(2) In March 2004, we sold our manufacturing rights and related assets for a feline leukemia virus vaccine to Virbac S.A. This sale and activity related to these assets has been treated as a discontinued operation for all periods presented.

(3) Given our history of incurring operating losses, no income tax benefit is recognized in our consolidated financial statements because of a loss before income taxes and the need to recognize a valuation allowance on net deferred tax assets.

(4) Effective July 1, 2001, we adopted Statement of Financial Accounting Standards (SFAS) No. 141, "Business Combinations" and effective January 1, 2002 adopted SFAS No. 142, "Goodwill and Other Intangibles." As a result, we have ceased amortization of all goodwill beginning January 1, 2002. Had SFAS No. 142 been adopted by us effective January 1, 2000, net loss attributable to common stockholders and net loss attributable to common stockholder per common share, basic and diluted, would have been as follows (in thousands, except per share data):

	2001	2000
Net loss attributable to common stockholders, as reported	$ (73,541)	$ (46,729)
Goodwill and assembled workforce amortization	480	39
Pro forma net loss attributable to common stockholders	$ (73,061)	$ (46,690)
Net loss attributable to common stockholders per common share, basic and diluted:		
As reported	$ (2.61)	$ (1.90)
Pro forma	(2.60)	(1.89)

(5) Effective January 1, 2003, we adopted SFAS No. 143 "Accounting for Asset Retirement Obligations." As a result, we have recorded the fair value of an asset retirement obligation of long-lived assets and the corresponding capitalized cost, effective January 1, 2003. Had SFAS No. 143 been in effect for the years presented below, net loss attributable to common stockholders per common share, basic and diluted, would have been as follows (in thousands, except per share data):

	Year Ended December 31,	
	2002	2001
Net loss attributable to common stockholders, as reported	$ (55,878)	$ (73,541)
Depreciation expense	(43)	(43)
Accretion expense	(18)	(17)
Pro forma net loss attributable to common stockholders	$ (55,939)	$ (73,601)
Net loss attributable to common stockholders per common share, basic and diluted:		
As reported	$ (1.70)	$ (2.61)
Pro forma	(1.70)	(2.62)

The pro forma liability for asset retirement obligations would have been as follows (in thousands):

	Year Ended December 31, 2002
Long-term liabilities, less current portion, as reported	$ 1,335
Asset retirement obligation	367
Pro forma long-term liabilities, less current portion	$ 1,702

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

OVERVIEW

We are currently researching and/or developing product candidates to treat cancers, infectious diseases and autoimmune disorders. Since our inception in March 1994, our activities have primarily been associated with the development of our heat shock protein technology and our most advanced product candidate, Oncophage. Our business activities have included, product research and development, intellectual property prosecution, manufacturing therapeutic vaccines for clinical trials, regulatory and clinical affairs, corporate finance and development activities, marketing and integration of our acquisitions.

We have incurred significant losses since our inception. As of December 31, 2004, we had an accumulated deficit of $335,860,000. We continue to finance the majority of our operations through the sale of equity. For the years ended December 31, 2004 and 2003, we raised through the sale of equity, exercises of stock options and proceeds from our employee stock purchase plan approximately $54,617,000 and $92,531,000, respectively. On January 25, 2005, we raised gross proceeds of $50,000,000 through the issuance of 5.25% Convertible Senior Notes due 2025.

We expect, as we have in the past, to attempt to raise additional funds in advance of depleting our current funds. Satisfying long-term liquidity needs will require the successful commercialization of Oncophage or other products and may require substantial additional capital. We expect that we will be able to fund our

growing operations and capital expenditures into 2006 with our current working capital, and the proceeds from our January 2005 offering of 5.25% Convertible Senior Notes due 2025.

On March 17, 2004, we sold our manufacturing rights for feline leukemia virus, also know as FeLV, vaccine and related assets to French veterinary pharmaceutical manufacturer Virbac S.A., also known as Virbac. Pursuant to this arrangement, in exchange for the transfer of our manufacturing rights and related equipment for FeLV, we received $14,552,000 in cash. In addition, we entered into a sublease agreement with PP Manufacturing, a subsidiary of Virbac, for a portion of the manufacturing facility in Framingham, MA. In April 2004, upon the satisfaction of a contingency of the arrangement, we recorded a gain on the divestiture of these assets. The gain recorded before tax in 2004 was approximately $14,132,000. The carrying value of the assets sold and liabilities assumed were approximately $409,000 and $15,000, respectively.

Virbac has held exclusive, perpetual, worldwide, marketing rights to the FeLV vaccine since 1983. The supply agreement was due for renewal in July 2002, at which point we began to supply product to Virbac through month-to-month supply agreements until the sale of our FeLV manufacturing rights to them in March 2004.

During the years ended December 31, 2004, 2003 and 2002, we had research and development revenues of $690,000, $985,000, and $784,000, respectively, representing grant payments and license fees earned, and shipments of our adjuvant QS-21 to our QS-21 licensees. In addition, during the year ended December 31, 2004, we also had product sales of our veterinary adjuvant QA-21 of $17,000. To date, we have generated product sales revenues substantially from one product, the feline leukemia virus vaccine, the rights to which we sold to Virbac. As a result of the sale, we will not generate further sales revenue from this product. Our revenues from this product were $338,000, $3,465,000, and $2,627,000 for the years ended December 31, 2004, 2003, and 2002 respectively. These amounts are included in our income from discontinued operations presented in the consolidated statements of operations.

Forward-Looking Statements

This report contains forward-looking statements. Generally, these statements can be identified by the use of terms like “believe,” “expect,” “anticipate,” “plan,” “may,” “will,” “could,” “estimate,” “potential,” “opportunity,” “future,” “project” and similar terms. Forward-looking statements may include statements about our time lines for completing clinical trials, time lines for releasing data from clinical trials, time lines for initiating new clinical trials, expectations regarding clinical trials and regulatory processes, expectations regarding test results, future product research and development activities, the expected effectiveness of therapeutic drugs and vaccines in treating diseases, applicability of our heat shock protein technology to multiple cancers and infectious diseases, competitive position, plans for regulatory filings, possible receipt of future regulatory approvals, expected cash needs, plans for sales and marketing, implementation of corporate strategy and future financial performance. These forward-looking statements involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. These risks and uncertainties include, among others, that clinical trials may not demonstrate that our products are both safe and more effective than current standards of care; that we may be unable to obtain the regulatory approvals necessary to conduct additional clinical trials; that we may not be able to enroll sufficient numbers of patients in our clinical trials; that we may be unable to obtain the regulatory approvals necessary to commercialize our products because the United States Food and Drug Administration (FDA) or other regulatory agencies are not satisfied with our trial protocols or the results of our trials; that we may fail to adequately protect our intellectual property or that we are determined to infringe on the intellectual property of others; changes in financial markets and geopolitical developments; and the solvency of counter-parties under subleases and general real estate risks. Forward-looking statements, therefore, should be considered in light of all of the information included or referred to in this report, including the information set forth under

the heading “Factors That May Impact Future Results”. You are cautioned not to place significant reliance on these forward-looking statements, which speak only as of the date of this report. We undertake no obligation to update these statements.

Historical Results of Operations

Year Ended December 31, 2004 Compared To The Year Ended December 31, 2003

Revenue: We generated $690,000 of research and development revenue and $17,000 of QA-21 product revenue during the year ended December 31, 2004 and $985,000 of research and development revenue and no product revenue during the year ended December 31, 2003. Revenues from research and development activities include revenues earned on shipments of QS-21 to our QS-21 licensees, grant payments and license fees earned. The decrease in research and development revenue is attributable to lower shipments of QS-21 during the year ended December 31, 2004 compared to the year ended December 31, 2003 and to a large non-recurring shipment of QS-21 during the first half of 2003.

Cost of Sales: Cost of sales, which is related entirely to product revenue on the sale of QA-21, was $4,800, or 28% of product sales, for the year ended December 31, 2004.

Research and Development: Research and development expenses include the costs associated with our internal research and development activities including salaries and benefits, occupancy costs, clinical manufacturing costs, related administrative costs and research and development conducted for us by outside advisors, such as sponsored university-based research partners, including the University of Connecticut where we sponsor research, and clinical research organizations, as well as expenses related to grant revenue. Research and development expense decreased 10% to $41,718,000 for the year ended December 31, 2004 from $46,264,000 for the year ended December 31, 2003. The decrease was primarily due to reduced clinical trial related expenses as we completed enrollment for part I of our Phase 3 renal cell carcinoma trial and our Phase 3 metastatic melanoma trial during 2004. As compared to the year ended December 31, 2003, trial related expenses have decreased $5,250,000. In addition, depreciation expense decreased $2,061,000 due mostly to the exiting of the Woburn and Framingham facilities during the first quarter of 2004 following the consolidation of these activities into a single larger facility in Lexington adequate to meet our long-term needs. Offsetting these expense decreases was a $1,820,000 increase in research and development payroll related expenses due to growth in headcount and employee payroll expense, including a severance payment for a terminated executive, and a $945,000 increase in other research and development expenses for the year ended December 31, 2004 when compared to the year ended December 31, 2003.

General and Administrative: General and administrative expenses consist primarily of personnel costs, office expenses and professional fees. General and administrative expenses increased 19% to $25,784,000 for the year ended December 31, 2004 from $21,682,000 for the year ended December 31, 2003. This increase is attributable to a $1,026,000 increase in personnel compensation associated with the growth of our operations including a non-recurring severance payment to one of our executives, and a $411,000 increase in non-payroll personnel related expenses primarily related to travel costs. Professional fees increased $2,820,000 due mainly to increased consulting services, accounting and legal fees, and additional recruiting expenses driven by the growth of our business and increased regulatory compliance costs. Offsetting these increases is a decrease in facility related expenses of $650,000 primarily due to the sublease of the Framingham facility. Other general and administrative expenses increased $495,000.

Acquired In-Process Research and Development: Acquired in-process research and development of $2,888,000 for the year ended December 31, 2004 related to the charge for the purchase from Mojave Therapeutics Inc. (Mojave) of all of their intellectual property and certain scientific assets relating to their heat shock protein based antigen delivery system and other technologies. The total purchase price of the assets

(comprised of a cash payment of $200,000 and the value of common stock issued of $2,688,000) was allocated to incomplete acquired technologies under development but not yet technologically feasible or commercialized and which had no alternative future uses. At the date of the acquisition, none of the purchased technologies under development by Mojave had achieved technological feasibility and none were being sold on the market. There still remains substantial risk and significant uncertainty concerning the remaining course of technical development. Because of the great uncertainty associated with these issues and the remaining effort associated with development of these technologies, the development projects had not established technological feasibility at the acquisition date.

Interest Income: Interest income increased 25% to $1,460,000 for the year ended December 31, 2004 from $1,166,000 for the year ended December 31, 2003. This increase is due primarily to an increased average monthly cash and investment balance as well as rising interest rates. Our average interest rate increased from 1.2% for the year ended December 31, 2003 to 1.4% for the year ended December 31, 2004.

Interest expense: Interest expense increased 115% to $531,000 for the year ended December 31, 2004 from $247,000 for the year ended December 31, 2003. This increase relates to the increase of the average balance of our interest bearing debt relating to the new facility in Lexington, Massachusetts.

Discontinued Operations: Due to the sale of our manufacturing rights for the FeLV vaccine and related assets to Virbac, we have reported the results of those operations as discontinued in accordance with SFAS No. 144, *"Accounting for the Impairment or Disposal of Long-Lived Assets."*

Year Ended December 31, 2003 Compared To The Year Ended December 31, 2002

Revenue: We had $985,000 and $784,000 of research and development revenue during the years ended December 31, 2003 and 2002, respectively. Revenues from research and development activities include shipments of our adjuvant QS-21 to be used in clinical trials by our partners and grant payments earned.

Research and Development: Research and development expenses include the costs associated with our internal research and development activities including, salaries and benefits, occupancy costs, clinical manufacturing costs, related administrative costs, and research and development conducted for us by outside advisors, such as sponsored university-based research partners, including the University of Connecticut where we sponsor research, and clinical research organizations. In addition, research and development expenses include the cost of clinical material shipped to our research partners and expenses related to grant revenue. Research and development expense increased 23% to $46,264,000 for the year ended December 31, 2003 from $37,478,000 for the year ended December 31, 2002. This increase reflected the continued advancement of our Oncophage Phase 3 clinical trials in renal cell carcinoma and metastatic melanoma, including increased monitoring of these Phase 3 trials during the clinical hold, increased costs due to the interim analysis of part I of our Phase 3 trial in renal cell carcinoma, and other heat shock protein related research. Expenses related to our Oncophage clinical trials increased $4,426,000 for the year ended December 31, 2003 over the same period in 2002. Also adding to the increase was a $1,292,000 depreciation charge for machinery and equipment related to the exit from our Woburn, Massachusetts facility. In addition, salary and personnel related expenses increased $1,759,000 during the year ended December 31, 2003 over the same period of 2002. This increase in salary expense was due to our hiring of personnel to assist with our expanding research activities. Our other research and development expenses increased by $1,309,000 for the year ended December 31, 2003 over the same period in 2002.

General and Administrative: General and administrative expenses consist primarily of personnel compensation, office expenses and professional fees. General and administrative expenses increased 5% to $21,682,000 for the year ended December 31, 2003 from $20,673,000 for the year ended December 31, 2002. The increase was primarily due to a $986,000 increase in rent expense due to a settlement with our Woburn

facility landlord, and rent related to our Lexington, Massachusetts facility. In addition, advisory services and employee training expenses increased $819,000 primarily to support our expanding market development operations. Also added to the increase in general and administrative expenses was the $135,000 increase in our directors and officers insurance premium. These increases were offset by a $611,000 increase in sublease income. The remainder of our general and administrative expenses decreased by $320,000 for the year ended December 31, 2003 over the same period.

Interest Income: Interest income decreased 27% to $1,166,000 for the year ended December 31, 2003 from $1,590,000 for the year ended December 31, 2002. This decrease was attributable to declining interest rates during 2003. Our average interest rate decreased from 1.9% for the year ended December 31, 2002, to 1.2% for the year ended December 31, 2003.

Interest expense: Interest expense decreased 32% to $247,000 for the year ended December 31, 2003 from $365,000 for the year ended December 31, 2002. The decrease was attributable to our reduced debt balance for the majority of the 2003 fiscal year. The majority of our debt balance at December 31, 2003 corresponds with the build-out of the Lexington facility, which did not occur until the second half of 2003.

Discontinued Operations: Due to the sale of our manufacturing rights for the FeLV vaccine and related assets to Virbac, we have reported the results of those operations as discontinued in accordance with SFAS No. 144, *"Accounting for the Impairment or Disposal of Long-Lived Assets."*

Research and Development Programs

Prior to 2002, we did not track costs on a per project basis, and therefore have estimated the allocation of our total research and development costs to each of our three largest research and development programs. These research and development programs contain our four lead product candidates, Oncophage®, AG-858, AG-702/707, and Aroplatin™, as indicated in the following table.

		Year Ended December 31,				
Research and Development Program	Lead Product	2004	2003	2002	2001	Prior to 2001
Heat Shock Proteins for Cancer	Oncophage & AG-858	$ 35,462,000	$ 40,052,000	$ 31,046,000	$ 23,277,000	$ 36,798,000
Heat Shock Proteins for Infectious Diseases	AG-702/707	2,682,000	2,376,000	1,248,000	735,000	2,085,000
Liposomal Cancer Treatments*	Aroplatin	1,112,000	1,263,000	2,061,000	1,442,000	—
Other Research and Development Programs		2,462,000	2,573,000	3,123,000	5,805,000	2,578,000
Total Research and Development Expenses		$ 41,718,000	$ 46,264,000	$ 37,478,000	$ 31,259,000	$ 41,461,000

* Prior to 2001 costs were incurred by Aronex Pharmaceuticals Inc., a company we acquired in July 2001.

We have allocated direct and indirect costs to each program based on certain assumptions and our review of the status of each program, payroll related expenses and other overhead costs based on estimated usage by each program. Each of our lead product candidates is in various stages of completion as described below. Significant additional expenditures will be required if we complete our clinical trials, start new trials, apply for regulatory approvals, continue development of our technologies, expand our operations and bring our product candidates to market. The eventual total cost of each clinical trial is dependent on a number of uncertainties such as trial design, the length of the trial, the number of clinical sites and the number of patients. The process of obtaining and maintaining regulatory approvals for new therapeutic products is lengthy, expensive and uncertain. Because the successful development of our most advanced product candidate, Oncophage, is uncertain, and because AG-858, AG-702/707, and Aroplatin are in early-stage clinical development, we are

unable to reliably estimate the cost of completing our research and development programs, the timing of bringing such programs to market and, therefore, when material cash inflows are likely to commence.

Oncophage

We started enrolling patients in our first clinical trial studying Oncophage in November 1997. To date, over 700 patients have been treated with Oncophage in our various clinical trials. We have ongoing Phase 1 and Phase 2 trials in several types of cancer, and we have completed enrollment in part I of a Phase 3 trial for renal cell carcinoma and a Phase 3 trial for metastatic melanoma. Because Oncophage is a novel cancer therapeutic vaccine that is personalized for each patient, it may experience a longer regulatory review process and higher development costs, either of which could delay or prevent our commercialization efforts. For additional information regarding regulatory risks and uncertainties, please read the factors identified under "Factors That May Impact Future Results."

On September 3, 2003, we announced that the FDA placed our Phase 3 Oncophage clinical trials on partial clinical hold because of inadequate data to support specifications for our product purity, identity, potency and pH. With FDA consent, we continued to treat and monitor patients who were already enrolled in the trials as of that date. On October 22, 2003 we provided information in response to the FDA comments received September 2, 2003, and on November 23, 2003, the agency lifted the partial clinical hold.

On December 22, 2003, we announced the result of the planned interim analysis of the data from our Phase 3 trial of Oncophage in renal cell carcinoma. Based on its review of the safety data, efficacy data, and other information regarding the trial, the independent Data Monitoring Committee (DMC) for the trial, a panel of cancer specialists who are reviewing the safety and conduct of the trial at regular intervals but are not otherwise involved in the study, recommended that the trial proceed as planned and did not require that we change the number of patients we planned to enroll in this trial for a successful analysis of part I of the Phase 3 trial. At the interim analysis, the DMC also declared the design and conduct of the trial sound and raised no safety concerns.

In July 2004, we held a meeting with the medical team of the FDA for Oncophage in renal cell carcinoma. The medical review team is specifically focused on the review of patient safety, product efficacy, clinical protocols and clinical development plan-related issues. The purpose of the meeting was to address issues surrounding the clinical development plan for product registration of Oncophage in renal cell carcinoma. The FDA expressed agreement with our overall proposed registration plan. This plan includes our ability to use part I of the Phase 3 trial as part of our product registration strategy as well as starting a second part of the trial in the same patient population. We commenced enrollment activities for part II of this Phase 3 trial in renal cell carcinoma in February 2005. The FDA has indicated that, by itself, part I of our Phase 3 clinical trial in renal cell carcinoma is not sufficient to support a biologics license application, also known as a BLA, filing as they consider part II of the trial as potentially providing the definitive evidence of safety and efficacy; however, we expect that part I will be accepted as part of the BLA filing. We intend to complete part I, perform final analysis and review the data closely. Should the results from the first part of the trial be clearly positive in terms of clinical outcomes, we plan to submit data to the FDA and request that the agency reconsider its position regarding the use of the data from part I of the trial alone to support a BLA filing, while part II of the study is continuing. There is no assurance that we will be successful in demonstrating that our product is sufficiently characterized or that the FDA would accept such a strategy.

During the quarter ended September 30, 2004, this trial was closed to enrollment. The final analysis for our part I Phase 3 trial in renal cell carcinoma will be triggered once a pre-specified number of events occur. An event is defined as a recurrence of a patient's renal cell carcinoma or a death of a patient. Events are reviewed and confirmed, on a blinded basis, by an independent Clinical Events Committee comprised of

expert radiologists and an expert oncologist. Based on the overall trend of events in this trial to date, we believe that the earliest the final analysis for this trial could be triggered is in mid 2005. If the efficacy data demonstrates a statistically significant improvement in the primary endpoint for patients treated with Oncophage, and if the FDA accepts the data from this trial as being pivotal and sufficient to support product registration, we would expect to file a biologics license application, or BLA, within six months after completing the final analysis.

During the quarter ended September 30, 2004 we completed enrollment of our ongoing Phase 3 trial in metastatic melanoma. We had a meeting with the DMC during the first quarter of 2004 to review the safety and conduct of our Phase 3 metastatic melanoma trial of Oncophage. This meeting was not an interim analysis of the efficacy data from this trial. Our overall manufacturing success rate for this trial is approximately 70%. Our inability to manufacture adequate amounts of Oncophage for approximately 30% of the patients randomized in the Oncophage treatment arm will jeopardize the potential for the trial, as currently designed, to meet its pre-specified clinical endpoints. We believe this study will not qualify as registrational, primarily due to the relatively high failure rate in vaccine manufacturing.

We initiated a Phase 2 trial of Oncophage in lung cancer during 2004. We intend to initiate a Phase 1/2 trial in breast cancer during the second half of 2005, as well as Phase 1/2 trials of Oncophage in combination with other molecules for advanced disease in multiple tumor types.

AG-858

In December 2002, interim data were reported from a pilot Phase 1 clinical trial conducted at the University of Connecticut School of Medicine using HSPPC-70, a purified HSP70 and its associated antigens, for the treatment of chronic myelogenous leukemia, or CML. In April 2003, we initiated a Phase 2 trial in CML combining AG-858, our HSP70 based product candidate, with Gleevec in patients with CML refractory to Gleevec. In May 2004, we voluntarily placed enrollment of this study on hold to modify the cell collection procedure. The study resumed on July 24, 2004. The trial will evaluate the safety and cytogenetic response (changes in the amount of tumor cells in the patient's blood) of this combination treatment in up to 40 patients with chronic phase CML who are currently receiving Gleevec treatment but are cytogenetically positive. We expect to complete enrollment in this trial by mid 2005 and to release the data from this trial approximately 12-15 months after completion of enrollment.

AG-702/707

We initiated a proof-of principle Phase 1 trial for AG-702 in the fourth quarter of 2001, we plan to file an investigational new drug application (IND) during the first half of 2005 for AG-707, and we plan to initiate a Phase 1 clinical trial of AG-707 shortly thereafter. We have experienced delays in the animal experiments performed to support the basis of clinical development and IND filing. Delays in animal experiments are common. We continue to work towards achieving an effective formulation from our animal studies and expect to complete these studies in the first half of 2005. We do not anticipate further developing AG-702 given that AG-707 should be beneficial to a larger number of patients with genital herpes.

Aroplatin

We initiated a Phase 2 trial for advanced colorectal cancer unresponsive to medical treatment (refractory) in 2002. This single-arm, open-label trial, conducted at the Arizona Cancer Center, was designed to evaluate the effect of Aroplatin alone in patients whose disease is not responsive to standard first-line cancer treatments (5-fluorouracil/leucovorin or capecitabine and irinotecan). In September 2003, the investigators presented findings from this trial at ECCO. One out of the 15 evaluable patients demonstrated a partial

clinical response and two experienced disease stabilization. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. In addition, researchers observed that Aroplatin appears well tolerated in this pretreated patient population. This trial is closed to enrollment.

In January 2003, we also initiated at the John Wayne Cancer Center, in Santa Monica, California, a Phase 1/2 trial of Aroplatin for a variety of advanced solid tumors amenable to platinum therapy. This study is closed to enrollment.

We have developed a new formulation of Aroplatin and a bridging GLP toxicology study comparing the old and new formulations of Aroplatin was initiated in early January 2005 and is on schedule to be completed during the second quarter of 2005. The results from this study and studies describing characterization of the new formulation will form the basis of an IND amendment that is expected to be filed with the FDA during the second quarter of 2005.

Liquidity and Capital Resources

We have incurred annual operating losses since inception, and, as of December 31, 2004, we had an accumulated deficit of $335,860,000. We expect to incur increasing and significant losses over the next several years as we continue our clinical trials, apply for regulatory approvals, continue development of our technologies, and expand our operations. Phase 3 trials are particularly expensive to conduct, and we initiated part II of our Phase 3 clinical trial in renal cell carcinoma during February 2005. Since our inception, we have financed our operations primarily through the sale of equity, interest income earned on cash, cash equivalents, and short-term investment balances and debt provided through secured lines of credit. From our inception through December 31, 2004, we have raised aggregate net proceeds of $350,890,000 through the sale of equity, the exercise of stock options and warrants and proceeds from our employee stock purchase plan, and borrowed $20,523,000 under two credit facilities. At December 31, 2004, we had debt outstanding of approximately $9,922,000. In February 2004, we sold 5,400,000 shares of our common stock for net proceeds of approximately $54 million. In August 2004, we filed a registration statement with the Securities and Exchange Commission for the registration and potential issuance of up to $100 million of registered securities. On January 25, 2005, we raised net proceeds of approximately $48 million through the issuance of 5.25% Convertible Senior Notes due 2025.

We expect that we will be able to fund our capital expenditures and growing operations into 2006 with our current working capital and the proceeds from our 2005 convertible note offering. In order to fund our needs subsequently, we may need to raise additional money and may attempt to do so by: (1) out-licensing technologies or products to one or more corporate partners, (2) renegotiating license agreements with current corporate partners, (3) completing an outright sale of assets, (4) securing additional debt financing and/or (5) completing securities offerings. Our ability to successfully enter into any such arrangements is uncertain and if funds are not available, or not available on terms acceptable to us, we may be required to revise our planned clinical trials, other development activities, capital expenditures and/or the scale of our operations. We expect to attempt to raise additional funds in advance of depleting our current funds; however, we may not be able to raise funds or raise amounts sufficient to meet the long-term needs of the business. Satisfying long-term liquidity needs will require the successful commercialization of Oncophage or other product candidates and, at this time, we cannot reliably estimate if or when that will occur, and the process may require substantial additional capital as discussed above. Please see the “Forward-Looking Statements” section and the factors highlighted in the “Factors That May Impact Future Results” section.

Our future cash requirements include, but are not limited to, supporting our clinical trial efforts and continuing our other research and development programs. Since inception we have entered into various agreements with institutions and clinical research organizations to conduct and monitor our current clinical

studies. Under these agreements, subject to the enrollment of patients and performance by the applicable institution of certain services, we have estimated our payments to be $55,965,000 over the term of the studies. Through December 31, 2004, approximately $31,374,000 has been expensed as research and development expenses in the accompanying consolidated statements of operations and $26,314,000 has been paid related to these clinical studies. The timing of our expense recognition and future payments related to these agreements are subject to the enrollment of patients and performance by the applicable institution of certain services. The actual amounts we pay out, if any, will depend on a range of factors outside of our control, including the success of our pre-clinical and clinical development efforts with respect to product candidates being developed which incorporate the patents, the content and timing of decisions made by the United States Patent and Trademark Office (USPTO), the FDA and other regulatory authorities, the existence and scope of third party intellectual property, the reimbursement and competitive landscape around such products, and other factors affecting operating results. As we expand our clinical studies we plan to enter into additional agreements. We anticipate significant additional expenditures will be required to complete our clinical trials, apply for regulatory approvals, continue development of our technologies and expand our operations and bring our product candidates to market. In addition, we have entered into sponsored research agreements related to our product candidates that require payments of approximately $9,217,000, of which $3,563,000 has been paid through December 31, 2004. Part of our strategy is to develop and commercialize some of our product candidates by continuing our existing collaborative arrangements with academic and corporate partners and licensees, and by entering into new collaborations. As a result of our collaborative agreements, we will not completely control the efforts to attempt to bring those product candidates to market. We have various agreements, for example, with corporate partners that allow the use of our QS-21 adjuvant in numerous vaccines. These agreements grant exclusive worldwide rights in some fields of use, and co-exclusive or non-exclusive rights in others. The agreements call for royalties to be paid to us by the partner on its future sales of licensed vaccines that include QS-21, which may or may not be achieved.

Our cash, cash equivalents and short-term investments at December 31, 2004 were $86,921,000, a decrease of $1,057,000 from December 31, 2003. During the year ended December 31, 2004, we used cash primarily to finance our operations, including our Oncophage clinical trials. Net cash used in operating activities for the years ended December 31, 2004 and 2003 was $60,225,000 and $51,683,000, respectively. The increase resulted primarily from the increase in the activity to support our Oncophage clinical trials and on-going development activities. As we develop our technologies and further our clinical trial programs we expect to increase our spending. Our future ability to generate cash from operations will depend on achieving regulatory approval of our products, market acceptance of such products, achieving benchmarks as defined in existing collaborative agreements, and our ability to enter into new collaborations. Please see the “Forward-Looking Statements” section and the factors highlighted in the “Factors That May Impact Future Results” section.

Net cash provided by investing activities for the year ended December 31, 2004 was $3,934,000 as compared to net cash used in investing activities of $52,181,000 for the year ended December 31, 2003. During the year ended December 31, 2004 we had net purchases of $7,690,000 in short-term investments. Additionally, our investment in the purchase of equipment, furniture and fixtures decreased $14,567,000 to $3,970,000 for the year ended December 31, 2004 from $18,537,000 for the year ended December 31, 2003. This decrease in investment is primarily due to the 2003 build-out of our Lexington, Massachusetts facility. We anticipate capital expenditures of up to $3,000,000 during 2005. We also received proceeds of $12,552,000 for the divestiture of our manufacturing and certain intellectual property rights to the feline leukemia vaccine during 2004, which represents a non-recurring gain, and we received $3,399,000 pertaining to the reduction of our restricted cash balance. In addition, we made a $375,000 contribution to Applied Genomic Technology Capital Fund (AGTC), a limited partnership, during the year ended December 31, 2004. Our remaining

commitment to AGTC on December 31, 2004 is $750,000 with contributions made as requested by the general partner.

Net cash provided by financing activities was $47,854,000 for the year ended December 31, 2004 as compared to $107,800,000 for the year ended December 31, 2003. Since inception, our primary source of financing has been from equity sales. During the years ended December 31, 2004 and 2003, sales of equity, exercises of stock options and proceeds from our employee stock purchase plan totaled approximately $54,506,000 and $92,531,000, respectively. These proceeds will continue to fund our research and product development and other activities. In July 2003 we entered into a $17,100,000 debt facility to finance the first phase of build-out of our Lexington facility. Through December 31, 2004, we have borrowed $17,042,000 under this facility. Specific assets, including leasehold improvements, which they finance, and a cash security deposit of $5,122,000 secure the loans drawn on the credit facility. At December 31, 2004, we had a $9,776,000 debt balance under this credit facility.

The tables below summarize our contractual obligations as of December 31, 2004:

		Payments Due by Period			
	Total	Less than 1 Year	1–3 Years	3–5 Years	More than 5 Years
Long-Term Debt(1)	$ 10,281,000	$ 5,688,000	$ 4,593,000	$ —	$ —
Operating Leases	24,238,000	3,178,000	7,099,000	5,778,000	8,183,000
Research Agreement(2)	5,400,000	1,350,000	2,700,000	1,350,000	—
TOTAL	$ 39,919,000	$ 10,216,000	$ 14,392,000	$ 7,128,000	$ 8,183,000

(1) Includes fixed interest payments.

(2) Represents research agreement with the University of Connecticut Health Center.

Effective July 19, 2002, we sublet part of our Framingham manufacturing, research and development, and office space to GTC Biotherapeutics, Inc and we have leased related leasehold improvements and equipment under agreements which expire on December 31, 2006. GTC Biotherapeutics has an option to extend this lease until September 2010. Under the terms of our original lease, we are obligated to pay our landlord approximately 7% of our rental income. Effective March 17, 2004, we sublet an additional part of our Framingham manufacturing, research and development, and office space to PP Manufacturing whose lease expires on September 30, 2010. As a result of the PP Manufacturing lease agreement, we amended our agreement with GTC effective March 16, 2004, adjusting the leaseable square footage. In addition, we sublet part of our Texas facility to a few small private companies under agreements that expire in 2008. We had sublet part of our New York facility to a private company under an agreement that expired during July 2004. We are contractually entitled to receive rental income of $1,292,000 in 2005; $1,375,000 in 2006; $753,000 in 2007; $535,000 in 2008, $515,000 in 2009 and $386,000 thereafter; the collection of this income, however, is subject to uncertainty.

We are currently involved in certain legal proceedings as detailed in Item 3 above and Note 16 to our consolidated financial statements. We do not believe these proceedings will have a material adverse effect on our consolidated financial position, results of operations or liquidity. Litigation however, is subject to inherent uncertainty.

Related Parties

As of December 31, 2004 and 2003, we had invested $2,250,000 and $1,875,000 in a limited partnership, AGTC. Our total capital commitment to AGTC is $3,000,000. One of our directors, Noubar Afeyan, Ph.D., is

the Chairman and Senior Managing Director and CEO of a partnership of funds that includes the general partner of AGTC and, until its dissolution during 2004, NewcoGen Group, Inc. For details refer to Note 5 to our consolidated financial statements. Garo H. Armen, Ph.D., our chairman and chief executive officer, was a director of NewcoGen Group, Inc. until its dissolution during 2004.

As detailed in Note 11 to our consolidated financial statements, our predecessor company, Founder Holdings, Inc., which, indirectly, remains a significant stockholder, approved a stock option plan pursuant to which our officers, directors, employees and consultants may be granted options in the predecessor company. In accordance with U.S. generally accepted accounting principles, options granted under this plan are accounted for as compensation expense by us and treated as a contribution to stockholders' equity.

We currently have a QS-21 license and supply agreement with Neuralab Limited, a wholly owned subsidiary of Elan Corporation, plc, for use of QS-21 with an antigen in the field of Alzheimer's disease. Garo H. Armen, Ph.D., our Chairman and Chief Executive Officer, is a director of Elan. For the years ended December 31, 2004 and 2003, no revenues were earned under these agreements and accordingly, at December 31, 2004 and 2003, we had no amounts due to us under these agreements.

In March 1995, we entered into a consulting agreement with Dr. Pramod Srivastava, our scientific founder and one of our directors. This agreement was to expire in March 2005 but was extended for an additional one-year period until March 2006. This agreement will automatically renew for additional one year periods unless either party decides not to extend the agreement. We paid Dr. Srivastava cash bonuses of $135,000 and $100,000 in 2004 and 2003, respectively, and granted him options to purchase 120,000, 120,000 and 50,000 shares of our common stock for services performed in 2004, 2003 and 2002, respectively.

In February 1998, we entered into a research agreement with the University of Connecticut Health Center (UConn) to fund research in Dr. Pramod Srivastava's laboratory at UConn. Dr. Srivastava is a member of the faculty of the University of Connecticut School of Medicine and one of our directors. The research agreement was amended on December 30, 2003, to extend the term to December 31, 2008 and calls for payments to UConn totaling a minimum of $6,750,000, payable quarterly at the rate of $337,500 (contingent on the continuing employment of Dr. Srivastava by UConn). In return, we have an option to obtain an exclusive license to new inventions (as defined in the research agreement) subject to our payment to UConn of royalties at varying rates upon commercialization of a product utilizing technology discovered under the research agreement.

In September 2004, we entered into a $60,000 one-year service agreement with Techsoft, Inc. d.b.a Medical Systems and NG Techsoft Pvt. for data management services. Navin Gupta is the President and CEO of Techsoft, Inc. d.b.a Medical Systems, Director and Chairman of the Board of NG Techsoft Pvt Ltd. and is the spouse of Renu Gupta, our Senior Vice President of Development. As of December 31, 2004, approximately $35,000 due under this agreement is included in accrued expenses. No amounts were paid under this agreement for the year ended December 31, 2004.

On October 22, 2004, we executed a letter of intent with Symphony Capital LLC for a potential transaction to provide funding for certain of our research programs. Mr. Mark Kessel, one of our directors, is a managing director of Symphony Capital LLC. During February 2005 this potential transaction was terminated. During 2004, we made payments to Symphony Capital LLC of $125,000 for development planning activities. At December 31, 2004, we had accrued $159,000 due to Symphony Capital LLC. During 2005, $196,000, related to such activities, was paid to Symphony Capital LLC for activities up to termination, including amounts accrued at December 31, 2004.

Factors That May Impact Future Results

Our future operating results could differ materially from the results described above due to the risks and uncertainties described below.

Risks Related to our Business

If we incur operating losses for longer than we expect, we may be unable to continue our operations.

From our inception through December 31, 2004, we have generated net losses totaling approximately $336 million. Our net losses for the years ended December 31, 2004, 2003, and 2002, were approximately $56.2 million, $65.9 million, and $55.9 million, respectively. We expect to incur significant losses over the next several years as we continue our clinical trials, apply for regulatory approvals, continue development of our technologies, and expand our operations. Phase 3 clinical trials are particularly expensive to conduct, and in February 2005 we initiated part II of our Phase 3 clinical trial in renal cell carcinoma. Furthermore, our ability to generate cash from operations is dependent on if and when we will be able to commercialize our product candidates. We expect that the earliest we may be able to commercialize Oncophage would be in early 2006. If we incur operating losses for longer than we expect, we may be unable to continue our operations.

If we fail to obtain the capital necessary to fund our operations, we will be unable to advance our development programs and complete our clinical trials.

On December 31, 2004, we had approximately $86.9 million in cash, cash equivalents and short-term investments. In January 2005, we sold 5.25% Convertible Senior Notes due 2025 raising net proceeds of approximately $48 million. With our current capital we expect that we could fund our development programs, clinical trials, and other operating expenses into 2006. We plan to raise additional funds prior to that time. For the year ended December 31, 2004, the sum of our average monthly cash used in operating activities plus our average monthly capital expenditures was approximately $5.3 million. Total capital expenditures for the year ended December 31, 2004 were $4.0 million and we anticipate capital expenditures of up to $3.0 million during 2005. Since our inception, we have financed our operations primarily through the sale of equity. In order to finance our future operations, we will be required to raise additional funds in the capital markets, through arrangements with corporate partners, or from other sources. Additional financing, however, may not be available on favorable terms or at all. If we are unable to raise additional funds when we need them, we will be required to delay, reduce, or eliminate some or all of our development programs and some or all of our clinical trials, including the development programs and clinical trials supporting our most advanced product candidate, Oncophage. We also may be forced to license technologies to others under agreements that allocate to third parties substantial portions of the potential value of these technologies.

Because the FDA has indicated to us that part I of our current Phase 3 trial in renal cell carcinoma, by itself, will not be sufficient to support a biologics license application for product approval, unless the FDA changes its position, we would not expect to generate product revenue from sales of Oncophage for at least several years, if ever.

On September 3, 2003, the FDA placed our Phase 3 Oncophage clinical trials in renal cell carcinoma and in melanoma on partial clinical hold. The FDA's written correspondence instituting the partial clinical hold indicated that Oncophage was not sufficiently characterized. Product characterization represents our products' specifications for purity, identity, potency and pH. On October 24, 2003, we submitted to the FDA additional specifications for purity, identity, potency and pH, which represent product characterization data, and on November 24, 2003, we announced that the FDA had lifted the partial clinical hold. Even though the FDA lifted the partial clinical hold, the FDA has informed us that, for purposes of part I of our Phase 3 trial in renal

cell carcinoma (study C-100-12) and our Phase 3 trial in melanoma (study C-100-21), Oncophage has been insufficiently characterized and that the results obtained with an insufficiently characterized product could not be used to provide efficacy data in support of a biologics license application, or BLA. The FDA deemed the Oncophage provided to patients before December 2003 as insufficiently characterized because it had not undergone the full battery of tests required for drugs used in pivotal trials. Some of these tests, such as potency assays, were not fully developed until after September 2003. The imposition of the partial clinical hold prevented us from enrolling new patients in our Phase 3 clinical trials between September 3, 2003 and November 21, 2003. We believe that we addressed the comments the FDA raised in connection with the partial clinical hold. After the clinical hold was lifted, the FDA asked us to implement the use of the qualified potency assays to release vaccine lots for all trials of Oncophage, including our Phase 3 trials. After the clinical hold was lifted, we submitted, during 2004, our validation package to the FDA for the qualified potency assays and await their response. Validation of the assays refers, in general terms, to establishing the robustness and reproducibility of the assays on an ongoing basis and under various different conditions to demonstrate that the qualified potency assays, accepted by the FDA for continuation of the clinical trial, work consistently.

The FDA has indicated that, by itself, part I of our ongoing Phase 3 clinical trial in renal cell carcinoma is not sufficient to support a BLA filing. We have expanded our clinical development plan by initiating a part II to this Phase 3 trial in a similar patient population. The FDA has approved this registration plan, which comprises two components — part I and part II. The FDA has indicated that part I alone will not be sufficient for approval, as they consider part II of the trial as potentially providing the definitive evidence of safety and efficacy; however, we expect that part I will be accepted as part of the BLA filing. While the FDA has expressly excluded the possibility that part I of our renal cell carcinoma trial alone can support a BLA filing, we intend to complete part I, which is a large, controlled study, perform final analysis, and review the data closely. Should the results from the first part of the trial be clearly positive in terms of clinical outcomes, we plan to submit the data to the FDA and request that the agency reconsider its position regarding the use of the data from part I of the trial alone to support a BLA filing, while part II of the study is continuing. We expect to support that position with data which may demonstrate that Oncophage used in part I of the study should be considered sufficiently characterized. We would expect to derive that data from additional tests we plan to perform on frozen portions of the administered product. We plan on commencing these additional tests and have them completed in time for any BLA filing. We believe that the FDA is unlikely to reverse its position unless part I of the trial demonstrates significant benefit to patients. We believe that demonstration of efficacy might be persuasive given (1) part I of our Phase 3 renal cell carcinoma trial is designed to show that patients being treated with Oncophage have a statistically significant benefit in terms of recurrence-free survival over patients in the observation arm, (2) Oncophage has a favorable safety profile, particularly when compared with the toxicity associated with many cancer drugs, (3) part I of the trial represents the largest single randomized trial to date in this patient population and was designed to show statistically significant results, and (4) the patients with the stage of renal cell carcinoma addressed in this trial have no approved post-surgical treatment options. Other companies have submitted BLAs, and obtained approvals, based on data from non-definitive Phase 2 and Phase 3 studies while they complete confirmatory studies. We are not aware of a situation in which the FDA has reconsidered its position that a clinical trial could not be considered pivotal, and therefore would not support licensure, because of its determination that the product candidate was insufficiently characterized. However, as noted previously, we plan to perform additional tests of Oncophage product samples produced prior to December 2003 and attempt to demonstrate that our product candidate should be considered sufficiently characterized. There is no assurance that we will be successful in demonstrating that our product candidate is sufficiently characterized or that the FDA would accept such a strategy.

Even if we are able to demonstrate that the Oncophage used in part I of the trial should be considered sufficiently characterized and part I of the trial demonstrates significant benefit to patients, the FDA may

continue to adhere to its current position that the data from this part of the trial cannot, by itself, support a BLA. In addition, the results of our two potency tests may not indicate that the Oncophage used in part I of the trial is sufficiently characterized. Furthermore, part I may not meet its statistical endpoint, or the FDA could determine that making Oncophage available based on the part I results is not in the best interests of patients. We estimate that completing part II of the study will take at least 3 years and cost between $20 million and $40 million. Furthermore, we intend to continue with part II of the renal cell carcinoma study unless and until the FDA indicates that is not necessary.

We may not be able to secure additional financing to complete part II of the renal cell carcinoma trial even if the results from part I of the trial are positive. If we cannot raise funding because we are unable to convince the FDA that the data from part I should be deemed sufficient, by itself, to support a BLA filing, we may become insolvent.

Because we expect to conduct additional Phase 3 clinical trials of Oncophage in the treatment of melanoma prior to submitting a BLA for this indication, we will not commercialize Oncophage in this indication for several years, if ever.

We have concluded enrollment in our Phase 3 trial of Oncophage in patients with metastatic melanoma (C-100-21). We believe that, due to a relatively high failure rate in vaccine manufacturing, this study will not, by itself, support a BLA filing. Even if we had not experienced the high manufacturing failure rate, the FDA has indicated that this study, like part I of our Phase 3 renal cell carcinoma study, could not, by itself, support a BLA filing because the FDA views the Oncophage administered to patients in this study prior to December 2003 as insufficiently characterized. We have not yet had any specific discussions with the FDA regarding our clinical development plan for melanoma. Accordingly, we do not know the types of studies that the FDA will require to support a BLA filing. We did not discuss our regulatory strategy for melanoma during our meeting in July 2004 with the FDA to discuss Oncophage for renal cell carcinoma. Even if the FDA were to indicate agreement with our clinical development plan, that plan may fail to support a BLA filing for many reasons, including failure of the trials to demonstrate that Oncophage is safe and effective in this indication, failure to conduct the studies in compliance with the clinical trial protocols, or a change in the FDA's views.

Our commercial launch of Oncophage may be delayed or prevented, which would diminish our business prospects.

In December 2003, we announced that the Data Monitoring Committee, or DMC, had convened as scheduled for the interim analysis of our ongoing Phase 3 clinical trial of Oncophage in the treatment of renal cell carcinoma, C-100-12. The DMC is a panel of cancer specialists who review the safety and conduct of the trial at regular intervals but are not otherwise involved in the study. The DMC has no direct relationship with the FDA but can make recommendations regarding the further conduct of the trial, which recommendations are reported to the FDA. The use of the DMC is intended to enhance patient safety and trial conduct. The DMC recommended that the trial proceed as planned and did not require that we change the number of patients required to meet the trial's objectives. Part I of our Phase 3 renal cell carcinoma trial is designed to show that patients in the Oncophage arm demonstrate a statistically significant benefit in recurrence-free survival over the patients in the observation arm. We interpreted the recommendation by the DMC that we would not need to add patients in order to potentially achieve a statistically significant benefit as an encouraging development, indicating that the trial could demonstrate efficacy goals without increasing the number of patients in the trial. The DMC's recommendations do not assure either that the trial will demonstrate statistically significant results or that the trial will prove adequate to support approval of Oncophage for commercialization in the treatment of patients with renal cell carcinoma. The assessment of

the interim analysis is preliminary. The final data from the trial may not demonstrate efficacy and safety. Furthermore, data from clinical trials are subject to varying interpretations.

Inconclusive or negative final data from part I of our Phase 3 renal cell carcinoma trial would have a significant negative impact on our prospects. If the results in any of our clinical trials are not positive, we may abandon development of Oncophage for the applicable indication.

The regulatory approval process is uncertain, time-consuming and expensive.

The process of obtaining and maintaining regulatory approvals for new therapeutic products is lengthy, expensive and uncertain. It also can vary substantially, based on the type, complexity and novelty of the product. Our most advanced product candidate, Oncophage, is a novel therapeutic cancer vaccine that is personalized for each patient. To date, the FDA has not approved any therapeutic cancer vaccines for commercial sale, and foreign regulatory agencies have approved only a limited number. Both the FDA and foreign regulatory agencies, particularly the European Medicines Agency responsible for product approvals in Europe, have relatively little experience in reviewing personalized oncology therapies, and the partial clinical hold that the FDA had placed, and subsequently lifted, on our current Phase 3 Oncophage clinical trials primarily related to product characterization issues partially associated with the personalized nature of Oncophage. Oncophage may experience a long regulatory review process and high development costs, either of which could delay or prevent our commercialization efforts. We have not held discussions with regulatory agencies other than the FDA regarding product approval strategies. As of December 31, 2004, we have spent approximately 10 years and $167 million on our research and development program in heat shock proteins for cancer.

To obtain regulatory approvals, we must, among other requirements, complete carefully controlled and well-designed clinical trials demonstrating that a particular product candidate is safe and effective for the applicable disease. Several biotechnology companies have failed to obtain regulatory approvals because regulatory agencies were not satisfied with the structure or conduct of clinical trials or the ability to interpret the data from the trials; similar problems could delay or prevent us from obtaining approvals. We initiated part II of our Phase 3 trial for Oncophage in renal cell carcinoma in early 2005. Even after reviewing our protocols for these trials, the FDA and other regulatory agencies may not consider the trials to be adequate for registration and may disagree with our overall strategy to seek approval for Oncophage in renal cell carcinoma. In this event, the potential commercial launch of Oncophage would be at risk, which would likely have a materially negative impact on our ability to generate revenue and our ability to secure additional funding.

The timing and success of a clinical trial is dependent on enrolling sufficient patients in a timely manner, avoiding adverse patient reactions and demonstrating in a statistically significant manner the safety and efficacy of the product candidate. Because we rely on third-party clinical investigators and contract research organizations to conduct our clinical trials, we may encounter delays outside our control, particularly if our relationships with any third-party clinical investigators or contract research organizations are adversarial. The timing and success of our Phase 3 trials, in particular, are also dependent on the FDA and other regulatory agencies accepting each trial's protocol, statistical analysis plan, product characterization tests, and clinical data. If we are unable to satisfy the FDA and other regulatory agencies with such matters, including the specific matters noted above, and/or our Phase 3 trials yield inconclusive or negative results, we will be required to modify or expand the scope of our Phase 3 studies or conduct additional Phase 3 studies to support BLA filings, including additional studies beyond the new part II Phase 3 trial in renal cell carcinoma and additional Phase 3 trials in melanoma. In addition, the FDA may request additional information or data to which we do not have access. Delays in our ability to respond to such an FDA request would delay, and failure to adequately address all FDA concerns would prevent, our commercialization efforts.

In addition, we, or the FDA, might further delay or halt our clinical trials for various reasons, including but not limited to:

- we may fail to comply with extensive FDA regulations;
- a product candidate may not appear to be more effective than current therapies;
- a product candidate may have unforeseen or significant adverse side effects or other safety issues;
- the time required to determine whether a product candidate is effective may be longer than expected;
- we may be unable to adequately follow or evaluate patients after treatment with a product candidate;
- patients may die during a clinical trial because their disease is too advanced or because they experience medical problems that may not be related to the product candidate;
- sufficient numbers of patients may not enroll in our clinical trials; or
- we may be unable to produce sufficient quantities of a product candidate to complete the trial.

Furthermore, regulatory authorities, including the FDA, may have varying interpretations of our pre-clinical and clinical trial data, which could delay, limit, or prevent regulatory approval or clearance. Any delays or difficulties in obtaining regulatory approvals or clearances for our product candidates may:

- adversely affect the marketing of any products we or our collaborators develop;
- impose significant additional costs on us or our collaborators;
- diminish any competitive advantages that we or our collaborators may attain; and
- limit our ability to receive royalties and generate revenue and profits.

If we do not receive regulatory approval for our product candidates in a timely manner, we will not be able to commercialize them in the timeframe anticipated, and, therefore, our business will suffer.

We must receive separate regulatory approvals for each of our product candidates for each type of disease indication before we can market and sell them in the United States or internationally.

We and our collaborators cannot sell any drug or vaccine until we receive regulatory approval from governmental authorities in the United States, and from similar agencies in other jurisdictions. Oncophage and any other drug candidate could take a significantly longer time to gain regulatory approval than we expect or may never gain approval or may gain approval for only limited indications.

Even if we do receive regulatory approval for our product candidates, the FDA or international regulatory authorities will impose limitations on the indicated uses for which our products may be marketed or subsequently withdraw approval, or take other actions against us or our products adverse to our business.

The FDA and international regulatory authorities generally approve products for particular indications. If an approval is for a limited indication, this limitation reduces the size of the potential market for that product. Product approvals, once granted, may be withdrawn if problems occur after initial marketing. Failure to comply with applicable FDA and other regulatory requirements can result in, among other things, warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, refusal of the government to renew marketing applications and criminal prosecution.

Delays enrolling patients and/or the timing of clinical events in our studies will slow or prevent completion of clinical trials.

We have encountered in the past, and may encounter in the future, delays in initiating trial sites and in enrolling patients into our clinical trials. Future enrollment delays will postpone the dates by which we expect to complete the impacted trials and the potential receipt of regulatory approvals. If we fail to enroll sufficient numbers of patients in clinical trails, the trials may fail to demonstrate the efficacy of a product candidate at a statistically significant level. While such trials may help support our efforts to obtain marketing approval, they generally would not, by themselves, be sufficient for obtaining approval. In our cancer trials, enrollment difficulties may arise due to many factors, including the novel nature of Oncophage, the identification of patients' meeting the specific criteria for inclusion in our trials, the speed by which participating clinical trial sites review our protocol and allow enrollment and any delay in contract negotiations between us and the participating clinical trial sites. In addition, we may encounter problems in our clinical trials due to the advanced disease state of the target patient population. Even if our patient enrollment is adequate, patients may die during a clinical trial if their disease is too advanced or because they experience problems that may be unrelated to the product candidate. A high dropout rate in a trial may undermine the ability to gain statistically significant data from the study.

Our part I and part II trials in renal cell carcinoma are event driven trials. Therefore, final analysis of the trials will be triggered once a specified number of events occur. An event is defined as a recurrence of a patient's renal cell carcinoma or death of a patient. We currently anticipate that the earliest the final event to trigger final analysis of our C-100-12 part I renal cell carcinoma trial will occur is in mid-2005. While this time estimate is based on our current expectations, we do not control the timing of occurrence of events in the trial and there can be no assurance that the total number of required events will occur when predicted.

If new data from our research and development activities continues to modify our strategy, then we expect to continually adjust our projections of timelines and costs of programs; this uncertainty may depress the market price of our stock and increase our expenses.

Because we are focused on novel technologies, our research and development activities, including our clinical trials, involve the ongoing discovery of new facts and the generation of new data, based on which, we determine next steps for a relevant program. These developments are sometimes a daily occurrence and constitute the basis on which our business is conducted. We need to make determinations on an ongoing basis as to which of these facts or data will influence timelines and costs of programs. We may not always be able to make such judgments accurately, which may increase the costs we incur attempting to commercialize our product candidates. These issues are pronounced in our efforts to commercialize Oncophage, which represents an unprecedented approach to the treatment of cancer.

We will not generate further product sales revenue from Quilvax-FELV.

To date, we have generated product sales revenue from only one product, a feline leukemia virus vaccine, the manufacturing rights to which we sold in March 2004 to Virbac, S.A., our former marketing partner. Prior to the sale, our revenues from the feline leukemia vaccine for the years ended December 31, 2004, 2003, and 2002 were $338,000, $3.5 million, and $2.6 million, respectively. We no longer sell that product.

Failure to enter into significant collaboration agreements may hinder our efforts to commercialize Oncophage and will increase our need to rely on equity sales to fund our operations.

We are engaged in efforts to partner Oncophage, our most advanced product candidate, with a pharmaceutical or larger biotech company to assist us with global commercialization. While we have been

pursuing these business development efforts for several years, we have not negotiated a definitive agreement relating to the potential commercialization of Oncophage. Many larger companies may be unwilling to commit to a substantial agreement prior to receipt of additional clinical data or, in the absence of such data, may demand economic terms that are unfavorable to us. Even if Oncophage generates favorable clinical data, we may not be able to negotiate a transaction that provides us with favorable economic terms. While some other biotechnology companies have negotiated large collaborations, we may not be able to negotiate any agreements with terms that replicate the terms negotiated by those other companies. We may not, for example, obtain significant upfront payments or substantial royalty rates. Some larger companies are skeptical of the commercial potential and profitability of a personalized product candidate like Oncophage. If we fail to enter into such collaboration agreements, our efforts to commercialize Oncophage may be undermined. In addition, if we do not raise funds through collaboration agreements, we will need to rely on sales of additional securities to fund our operations. Sales of additional equity may substantially dilute the ownership of existing stockholders.

We may not receive significant payments from collaborators, including due to unsuccessful results in existing collaborations or failure to enter into future collaborations.

Part of our strategy is to develop and commercialize some of our product candidates by continuing our existing arrangements with academic and corporate collaborators and licensees and by entering into new collaborations. Our success depends on our ability to negotiate such agreements and on the success of the other parties in performing research, preclinical and clinical testing. Our collaborations involving QS-21, for example, depend on our licensees successfully completing clinical trials and obtaining regulatory approvals. These activities frequently fail to produce marketable products. For example, in March 2002, Elan Corporation and Wyeth Ayerst Laboratories announced a decision to cease dosing patients in their Phase 2A clinical trial of their AN-1792 Alzheimer's vaccine containing our QS-21 adjuvant after several patients experienced clinical signs consistent with inflammation in the central nervous system. Several of our agreements also require us to transfer important rights to our collaborators and licensees. As a result of collaborative agreements, we will not completely control the nature, timing or cost of bringing these product candidates to market. These collaborators and licensees could choose not to devote resources to these arrangements or, under certain circumstances, may terminate these arrangements early. They may cease pursuing the programs or elect to collaborate with different companies. In addition, these collaborators and licensees, outside of their arrangements with us, may develop technologies or products that are competitive with those that we are developing. From time to time we may also become involved in disputes with our collaborators. As a result of these factors, our strategic collaborations may not yield revenues. In addition, we may be unable to enter into new collaborations or enter into new collaborations on favorable terms. Failure to generate significant revenue from collaborations would increase our need to fund our operations through sales of equity.

If we are unable to purify heat shock proteins from some cancer types, we may have difficulty successfully completing our clinical trials and, even if we do successfully complete our clinical trials, the size of our potential market would decrease.

Our ability to successfully develop and commercialize Oncophage or AG-858 for a particular cancer type depends on our ability to purify heat shock proteins from that type of cancer. If we experience difficulties in purifying heat shock proteins for a sufficiently large number of patients in our clinical trials, including our Phase 3 clinical trials, it may lower the probability of a successful analysis of the data from these trials and ultimately the ability to obtain FDA approval. Our overall manufacturing success rate to date for our Phase 3 trial, C-100-12, in renal cell carcinoma is 92%; for our Phase 3 trial in metastatic melanoma, C-100-21, it is 70%. Our inability to manufacture adequate amounts of Oncophage for approximately 30% of the patients

randomized to date in the Oncophage treatment arm of the metastatic melanoma trial undermines the potential for the trial, as currently designed, to meet its pre-specified clinical endpoints. To address this lower success rate for melanoma we instituted an inhibitor process to avoid the breakdown of proteins. Subsequent to the implementation of this change we successfully produced Oncophage for 19 of 25 patients, a success rate of approximately 76%, whereas previously we had produced Oncophage for 123 of 179 patients. The small sample size used subsequent to our process change may make the reported improvement in our manufacturing success unreliable as a predictor of future success.

Based on our completed earlier clinical trials and our ongoing clinical trials conducted in renal cell carcinoma (including our C-100-12 trial), we have been able to manufacture Oncophage from 93% of the tumors delivered to our manufacturing facility; for melanoma (including our C-100-21 trial), 78%; for colorectal cancer, 98%; for gastric cancer, 81%; for lymphoma, 89%; and for pancreatic cancer, 46%. The relatively low rate for pancreatic cancer is due to the abundance of proteases in pancreatic tissue. Proteases are enzymes that break down proteins. These proteases may degrade the heat shock proteins during the purification process. We have made process development advances that have improved the manufacture of Oncophage from pancreatic tissue. In an expanded Phase 1 pancreatic cancer study, Oncophage was manufactured from five of five tumor samples (100%), bringing the aggregate success rate for this cancer type, which was previously 30%, to 46%. We have successfully manufactured AG-858 from approximately 81% of the patient samples received.

We may encounter problems with other types of cancers as we expand our research. If we cannot overcome these problems, the number of cancer types that our heat shock protein product candidates could treat would be limited. In addition, if we commercialize our heat shock protein product candidates, we may face claims from patients for whom we are unable to produce a vaccine.

If we fail to sustain and further build our intellectual property rights, competitors will be able to take advantage of our research and development efforts to develop competing products.

If we are not able to protect our proprietary technology, trade secrets, and know-how, our competitors may use our inventions to develop competing products. We currently have exclusive rights to at least 80 issued US patents and 112 foreign patents. We also have rights to at least 70 pending US patent applications and 199 pending foreign patent applications. However, our patents may not protect us against our competitors. The standards which the United States Patent and Trademark Office uses to grant patents, and the standards which courts use to interpret patents, are not always applied predictably or uniformly and can change, particularly as new technologies develop. Consequently, the level of protection, if any, that will be provided by our patents if we attempt to enforce them, and they are challenged, is uncertain. In addition, the type and extent of patent claims that will be issued to us in the future is uncertain. Any patents that are issued may not contain claims that permit us to stop competitors from using similar technology.

In addition to our patented technology, we also rely on unpatented technology, trade secrets and confidential information. We may not be able to effectively protect our rights to this technology or information. Other parties may independently develop substantially equivalent information and techniques or otherwise gain access to or disclose our technology. We generally require each of our employees, consultants, collaborators and certain contractors to execute a confidentiality agreement at the commencement of an employment, consulting, collaborative or contractual relationship with us. However, these agreements may not provide effective protection of our technology or information or, in the event of unauthorized use or disclosure, they may not provide adequate remedies.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights, and we may be unable to protect our rights to, or use, our technology.

If we choose to go to court to stop someone else from using the inventions claimed in our patents, that individual or company has the right to ask a court to rule that our patents are invalid and should not be enforced against that third party. These lawsuits are expensive and would consume time and other resources even if we were successful in stopping the infringement of our patents. In addition, there is a risk that the court will decide that our patents are not valid and that we do not have the right to stop the other party from using the inventions. There is also the risk that, even if the validity of our patents is upheld, the court will refuse to stop the other party on the grounds that such other party's activities do not infringe our patents.

Furthermore, a third party may claim that we are using inventions covered by such third party's patents or other intellectual property rights and may go to court to stop us from engaging in our normal operations and activities. These lawsuits are expensive and would consume time and other resources. There is a risk that a court would decide that we are infringing the third party's patents and would order us to stop the activities covered by the patents. In addition, there is a risk that a court will order us to pay the other party substantial damages for having violated the other party's patents. The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. We know of patents issued to third parties relating to heat shock proteins and alleviation of symptoms of cancer, respectively. We have reviewed these patents, and we believe, as to each claim in those patents, that we either do not infringe the claim of the patents or that the claim is invalid. Moreover, patent holders sometimes send communications to a number of companies in related fields, suggesting possible infringement, and we, like a number of biotechnology companies, have received this type of communication, including with respect to the third-party patents mentioned above, as well as a communication alleging infringement of a patent relating to certain gel-fiberglass structures. If we are sued for patent infringement, we would need to demonstrate that our products either do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid, which we may not be able to do. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Additionally, two of the patent applications licensed to us contain claims that are substantially the same as claims in a third-party patent relating to heat shock proteins. We will ask the United States Patent and Trademark Office to declare an interference with this third-party patent, US Patent No. 6,713,608 which we believe is owned by the Science & Technology Corporation @UNM (University of New Mexico). We believe that the invention of US Patent No. 6,713,608 is the same as that of earlier-filed US Patents No. 5,747,332, 6,066,716, and 6,433,141, which we believe are owned by the University of New Mexico, and which were involved in a previous interference proceeding with one of those two applications. During that interference proceeding, we were awarded priority based upon our earlier effective filing date. Accordingly, we believe that the United States Patent and Trademark Office would declare an interference between our pending patent applications and this latest third-party patent and that the claims of US Patent No. 6,713,608 would be deemed invalid. Although we believe that we should prevail against this third-party patent in an interference proceeding, there is no guarantee that that will be the outcome.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to enter into collaborations with other entities.

If we fail to maintain positive relationships with particular individuals, we may be unable to successfully develop our product candidates, conduct clinical trials and obtain financing.

Pramod K. Srivastava, Ph.D., a member of our board of directors, the chairman of our scientific and medical advisory board, and a consultant to us, and Garo H. Armen, Ph.D., the chairman of our board of directors and our chief executive officer, who together founded Antigenics in 1994, have been, and continue to be, integral to building the company and developing our technology. If either of these individuals decreases his contributions to the company, our business could be adversely impacted. Dr. Srivastava is not an employee of Antigenics and has other professional commitments. We sponsor research in Dr. Srivastava's laboratory at the University of Connecticut Health Center in exchange for the right to license discoveries made in that laboratory with our funding. Dr. Srivastava is a member of the faculty of the University of Connecticut School of Medicine. The regulations and policies of the University of Connecticut Health Center govern the relationship between a faculty member and a commercial enterprise. These regulations and policies prohibit Dr. Srivastava from becoming our employee. Furthermore, the University of Connecticut may modify these regulations and policies in the future to further limit Dr. Srivastava's relationship with us. Dr. Srivastava has a consulting agreement with Antigenics, which includes financial incentives for him to remain associated with us, but these may not prove sufficient to prevent him from severing his relationship with Antigenics, even during the time covered by the consulting agreement. In addition, this agreement does not restrict Dr. Srivastava's ability to compete against us after his association with Antigenics is terminated. This agreement was to expire in March 2005 but was extended for an additional one-year period until March 2006. This agreement will automatically renew for additional one-year periods unless either party decides not to extend the agreement. If Dr. Srivastava were to terminate his affiliation with us or devote less effort to advancing our technologies, we may not have access to future discoveries that could advance our technologies.

We do not have an employment agreement with Dr. Armen. In addition, we do not carry key employee insurance policies for Dr. Armen or any other employee.

We also rely greatly on employing and retaining other highly trained and experienced senior management and scientific personnel. Since our manufacturing process is unique, our manufacturing and quality control personnel are very important. The competition for these and other qualified personnel in the biotechnology field is intense. If we are not able to attract and retain qualified scientific, technical and managerial personnel, we probably will be unable to achieve our business objectives.

We face litigation that could result in substantial damages and may divert management's time and attention from our business.

Antigenics, our chairman and chief executive officer, Garo H. Armen, Ph.D., and two brokerage firms that served as underwriters in our initial public offering have been named as defendants in a federal civil class action lawsuit. The suit alleges that the brokerage arms of the investment banking firms charged secret excessive commissions to certain of their customers in return for allocations of our stock offering. The suit also alleges that shares of our stock were allocated to certain of the investment banking firms' customers based upon agreements by such customers to purchase additional shares of our stock in the secondary market. To date, the plaintiffs have not asserted a specific amount of damages. We have submitted settlement papers with the Federal District Court for the Southern District of New York; however, a failure to finalize a settlement could require us to pay substantial damages. Regardless of the outcome, participation in a lawsuit may cause a diversion of our management's time and attention from our business.

In addition, we are involved in other litigation, and may become involved in additional litigation. Any such litigation could be expensive in terms of out-of-pocket costs and management time, and the outcome of any such litigation will be uncertain.

If we fail to obtain adequate levels of reimbursement for our product candidates from third-party payers, the commercial potential of our product candidates will be significantly limited.

Our profitability will depend on the extent to which government authorities, private health insurance providers and other organizations provide reimbursement for the cost of our product candidates. Many patients will not be capable of paying for our product candidates by themselves. A primary trend in the United States health care industry is toward cost containment. Large private payers, managed care organizations, group purchasing organizations, and similar organizations are exerting increasing influence on decisions regarding the use of particular treatments. Furthermore, many third-party payers limit reimbursement for newly approved health care products. Cost containment measures may prevent us from becoming profitable.

It is not clear that public and private insurance programs will determine that Oncophage or our other product candidates come within a category of items and services covered by their insurance plans. For example, although the federal Medicare program covers drugs and biological products, the program takes the position that the FDA's treatment of a product as a drug or biologic does not require the Medicare program to treat the product in the same manner. Accordingly, it is possible that the Medicare program will not cover Oncophage or our other product candidates if they are approved for commercialization. It is also possible that there will be substantial delays in obtaining coverage of Oncophage or our other product candidates and that, if coverage is obtained, there may be significant restrictions on the circumstances in which there would be reimbursement. Where insurance coverage is available, there may be limits on the payment amount. Congress and the Medicare program periodically propose significant reductions in the Medicare reimbursement amounts for drugs and biologics. Such reductions could have a material adverse effect on sales of any of our product candidates that receive marketing approval. In December 2003, the President of the United States signed the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. The future impact of this legislation on our product candidates is uncertain. Effective January 1, 2004, Medicare payments for many drugs administered in physician's offices were reduced significantly. This provision impacts many drugs used in cancer treatment by oncologists and urologists. The payment methodology changes in future years, and it is unclear how the payment methodology will impact reimbursement for Oncophage, if it receives regulatory approval, and incentives for physicians to recommend Oncophage relative to alternative therapies.

Product liability and other claims against us may reduce demand for our products or result in substantial damages.

We face an inherent risk of product liability exposure related to testing our product candidates in human clinical trials and will face even greater risks if we sell our product candidates commercially. An individual may bring a product liability claim against us if one of our product candidates causes, or merely appears to have caused, an injury. Product liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial volunteers;
- costs of related litigation; and
- substantial monetary awards to plaintiffs.

We manufacture Oncophage and AG-858 from a patient's cancer cells, and a medical professional must inject Oncophage or AG-858 into that same patient. A patient may sue us if we, a hospital, or a delivery company fails to deliver the removed cancer tissue or that patient's Oncophage or AG-858. We anticipate that the logistics of shipping will become more complex if the number of patients we treat increases, and it is possible that all shipments will not be made without incident. In addition, administration of Oncophage or AG-858 at a hospital poses risk of delivery to the wrong patient. Currently, we do not have insurance that

covers loss of or damage to Oncophage or AG-858, and we do not know whether insurance will be available to us at a reasonable price or at all. We have limited product liability coverage for clinical research use of product candidates. Our product liability policy provides $10 million aggregate coverage and $10 million per occurrence. This limited insurance coverage may be insufficient to fully cover us for future claims.

We may incur significant costs complying with environmental laws and regulations.

We use hazardous, infectious, and radioactive materials in our operations, which have the potential of being harmful to human health and safety or the environment. We store these hazardous (flammable, corrosive, toxic), infectious, and radioactive materials, and various wastes resulting from their use, at our facilities pending use and ultimate disposal. We are subject to a variety of federal, state and local laws and regulations governing use, generation, storage, handling, and disposal of these materials. We may incur significant costs complying with both current and future environmental health and safety laws and regulations. In particular, we are subject to regulation by the Occupational Safety and Health Administration, the Environmental Protection Agency, the Drug Enforcement Agency, the Department of Transportation, the Centers for Disease Control and Prevention, the National Institutes of Health, the International Air Transportation Association, and various state and local agencies. At any time, one or more of the aforementioned agencies could adopt regulations that may affect our operations. We are also subject to regulation under the Toxic Substances Control Act and the Resource Conservation Development programs.

Although we believe that our current procedures and programs for handling, storage, and disposal of these materials comply with federal, state, and local laws and regulations, we cannot eliminate the risk of accidents involving contamination from these materials. Although we have limited pollution liability coverage ($2 million) and a workers' compensation liability policy, in the event of an accident or accidental release, we could be held liable for resulting damages, which could be substantially in excess of any available insurance coverage and could substantially disrupt our business.

Our competitors in the biotechnology and pharmaceutical industries may have superior products, manufacturing capability or marketing expertise.

Our business may fail because we face intense competition from major pharmaceutical companies and specialized biotechnology companies engaged in the development of product candidates and other therapeutic products, including heat shock proteins directed at cancer, infectious diseases, and autoimmune disorders. Several of these companies have products that utilize similar technologies and/or personalized medicine techniques, such as CancerVax's Canvaxin, currently in a Phase 3 trial for melanoma and a Phase 2 trial in colon cancer, Dendreon's Provenge, with Fast Track designation and currently in a Phase 3 trial for prostate cancer, and Mylovenge in a Phase 2 trial for multiple myeloma, Stressgen's HspE7 currently in a Phase 2 trial in HPV-internal genital warts, AVAX's M-Vax in melanoma, L-Vax currently in Phase 2 trials for acute myelogenous leukemia (AML) and O-Vax, currently in a Phase 2 for ovarian cancer, Intracel's OncoVax, currently approved for administration in the Netherlands, Switzerland and Israel and in a Phase 3 trial in the US for colon cancer, and Cell Genesys' GVAX vaccines currently in trials for prostate (Phase 3), AML (Phase 2), pancreas (Phase 2), lung cancer (Phase 2), and myeloma (Phase 1/2). Patents have been issued in both the US and Europe related to Stressgen's heat shock protein technology. In particular, US patents 6,797,491, 6,657,055, 6,524,825, 6,495,347, 6,338,952 and 6,335,183; and European patents EP700445 and EP1002110 are issued. Additionally, many of our competitors, including large pharmaceutical companies, have greater financial and human resources and more experience than we do. Our competitors may:

- commercialize their product candidates sooner than we commercialize our own;
- develop safer or more effective therapeutic drugs or preventive vaccines and other therapeutic products;
- implement more effective approaches to sales and marketing;

- establish superior intellectual property positions; or
- discover technologies that may result in medical insights or breakthroughs which render our drugs or vaccines obsolete, possibly before they generate any revenue.

More specifically, if we receive regulatory approvals, some of our product candidates will compete with well-established, FDA-approved therapies such as interleukin-2 and interferon-alpha for renal cell carcinoma and melanoma, which have generated substantial sales over a number of years. We anticipate that we will face increased competition in the future as new companies enter markets we seek to address and scientific developments surrounding immunotherapy and other cancer therapies continue to accelerate.

Risks Related to our Common Stock

Our officers and directors may be able to block proposals for a change in control.

Antigenics Holdings L.L.C. is a holding company that owns shares of our common stock, and, as of December 31, 2004, Antigenics Holdings L.L.C. controlled approximately 25% of our outstanding common stock. Due to this concentration of ownership, Antigenics Holdings L.L.C. may be able to prevail on all matters requiring a stockholder vote, including:

- the election of directors;
- the amendment of our organizational documents; or
- the approval of a merger, sale of assets, or other major corporate transaction.

Certain of our directors and officers, including our chief executive officer, directly and indirectly own approximately 74% of Antigenics Holdings L.L.C. and, if they elect to act together, can control Antigenics Holdings L.L.C. In addition, several of our directors and officers directly and indirectly own approximately 4% of our outstanding common stock.

A single, otherwise unaffiliated, stockholder holds a substantial percentage of our outstanding capital stock.

According to publicly filed documents, Mr. Brad M. Kelley beneficially owns 5,546,240 shares of our outstanding common stock and 31,620 shares of our series A convertible preferred stock. The shares of preferred stock are currently convertible at any time into 2,000,000 shares of common stock at an initial conversion price of $15.81, are non-voting, and carry a 2.5% annual dividend yield. If Mr. Kelley had converted all of the shares of preferred stock on December 31, 2004, he would have held approximately 16% of our outstanding common stock. We currently have a right of first refusal agreement with Mr. Kelley that provides us with limited rights to purchase certain of Mr. Kelley's shares if he proposes to sell them to a third party.

Mr. Kelley's substantial ownership position provides him with the ability to substantially influence the outcome of matters submitted to our stockholders for approval. Furthermore, collectively, Mr. Kelley and Antigenics Holdings L.L.C. control approximately 37% of our outstanding common stock, providing substantial ability, if they vote in the same manner, to determine the outcome of matters submitted to a stockholder vote. If Mr. Kelley were to convert all of his preferred stock into common stock, the combined percentage would increase to 39%. Additional purchases of our common stock by Mr. Kelley also would increase both his own percentage of outstanding voting rights and the percentage combined with Antigenics Holdings L.L.C. (Mr. Kelley's shares of preferred stock do not carry voting rights; the common stock issuable upon conversion, however, carries the same voting rights as other shares of common stock.)

Provisions in our organizational documents could prevent or frustrate attempts by stockholders to replace our current management.

Our certificate of incorporation and bylaws contain provisions that could make it more difficult for a third party to acquire us without consent of our board of directors. Our certificate of incorporation provides for a staggered board and removal of directors only for cause. Accordingly, stockholders may elect only a minority of our board at any annual meeting, which may have the effect of delaying or preventing changes in management. In addition, under our certificate of incorporation, our board of directors may issue shares of preferred stock and determine the terms of those shares of stock without any further action by our stockholders. Our issuance of preferred stock could make it more difficult for a third party to acquire a majority of our outstanding voting stock and thereby effect a change in the composition of our board of directors. Our certificate of incorporation also provides that our stockholders may not take action by written consent. Our bylaws require advance notice of stockholder proposals and director nominations, and permit only our president or a majority of the board of directors to call a special stockholder meeting. These provisions may have the effect of preventing or hindering attempts by our stockholders to replace our current management. In addition, Delaware law prohibits a corporation from engaging in a business combination with any holder of 15% or more of its capital stock until the holder has held the stock for three years unless, among other possibilities, the board of directors approves the transaction. Our board of directors may use this provision to prevent changes in our management. Also, under applicable Delaware law, our board of directors may adopt additional anti-takeover measures in the future.

Our stock has low trading volume and its public trading price has been volatile.

Between our initial public offering on February 4, 2000 and March 18, 2005, and for the twelve months ended March 18, 2005, the closing price of our common stock has fluctuated between $4.72 and $52.63 per share, and $4.72 and $11.46 per share, respectively, with an average daily trading volume for the year ended December 31, 2004 of approximately 579,891 shares. The market has experienced significant price and volume fluctuations that are often unrelated to the operating performance of individual companies. In addition to general market volatility, many factors may have a significant adverse effect on the market price of our stock, including:

- continuing operating losses, which we expect over the next several years as we continue our clinical trials;
- announcements of decisions made by public officials;
- results of our preclinical and clinical trials;
- announcements of technological innovations or new commercial products by our competitors;
- developments concerning proprietary rights, including patent and litigation matters;
- publicity regarding actual or potential results with respect to products under development by us or by our competitors;
- regulatory developments; and
- quarterly fluctuations in our financial results.

The sale of a significant number of shares could cause the market price of our stock to decline.

The sale by us or the resale by stockholders of a significant number of shares of our common stock could cause the market price of our common stock to decline. As of December 31, 2004, we had approximately 45,536,000 shares of common stock outstanding. All of these shares are eligible for sale on the NASDAQ National Market, although certain of the shares are subject to sales volume and other limitations.

We have filed registration statements to permit the sale of 10,436,831 shares of common stock under our equity incentive plan, and certain equity plans that we assumed in the acquisitions of Aquila Biopharmaceuticals, Inc. and Aronex Pharmaceuticals, Inc. We have also filed a registration statement to permit the sale of 300,000 shares of common stock under our employee stock purchase plan. We have also filed a registration statement to permit the sale of 100,000 shares of common stock under our directors' deferred compensation plan. As of December 31, 2004, options to purchase approximately 5,633,000 shares of our common stock upon exercise of options with a weighted average exercise price per share of $9.53 were outstanding. Many of these options are subject to vesting that generally occurs over a period of up to five years following the date of grant. As of December 31, 2004, warrants to purchase approximately 92,000 shares of our common stock with a weighted average exercise price per share of $40.69 were outstanding. On August 12, 2004, we filed a registration statement relating to the resale of 350,000 shares of our common stock that we issued in a private placement on July 30, 2004 in connection with our acquisition of assets from Mojave Therapeutics, Inc. That registration statement has become effective, and those shares may be offered and sold from time to time by the selling security holders listed in the related prospectus. The market price of our common stock may decrease based on the expectation of such sales. Similarly, on August 12, 2004, we filed a registration statement with respect to an aggregate of $100 million of our common stock, preferred stock, and debt. That registration statement has become effective, and we may offer and sell any of those securities from time to time. The market price of our common stock may decrease based on investor expectations that we will issue a substantial number of shares of common stock or securities convertible into common stock at low prices.

Because we are a relatively small company and are cash flow negative, we have been disproportionately negatively impacted by the Sarbanes-Oxley Act of 2002 and related regulations, which have increased our costs and required additional management resources.

The Sarbanes-Oxley Act of 2002, which became law in July 2002, has required changes in some of our corporate governance, securities disclosure and compliance practices. In response to the requirements of that Act, the SEC and the NASDAQ have promulgated new rules and listing standards covering a variety of subjects. Compliance with these new rules and listing standards has significantly increased our legal and financial and accounting costs, which we expect to continue to increase as we continue to develop our product candidates and seek to commercialize these product candidates. In addition, the requirements have taxed a significant amount of management's and the board of directors' time and resources. Likewise, these developments have made it more difficult for us to attract and retain qualified members of our board of directors, particularly independent directors, or qualified executive officers. Because we are a relatively small company and are cash flow negative, we expect to be disproportionately negatively impacted by these changes in securities laws and regulations, which have increased our costs and required additional management resources.

Our internal control over financial reporting (as defined in Rules 13a-15 of the Exchange Act of 1934, as amended) is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect all deficiencies or weaknesses in our financial reporting. While our management has concluded in this report on Form 10-K that there were no material weaknesses in our internal control over financial reporting as of December 31, 2004, our procedures are subject to the risk that our controls may become inadequate because of changes in conditions or as a result of a deterioration in compliance with such procedures. No assurance is given that our procedures and processes for detecting weaknesses in our internal control over financial reporting will be effective.

Critical Accounting Policies and Estimates

The SEC defines “critical accounting policies” as those that require application of management’s most difficult, subjective, or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods.

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. We base those estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances. Actual results could differ from those estimates.

The following listing is not intended to be a comprehensive list of all of our accounting policies. Our significant accounting policies are described in Note 2 to our consolidated financial statements. In many cases, the accounting treatment of a particular transaction is dictated by U.S. generally accepted accounting principles , with no need for our judgment in their application. There are also areas in which our judgment in selecting an available alternative would not produce a materially different result. We have identified the following as our critical accounting policies:

Research and Development

Research and development expenses include the costs associated with our internal research and development activities, including salaries and benefits, occupancy costs, clinical manufacturing costs, related administrative costs, and research and development conducted for us by outside advisors, such as sponsored university-based research partners, and clinical study partners. We account for our clinical study costs by estimating the total cost to treat a patient in each clinical trial and recognizing this cost as we estimate when the patient receives treatment, beginning when the patient enrolls in the trial. This estimated cost includes payments to the trial site and patient-related costs, including laboratory costs, related to the conduct of the trial. Cost per patient varies based on the type of clinical trial, the site of the clinical trial and the length of the treatment period for each patient. As we become aware of the actual costs, we adjust our accrual; such changes in estimate may be a material change in our clinical study accrual, which could also materially affect our results of operations. Research and development costs are expensed as incurred and were $41,718,000, $46,264,000, and $37,478,000 for the years ended December 31, 2004, 2003, and 2002, respectively.

Investments

We classify investments in marketable securities at the time of purchase. At December 31, 2004, all marketable securities were classified as available-for-sale and as such, changes in the fair value of the available-for-sale securities are reported as a separate component of accumulated other comprehensive income (loss) until realized. If we were to classify future investments as trading securities rather than available-for-sale, our financial results would be subject to greater volatility. If declines in the fair value of available-for-sale securities are determined to be other than temporary, accumulated other comprehensive income is reduced and the impairment is charged to operations.

Investments of less than 20% of the voting control of companies or other entities over whose operating and financial policies we do not have the power to exercise significant influence, are accounted for by the cost method. Pursuant to this method, we currently account for our investment in AGTC under the cost method and, as of December 31, 2004, we have included it in non-current other assets on the consolidated balance sheet, as more fully disclosed in Note 5 to our consolidated financial statements. The general partner of AGTC determines the timing of our additional contributions. Our investment represents an approximate ownership of 2%. We continue to assess the realizability of this investment. In order to assess whether or not

there has been an other than temporary decline in the value of this investment, we analyze several factors including: (1) the carrying value of the limited partnership's investments in its portfolio companies, (2) how recently the investments in the portfolio companies had been made, (3) the post-financing valuations of those investments, (4) the level of un-invested capital held by the limited partnership, and (5) the overall trend in venture capital valuations. Based on this analysis, during the year ended December 31, 2004, we concluded that an other than temporary decline of $67,494 had occurred. Our investment balance aggregated $1,844,000 at December 31, 2004.

Revenue Recognition

Revenue from product sales is recognized at the time of product shipment. Revenue for services under research and development grants and contracts are recognized as the services are performed, milestones are achieved, or clinical trial materials are provided.

Stock Option Accounting

We account for options granted to employees and directors in accordance with Accounting Principles Board ("APB") Opinion No. 25, *Accounting for Stock Issued to Employees,* and related interpretations. As such, compensation expense is recorded on fixed stock option grants only if the current fair value of the underlying stock exceeds the exercise price of the option at the date of grant and it is recognized on a straight-line basis over the vesting period. We account for stock options granted to non-employees on a fair-value basis in accordance with Statement of Financial Accounting Standards ("SFAS") No. 123, *Accounting for Stock-Based Compensation* and Emerging Issues Task Force Issue ("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.* As a result, the non-cash charge to operations for non-employee options with vesting or other performance criteria is affected each reporting period by changes in the fair value of our common stock. As required, we also provide pro forma net loss attributable to common stockholders and pro forma net loss attributable to common stockholders per common share disclosures for employee and director stock option grants as if the fair-value-based method defined in SFAS No. 123 had been applied (see Note 2 to our consolidated financial statements).

Recently Issued Accounting Standards

In October 1995, the FASB issued SFAS No. 123, which establishes financial accounting and reporting standards for stock-based employee compensation plans. In December 2004, the FASB issued a revision of SFAS 123, *"Share-Based Payment"* ("SFAS No. 123R"). SFAS No. 123R is focused primarily on the accounting for transactions in which a company obtains employee services in exchange for stock options or share-based payments. Currently, we grant stock options to our employees and disclose the pro forma effect of compensation expense for these stock options. SFAS 123R requires that companies recognize compensation expense associated with these grants of stock options in the Company's results of operations effective as of the beginning of the first interim or annual reporting period that begins after June 15, 2005. Compensation expense will be measured based on the fair value of the instrument on the grant date and will be recognized over the vesting period. This pronouncement applies to all grants after the effective date and to the unvested portion of stock options outstanding as of the effective date. SFAS 123R eliminates our ability to account for such transactions using the intrinsic method currently used. SFAS 123R also requires that companies recognize compensation expense associated with purchases of shares of common stock by employees at a discount to market value under employee stock purchase plans that meet certain criteria. We are required to adopt SFAS 123R as of July 1, 2005. We have not yet determined the impact of adoption on our consolidated financial statements. However, we anticipate incurring material non-cash charges in our consolidated results of operations.

In November 2004, the FASB issued SFAS No. 151, *"Inventory Costs."* This statement amends the guidance in ARB No. 43, Chapter 4, *"Inventory Pricing,"* to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). This statement requires that those items be recognized as current-period charges regardless of whether they meet the criterion of "so abnormal." In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. This statement is effective for fiscal years beginning after June 15, 2005. We do not expect that the adoption of this pronouncement will have a material impact on our financial position or results of operations.

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

In the normal course of business, we are exposed to fluctuations in interest rates as we seek debt financing to make capital expenditures and invest excess cash and also foreign currency exchange rate fluctuation risk related to our transactions denominated in foreign currencies. We do not employ specific strategies, such as the use of derivative instruments or hedging, to manage these exposures. Our currency exposures vary, but are primarily concentrated in the Euro. Further, we do not expect our market risk exposures to change in the near term.

The information below summarizes our market risks associated with debt obligations as of December 31, 2004. Fair value included herein has been estimated taking into consideration the nature and terms of each instrument and the prevailing economic and market conditions at December 31, 2004. The tables present cash flows by year of maturity and related interest rates based on the terms of the debt.

2004:

	Estimated Fair Value	Carrying Amount December 31, 2004	Year of Maturity 2005	2006	2007
Long-term debt(1)	$9,875,000	$ 9,922,000	$5,410,000	$4,468,000	$44,000

(1) Fixed interest rates from 3.92% to 7%

In addition, we have cash equivalents and short-term investments at December 31, 2004, which are exposed to the impact of interest rate changes and our interest income fluctuates as interest rates change. Due to the short-term nature of our investments in money market funds, corporate debt securities, taxable auction preferred and government backed securities, our carrying value approximates the fair value of these investments at December 31, 2004.

We invest our cash, cash equivalents and short-term investments in accordance with our Investment Policy. The primary objectives of our Investment Policy 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 investment. Our investments are also subject to interest rate risk and will decrease in value if market interest rates increase. However, due to the conservative nature of our investments and relatively short duration, interest rate risk is mitigated. We do not own derivative financial instruments in our investment portfolio. Accordingly, we do not believe that there is any material market risk exposure with respect to derivative or other financial instruments that would require disclosure under this item.

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

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Antigenics Inc.:

We have audited the accompanying consolidated balance sheets of Antigenics Inc. and subsidiaries as of December 31, 2004 and 2003, and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows for each of the years in the three-year period ended December 31, 2004. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Antigenics Inc. and subsidiaries as of December 31, 2004 and 2003, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2004, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Antigenics Inc.'s internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 29, 2005, expressed an unqualified opinion on management's assessment of, and the effective operation of, internal control over financial reporting.

/s/ KPMG LLP

Princeton, New Jersey
March 29, 2005

ANTIGENICS INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

	December 31, 2004	December 31, 2003
ASSETS		
Cash and cash equivalents	$ 15,979,714	$ 24,416,311
Short-term investments	70,941,163	63,561,347
Accounts receivable	75,631	41,624
Inventories	169,743	227,897
Prepaid expenses	1,925,051	1,899,558
Restricted cash	2,865,665	—
Other current assets	647,299	483,230
Assets of discontinued operations	—	1,191,433
Total current assets	92,604,266	91,821,400
Plant and equipment, net of accumulated amortization and depreciation of $10,559,935 and $15,267,718 at December 31, 2004 and 2003, respectively	24,987,730	24,845,966
Goodwill	2,572,203	3,081,703
Core and developed technology, net of accumulated amortization of $4,216,792 and $3,107,963 at December 31, 2004 and 2003, respectively	6,855,837	7,964,666
Restricted cash	2,256,018	8,521,049
Other long-term assets	3,781,893	3,657,879
Assets of discontinued operations	—	186,872
Total assets	$ 133,057,947	$ 140,079,535
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current portion, long-term debt	$ 5,409,966	$ 5,622,736
Accounts payable	2,923,890	3,179,567
Accrued liabilities	10,861,710	11,302,367
Other current liabilities	8,525	2,000,000
Total current liabilities	19,204,091	22,104,670
Long-term debt, less current portion	4,512,035	10,244,796
Other long-term liabilities	2,898,487	2,484,317
Commitments and contingencies		
STOCKHOLDERS' EQUITY		
Preferred stock, par value $0.01 per share; 25,000,000 shares authorized; Series A convertible preferred stock, par value $0.01 per share; 31,620 shares designated, issued and outstanding at December 31, 2004 and 2003, respectively; liquidation value of $31,817,625 at December 31, 2004	316	316
Common stock, par value $0.01 per share; 100,000,000 shares authorized; 45,536,012 and 39,522,699 shares issued and outstanding at December 31, 2004 and 2003, respectively	455,360	395,227
Additional paid-in-capital	442,021,962	384,457,556
Deferred compensation	(27,134)	(72,081)
Accumulated other comprehensive (loss) income	(147,377)	162,802
Accumulated deficit	(335,859,793)	(279,698,068)
Total stockholders' equity	106,443,334	105,245,752
Total liabilities and stockholders' equity	$ 133,057,947	$ 140,079,535

See accompanying notes to consolidated financial statements.

ANTIGENICS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS
For the Years Ended December 31, 2004, 2003 and 2002

	2004	2003	2002
Revenue:			
Product sales	$ 16,698	$ —	$ —
Research and development	690,375	984,662	784,277
Total revenues	$ 707,073	$ 984,662	$ 784,277
Operating expenses:			
Cost of sales	(4,799)	—	—
Research and development	(41,717,626)	(46,264,220)	(37,478,133)
General and administrative	(25,784,360)	(21,681,522)	(20,673,385)
Acquired in-process research and development	(2,888,000)	—	—
Operating loss	(69,687,712)	(66,961,080)	(57,367,241)
Other income (expense):			
Interest expense	(530,880)	(247,072)	(365,166)
Interest income	1,459,976	1,165,911	1,590,033
Other non-operating income	7,654	—	—
Loss from continuing operations	(68,750,962)	(66,042,241)	(56,142,374)
Income from discontinued operations, net of tax of $617,145 in 2004 (including gain on disposal of $14,132,028 in 2004)	12,589,237	108,661	264,469
Net loss	(56,161,725)	(65,933,580)	(55,877,905)
Dividends on series A convertible preferred stock	(790,500)	(224,140)	—
Net loss attributable to common stockholders	$ (56,952,225)	$ (66,157,720)	$ (55,877,905)
Per common share data, basic and diluted:			
Loss from continuing operations	(1.56)	(1.70)	(1.71)
Income from discontinued operations	0.28	—	0.01
Net loss attributable to common stockholders	(1.27)	(1.70)	(1.70)
Weighted average number of common shares outstanding, basic and diluted	44,685,023	38,989,304	32,905,314

See accompanying notes to consolidated financial statements.

ANTIGENICS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE LOSS

For the Years Ended December 31, 2004, 2003 and 2002

	Series A Convertible Preferred Stock		Common Stock						
	Number of Shares	Par Value	Number of Shares	Par Value	Additional Paid-In Capital	Deferred Compensation	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total
Balance at December 31, 2001	—	$ —	29,014,616	$ 290,146	$ 234,238,808	$ (529,547)	$ (187,706)	$ (157,886,583)	$ 75,925,118
Comprehensive Loss:									
Net loss	—	—	—	—	—	—	—	(55,877,905)	(55,877,905)
Unrealized gain on marketable securities, net	—	—	—	—	—	—	125,761	—	125,761
Comprehensive Loss	—	—	—	—	—	—	—	—	$ (55,752,144)
Grant and recognition of stock options	—	—	—	—	416,731	418,530	—	—	835,261
Exercise of stock options	—	—	77,496	775	561,809	—	—	—	562,584
Issuance of common stock in follow-on offering in January 2002,									0
$15.00 per share (net of issuance costs of $3,989,000)	—	—	4,000,000	40,000	55,971,000	—	—	—	56,011,000
Employee stock purchases	—	—	20,987	210	174,911	—	—	—	175,121
Balance at December 31, 2002	—	—	33,113,099	331,131	291,363,259	(111,017)	(61,945)	(213,764,488)	77,756,940
Comprehensive Loss:									
Net loss	—	—	—	—	—	—	—	(65,933,580)	(65,933,580)
Unrealized gain on marketable securities, net	—	—	—	—	—	—	224,747	—	224,747
Comprehensive Loss	—	—	—	—	—	—	—	—	$ (65,708,833)
Grant and recognition of stock options	—	—	—	—	852,290	38,936	—	—	891,226
Exercise of stock options	—	—	130,667	1,307	1,113,843	—	—	—	1,115,150
Issuance of common stock in follow-on offering in January 2003, $9.92 per share (net of issuance costs of $2,458,000)	—	—	6,250,000	62,500	59,475,956	—	—	—	59,538,456
Issuance of series A convertible preferred stock, net of expenses of $13,556	31,620	316	—	—	31,606,128	—	—	—	31,606,444
Employee stock purchases	—	—	28,933	289	270,220	—	—	—	270,509
Dividend on series A convertible preferred stock ($7.09 per share)	—	—	—	—	(224,140)	—	—	—	(224,140)
Balance at December 31, 2003	31,620	316	39,522,699	395,227	384,457,556	(72,081)	162,802	(279,698,068)	105,245,752
Comprehensive Loss:									
Net loss	—	—	—	—	—	—	—	(56,161,725)	(56,161,725)
Unrealized loss on marketable securities, net	—	—	—	—	—	—	(310,179)	—	(310,179)
Comprehensive Loss	—	—	—	—	—	—	—	—	$ (56,471,904)
Grant and recognition of stock options	—	—	—	—	1,221,450	44,947	—	—	1,266,397
Exercise of stock options	—	—	248,706	2,487	876,426	—	—	—	878,913
Issuance of common stock in follow-on offering in February 2004, $10.50 per share (net of issuance costs of $3,179,516)	—	—	5,400,000	54,000	53,466,484	—	—	—	53,520,484

Employee stock purchases	—	—	14,607	146	106,046	—	—	—	106,192
Dividend on series A convertible preferred stock ($25 per share)	—	—	—	—	(790,500)	—	—	—	(790,500)
Issuance of stock in asset acquisition	—	—	350,000	3,500	2,684,500	—	—	—	2,688,000
Balance at December 31, 2004	31,620	$ 316	45,536,012	$ 455,360	$ 442,021,962	$ (27,134)	$ (147,377)	$ (335,859,793)	$ 106,443,334

See accompanying notes to consolidated financial statements.

ANTIGENICS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
For the Years Ended December 31, 2004, 2003 and 2002

	2004	2003	2002
Cash flows from operating activities:			
Net loss	$ (56,161,725)	$ (65,933,580)	$ (55,877,905)
(Loss) Income from discontinued operations	(925,646)	108,661	264,469
Gain on disposal of discontinued operations	13,514,883	—	—
Loss from continuing operations	(68,750,962)	(66,042,241)	(56,142,374)
Adjustments to reconcile net loss from continuing operations to net cash used in continuing operations:			
Depreciation and amortization	4,809,663	6,485,355	5,466,145
Acquired in-process research and development	2,688,000	—	—
Non-cash stock compensation	1,266,397	891,226	835,261
Write-down of inventory & investments	67,495	325,871	1,040,941
Write-down of fixed assets	—	27,065	513,605
Effect of accounting for asset retirement obligations	—	282,148	—
Loss on sale of fixed assets	78,737	—	—
Changes in operating assets and liabilities:			
Accounts receivable	(34,007)	364,880	(332,419)
Inventories	58,154	(42,419)	(712,406)
Prepaid expenses	(25,493)	(201,228)	(1,057,004)
Accounts payable	(255,677)	1,744,477	(1,513,327)
Accrued expenses and other current liabilities	(498,476)	3,142,376	685,447
Other operating assets and liabilities	322,657	1,035,837	(1,144,923)
Net cash used in continuing operations	(60,273,512)	(51,986,653)	(52,361,054)
Net cash provided by discontinued operations	48,599	303,349	522,465
Net cash used in operating activities	(60,224,913)	(51,683,304)	(51,838,589)
Cash flows from investing activities:			
Proceeds from maturities of available for sale securities	126,054,000	100,225,000	60,950,000
Purchases of available for sale securities	(133,743,995)	(126,597,236)	(98,158,926)
Investment in AGTC	(375,000)	(750,000)	(300,000)
Purchases of plant and equipment	(3,970,043)	(18,537,216)	(2,307,850)
Proceeds from sale of property and equipment	18,000	—	—
Proceeds from divestiture of assets	12,552,011	2,000,000	—
Decrease (Increase) in restricted cash	3,399,366	(8,521,049)	—
Net cash provided by (used in) investing activities	3,934,339	(52,180,501)	(39,816,776)
Cash flows from financing activities:			
Net proceeds from sale of equity	53,631,418	91,208,562	56,139,334
Proceeds from exercise of stock options	878,913	1,115,150	562,584
Proceeds from employee stock purchases	106,192	270,509	175,121
Deferred offering costs	—	(110,934)	(63,662)
Payments of series A convertible preferred stock dividend	(817,015)	—	—
Proceeds of long-term debt	—	17,042,100	(5,545,344)
Payments of long-term debt	(5,945,531)	(1,725,447)	—
Net cash provided by financing activities	47,853,977	107,799,940	51,268,033
Net (decrease) increase in cash and cash equivalents	(8,436,597)	3,936,135	(40,387,332)
Cash and cash equivalents, beginning of year	24,416,311	20,480,176	60,867,508
Cash and cash equivalents, end of year	$ 15,979,714	$ 24,416,311	$ 20,480,176
Supplemental cash flow information:			
Cash paid for interest	$ 579,199	$ 198,754	$ 470,794
Non-cash investing and financing activities:			
Effect of adoption of Statement of Financial Accounting Standards No. 143:			
Plant and equipment	$ —	$ 532,234	$ —
Asset retirement obligation	$ —	$ 814,472	$ —
Issuance of equity for acquired in-process research and development	$ 2,688,000	$ —	$ —

See accompanying notes to consolidated financial statements.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) Organization and Business

The business was formed on March 31, 1994 through the creation of a Delaware corporation (Founder Holdings Inc.). In July 1995, the founders of Founder Holdings Inc. formed Antigenics Inc., formerly, Antigenics LLC (Antigenics or the Company), a Delaware limited liability company, and subsequently transferred to the Company all of the assets, liabilities, properties and rights of the Delaware corporation in exchange for an initial 81.5% equity interest in the Company. The accounting for this recapitalization was recorded at Founder Holdings Inc.'s historical cost.

Since the reorganization in 1995, Founder Holdings Inc. has directly or indirectly (through Antigenics Holdings LLC) owned a significant portion of our common stock. As of December 31, 2004, Founder Holdings Inc. owns approximately 79% of Antigenics Holdings LLC that in turn owns approximately 25% of our outstanding common stock. As of December 31, 2004, Founder Holdings Inc. had no direct ownership of our common stock. Certain of our board members and executive officers own significant interests in these related parties.

We are a biotechnology company developing products to treat cancers, infectious diseases and autoimmune disorders. Our most advanced product candidate is Oncophage®, a personalized therapeutic cancer vaccine being tested in several types of cancer, including in Phase 3 clinical trials for the treatment of renal cell carcinoma (the most common type of kidney cancer) and for metastatic melanoma. Our product candidate portfolio also includes (1) AG-858, a personalized cancer vaccine in a Phase 2 clinical trial for the treatment of chronic myelogenous leukemia, (2) AG-702/ AG-707, a therapeutic vaccine program in Phase 1 clinical development for the treatment of genital herpes, and (3) Aroplatin™, a liposomal chemotherapeutic currently completing pre-clinical reformulation and testing. Our related business activities include research and development, regulatory and clinical affairs, clinical manufacturing, business development, marketing and administrative functions that support these activities.

We have incurred annual operating losses since inception and, as a result, at December 31, 2004 have an accumulated deficit of $335,860,000. Our operations have been funded principally by sales of equity. We believe that our working capital resources at December 31, 2004, in addition to the net proceeds received from our convertible debt offering on January 25, 2005 (see Note 19), are sufficient to satisfy our liquidity requirements into 2006. Satisfying our long-term liquidity needs will require the successful commercialization of Oncophage or other product candidates and may require additional capital.

Our lead product candidates require clinical trials and approvals from regulatory agencies as well as acceptance in the marketplace. We are conducting clinical trials in various cancers and in one infectious disease indication. Although we believe our patents, patent rights and patent applications are valid, the invalidation of our patents or failure of certain of our pending patent applications to issue as patents could have a material adverse effect upon our business. Part of our strategy is to develop and commercialize some of our products by continuing our existing collaborative arrangements with academic and corporate collaborators and licensees and by entering into new collaborations. Our success depends, in part, on the success of these parties in performing research, preclinical and clinical testing. We compete with specialized biotechnology companies, major pharmaceutical companies, universities and research institutions. Many of these competitors have substantially greater resources than we do.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(2) Summary of Significant Accounting Policies

(a) Basis of Presentation and Principles of Consolidation

The consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles and include the accounts of Antigenics Inc. and our wholly owned subsidiaries. All intercompany transactions and accounts have been eliminated in consolidation. Certain amounts in the prior year consolidated financial statements have been reclassified to conform to the current year presentation. We previously classified our investments in auction rate notes and similar instruments as cash and cash equivalents in the consolidated balance sheet. At December 31, 2004, we determined that these instruments are not cash equivalents and therefore, we have made a reclassification as of December 31, 2003 and 2002 in order to conform to the current year's presentation. The reclassification resulted in a decrease in cash and cash equivalents and a corresponding increase in short-term investments as of December 31, 2003 and 2002 of $32,300,000 and $12,650,000, respectively.

(b) Segment Information

We are managed and operated as one business. The entire business is managed by a single executive operating committee that reports to the chief executive officer. We do not operate separate lines of business with respect to any of our product candidates. Accordingly, we do not prepare discrete financial information with respect to separate product areas or by location and do not have separately reportable segments as defined by Statement of Financial Accounting Standards ("SFAS") No. 131, *Disclosures about Segments of an Enterprise and Related Information.*

(c) Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Management bases its estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances. Actual results could differ from those estimates.

(d) Cash and Cash Equivalents

We consider all highly liquid investments purchased with maturities at acquisition of three months or less to be cash equivalents. As of December 31, 2004 and 2003 cash equivalents consist primarily of money market funds.

(e) Investments

We classify investments in marketable securities at the time of purchase. At December 31, 2004 and 2003, all marketable securities are classified as available-for-sale and as such, the investments are recorded at fair value with changes in fair value reported as a component of accumulated other comprehensive income (loss). Gains and losses on the sale of marketable securities are recognized in operations based on the specific identification method.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Investments of less than 20% of the voting control of companies or other entities over whose operating and financial policies we do not have the power to exercise significant influence are accounted for by the cost method. Pursuant to this method, we record our investment at cost and recognize dividends received as income. The carrying values of investments are periodically reviewed to determine whether any decline in value is other than temporary. Other than temporary declines in the value of available-for-sale securities and other investments are charged to operations.

(f) Concentrations of Credit Risk

Financial instruments that potentially subject us to concentration of credit risk are primarily cash and cash equivalents, marketable securities and accounts receivable. We invest our cash and cash equivalents in accordance with our Investment Policy, which specifies high credit quality standards and limits the amount of credit exposure from any single issue, issuer or type of investment. Credit risk on accounts receivable is minimized by the financial position of the entities with which we do business. Credit losses from our customers have been immaterial.

(g) Inventories

Inventories are stated at the lower of cost or market. Cost has been determined using standard costs that approximate the first-in, first-out method.

(h) Plant and Equipment

Plant and equipment, including software developed for internal use, are carried at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Amortization of leasehold improvements is computed over the shorter of the lease term or estimated useful life of the asset. Additions and improvements are capitalized, while repairs and maintenance are charged to expense as incurred.

During the year ended December 31, 2004, we capitalized $1,745,000, including $295,000 of internal costs, in accordance with the American Institute of Certified Public Accountants Statement of Position 98-1 — Accounting for the Costs of Computer Software Developed or Obtained for Internal Use, related to the ongoing implementation of new enterprise resource planning and related software to manage certain business processes.

(i) Fair Value of Financial Instruments

The fair value of a financial instrument represents the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced sale or liquidation. Significant differences can arise between the fair value and carrying amounts of financial instruments that are recognized at historical cost amounts. The estimated fair values of all of our financial instruments, excluding debt, approximate their carrying amounts in the consolidated balance sheets. The fair value of our long-term debt was derived by evaluating the nature and terms of each note and considering the prevailing economic and market conditions at the balance sheet date. The carrying amount of debt, including current portions, is approximately $9,922,000 and $15,868,000 at December 31, 2004 and 2003, respectively; and the fair value is estimated to be approximately $9,875,000 and $15,882,000 at December 31, 2004 and 2003, respectively.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(j) Revenue Recognition

Revenue from product sales is recognized at the time of product shipment. Revenue for services under research and development grants and contracts are recognized as the services are performed, or as clinical trial materials are provided. Non-refundable milestone payments that represent the completion of a separate earnings process are recognized as revenue when earned. For the year end December 31, 2004, two research partners represented 67% and 25% of our research and development revenue, while for the year ended December 31, 2003, one research partner represented 93% of our research and development revenue, and for the year ended December 31, 2002 two partners represented 50% and 35% of total research and development revenues.

(k) Research and Development

Research and development expenses include the costs associated with our internal research and development activities, including salaries and benefits, occupancy costs, clinical manufacturing costs and administrative costs, and research and development conducted for us by outside advisors, sponsored research partners, clinical research organizations and clinical investigators and institutions. Research and development expenses also include all expenses related to any grant revenue recognized as well as the cost of clinical trial materials shipped to our research partners. All research and development costs are expensed as incurred.

(l) Stock-Based Compensation

We account for options granted to employees and directors in accordance with Accounting Principles Board ("APB") Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations. As such, compensation expense is recorded on fixed stock option grants only if the current fair value of the underlying stock exceeds the exercise price of the option at the date of grant and it is recognized on a straight-line basis over the vesting period.

We account for stock options granted to non-employees on a fair-value basis in accordance with Statement of Financial Accounting Standards (SFAS) No. 123, *Accounting for Stock-Based Compensation* and Emerging Issues Task Force Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services.* As a result, any non-cash charge to operations for non-employee options with vesting or other performance criteria is affected each reporting period by changes in the market price of our common stock.

In December 2002, the Financial Accounting Standards Board (FASB) issued SFAS No. 148, *Accounting for Stock-Based Compensation — Transition and Disclosure*, an amendment of SFAS No. 123. This statement amends SFAS No. 123 to provide alternative methods of transition for a voluntary change to the fair-value method of accounting for stock-based employee compensation. In addition, this statement amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements, which annual disclosures are included below. Other than the disclosure modification, the adoption of SFAS No. 148 did not have a material effect on our consolidated financial statements.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table illustrates the effect on net loss attributable to common stockholders and net loss attributable to common stockholders per common share, basic and diluted, had compensation cost for options granted to employees and directors and rights under our employee stock purchase plan been determined consistent with the fair value method of SFAS No. 123 (in thousands except per share data):

	Year Ended December 31,		
	2004	2003	2002
Net loss attributable to common stockholders, as reported	$ (56,952)	$ (66,158)	$ (55,878)
Add: Stock-based employee and director compensation recognized under APB Opinion No. 25	463	358	482
Deduct: total stock-based employee and director compensation expense determined under fair-value based method for all awards	(6,238)	(4,545)	(3,935)
Pro forma net loss attributable to common stockholders	$ (62,727)	$ (70,345)	$ (59,331)
Net loss attributable to common stockholders per common share, basic and diluted:			
As reported	$ (1.27)	$ (1.70)	$ (1.70)
Pro forma	$ (1.40)	$ (1.80)	$ (1.80)

The effects of applying SFAS No. 123, for either recognizing or disclosing compensation cost under such pronouncement, may not be representative of the effects on reported net income or loss for future years. The fair value of each option and employee stock purchase rights granted is estimated on the date of grant using an option-pricing model with the following weighted average assumptions:

	2004	2003	2002
Estimated volatility	47%	62%	63%
Expected life in years — employee and director options	6	6	6
Expected life in years — employee stock purchase rights	1	1	1
Risk-free interest rate	3.3%	1.2%	2.4%
Dividend yield	0%	0%	0%

The expected life used to estimate the fair value of non-employee options is equal to the contractual life of the option granted.

(m) Income Taxes

Income taxes are accounted for under the asset and liability method with deferred tax assets and liabilities recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be reversed or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period that includes the enactment date. Deferred tax assets are recorded when they more likely than not are expected to be realized.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(n) Net Loss Per Share

Basic earnings or loss per common share ("EPS") is calculated by dividing the applicable earnings or loss by the weighted average number of common shares outstanding. Diluted EPS is calculated by dividing the applicable earnings or loss by the weighted average common shares outstanding plus the dilutive effect of outstanding stock options, stock warrants and the series A convertible preferred stock. Because we have reported a loss from continuing operations for all periods, diluted loss per common share is the same as basic loss per common share as the effect of including the outstanding stock options, stock warrants and the convertible preferred stock in the calculation would have reduced the loss from continuing operations per common share. Therefore, the 5,633,000 outstanding stock options, the 92,000 outstanding stock warrants and the 31,620 outstanding shares of series A convertible preferred stock are not included in the calculation of diluted loss per common share.

(o) Goodwill and Acquired Intangible Assets

Goodwill represents the excess of cost over the fair value of net assets of businesses acquired. We adopted the provisions of SFAS No. 141, *Business Combinations*, as of July 1, 2001 and SFAS No. 142, *Goodwill and Other Intangible Assets*, as of January 1, 2002. SFAS No. 141 requires that the purchase method of accounting be used for all business combinations and specifies the criteria that intangible assets acquired in a business combination must meet to be recognized and reported separately from goodwill. In accordance with SFAS No. 142, goodwill and acquired intangible assets determined to have an indefinite useful life are not amortized, but instead tested for impairment at least annually. SFAS No. 142 also requires that intangible assets with estimable useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with SFAS No. 144, *Accounting for Impairment or Disposal of Long-Lived Assets*.

SFAS No. 142 requires us to assess annually whether there is an indication that goodwill is impaired, or more frequently if events and circumstances indicate that the asset might be impaired during the year. We perform our annual impairment test on October 31 of each year. We consider ourselves as a single reporting unit for purposes of the impairment test. We determine our fair value using the quoted market price of our common stock and compare it to our net book value at the date of our evaluation. To the extent the carrying amount exceeds the fair value, there is an indication that the reporting unit goodwill may be impaired and a second step of the impairment test is performed to determine the amount of the impairment to be recognized, if any.

Identifiable intangible assets deemed to have an indefinite life are tested annually for impairment, or more frequently if events and circumstances indicate that the asset might be impaired during the year. An impairment loss is recognized to the extent that the carrying amount exceeds the asset's fair value as determined based on discounted cash flows associated with the asset. We have not identified any indefinite life intangible assets.

The costs of core and developed technology are presented at estimated fair value at acquisition date. These costs are being amortized on a straight-line basis over their estimated useful lives of ten years.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(p) Accounting for Asset Retirement Obligations

In June 2001, FASB issued SFAS No. 143, *Accounting for Asset Retirement Obligations*. SFAS No. 143 requires us to record the fair value of an asset retirement obligation as a liability in the period in which we incur a legal obligation associated with the retirement of tangible long-lived assets that result from the acquisition, construction, development, and/or normal use of the assets. A legal obligation is a liability that a party is required to settle as a result of an existing or enacted law, statute, ordinance or contract. We are also required to record a corresponding asset that is depreciated over the life of the asset. Subsequent to the initial measurement of the asset retirement obligation, the obligation will be adjusted at the end of each period to reflect the passage of time (accretion) and changes in the estimated future cash flows underlying the obligation. Changes in the liability due to accretion will be charged to the consolidated statement of operations, whereas changes due to the timing or amount of cash flows will be an adjustment to the carrying amount of the related asset. We have adopted SFAS No. 143 effective January 1, 2003, the impact of which was immaterial to our consolidated financial statements. Our asset retirement obligations primarily relate to the expiration of our facility leases and anticipated costs to be incurred based on our lease terms. Had SFAS No. 143 been in effect during the year presented below, net loss attributable to common stockholders and net loss attributable to common stockholders per share, basic and diluted, would have been as follows (amounts in thousands, except per share data):

	Year Ended December 31, 2002
Net loss attributable to common stockholders, as reported	$ (55,878)
Depreciation expense	(43)
Accretion expense	(18)
Pro forma net loss attributable to common stockholders	$ (55,939)
Net loss attributable to common stockholders per common share, basic and diluted:	
As reported	$ (1.70)
Pro forma	$ (1.70)

(q) Long-lived Assets

SFAS No. 144 requires that long-lived assets, except goodwill and intangible assets not being amortized, be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the undiscounted future net cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future undiscounted cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. SFAS No. 144 requires companies to separately report discontinued operations and extends that reporting to a component of an entity that either has been disposed of (by sale, abandonment, or in a distribution to owners) or is classified as held for sale. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(r) Recent Accounting Pronouncements

In October 1995, the FASB issued SFAS No. 123, which establishes financial accounting and reporting standards for stock-based employee compensation plans. In December 2004, the FASB issued a revision of SFAS 123, *"Share-Based Payment"* ("SFAS No. 123R"). SFAS No. 123R is focused primarily on the accounting for transactions in which a company obtains employee services in exchange for stock options or share-based payments. Currently, we grant stock options to our employees in accordance with APB No. 25 and disclose the pro forma effect of compensation expense for these stock options as if the fair value method under SFAS No. 123 had been used. SFAS 123R requires that companies recognize compensation expense associated with these grants of stock options in the Company's results of operations effective as of the beginning of the first interim or annual reporting period that begins after June 15, 2005. Compensation expense will be measured based on the fair value of the instrument on the grant date and will be recognized over the vesting period. This pronouncement applies to all grants after the effective date and to the unvested portion of stock options outstanding as of the effective date. SFAS 123R eliminates our ability to account for such transactions using the intrinsic value method currently used. SFAS 123R also requires that companies recognize compensation expense associated with purchases of shares of common stock by employees at a discount to market value under employee stock purchase plans that meet certain criteria. We are required to adopt SFAS 123R as of July 1, 2005 and have not yet determined the full impact of adoption on our consolidated financial statements. We anticipate that implementation of SFAS No. 123R will result in material non-cash charges to our consolidated operating results.

In November 2004, the FASB issued SFAS No. 151, *"Inventory Costs."* This Statement amends the guidance in ARB No. 43, Chapter 4, *"Inventory Pricing,"* to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). This Statement requires that those items be recognized as current-period charges. In addition, this Statement requires that allocation of fixed production overheads to inventory based on the normal capacity of the production facilities. This statement is effective for fiscal years beginning after June 15, 2005. We do not expect that the adoption of this pronouncement will have a material impact on our financial position or results of operations prior to commercializing Oncophage.

(3) Discontinued Operations

On March 17, 2004, we sold our manufacturing rights for feline leukemia virus (FeLV) vaccine to French veterinary pharmaceutical manufacturer Virbac S.A. (Virbac). Pursuant to this arrangement, in exchange for the transfer of our manufacturing rights and related equipment for FeLV, we received $14,552,000 in cash. In addition, we entered into a sublease agreement with PP Manufacturing, a subsidiary of Virbac, for a portion of the manufacturing facility in Framingham, MA.

In April 2004, upon the satisfaction of a contingency of the sale, in accordance with SFAS No. 144, *"Accounting for the Impairment or Disposal of Long-Lived Assets"*, we recorded a gain on the divestiture of these assets. The gain recorded in 2004 was approximately $14,132,000 before tax. The carrying value of the assets sold and liabilities assumed were approximately $409,000 and $15,000, respectively. In addition, we have classified the results of operations of the FeLV activity as discontinued operations in the accompanying

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

consolidated financial statements, for all periods presented. The income (loss) from the results of the discontinued operations consist of the following (in thousands):

	Year Ended December 31,		
	2004	2003	2002
Revenue	$ 338	$ 3,465	$ 2,627
Expenses:			
Cost of sales	594	1,942	1,337
Research and development	193	837	873
General and administrative	477	577	153
Net (loss) income from discontinued operations	$ (926)	$ 109	$ 264

Virbac has held exclusive perpetual worldwide marketing rights to the FeLV vaccine since 1983. The supply agreement was due for renewal in July 2002, at which point we began to supply product to Virbac through month-to-month supply agreements until the sale of our FeLV manufacturing rights to them in March 2004. Subsequent to the completion of the sale there will be no further product sales of the FeLV vaccine.

(4) Inventories

Inventories consist solely of finished goods at December 31, 2004. During the year ended December 31, 2003, we wrote off finished goods inventory of approximately $109,000, representing the cost of research and development product we may not realize. The inventory write-off was charged to research and development expenses.

(5) Investments

Cash Equivalents and Short-term Investments

Our unrealized holding gains and losses in available for sale securities are as follows at December 31, 2004 and 2003 (in thousands):

	2004		2003	
	Unrealized Holding		Unrealized Holding	
	Gains	Losses	Gains	Losses
Government backed securities	$ —	$ 128	$ —	$ 19
Corporate debt securities	—	19	—	—
Equity securities	—	—	182	—
	$ —	$ 147	$ 182	$ 19

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Available-for-sale securities consisted of the following at December 31, 2004 and 2003 (in thousands):

	2004		2003	
	Cost	Estimated Fair Value	Cost	Estimated Fair Value
Institutional money market funds	$ 4,054	$ 4,054	$ 15,513	$ 15,513
Corporate debt securities	9,519	9,390	1,001	1,001
Taxable auction preferreds	10,746	10,750	20,900	20,900
Government backed securities	43,216	42,995	28,980	28,961
Short term municipals	9,900	9,900	12,700	12,700
	$ 77,435	$ 77,089	$ 79,094	$ 79,075

Proceeds from maturities of available for sale securities amounted to $126,054,000, $100,225,000 and $60,950,000 for the years ended December 31, 2004, 2003, and 2002, respectively. No available for sale securities were sold before their maturity in 2004, 2003 and 2002. Gross realized gains and gross realized losses included in earnings as a result of those maturities were immaterial for each of the years ended December 31, 2004, 2003 and 2002, respectively. The amount of net unrealized holding gains (losses) included in comprehensive income amounted to $(310,000), $225,000 and $126,000 for the years ended December 31, 2004, 2003 and 2002, respectively.

Of the available-for-sale securities listed above, at December 31, 2004 and 2003, approximately $6,148,000 and $15,514,000, respectively have been classified as cash and cash equivalents on our consolidated balance sheet. Approximately $70,941,000, and $63,561,000 have been classified as short-term investments at December 31, 2004 and 2003, respectively.

The contractual maturities of available for sale securities at December 31, 2004 are $57,908,000 in 2005, $4,289,000 in 2006, $992,000 in 2007 and $13,900,000 between 2025 and 2043. Securities with contractual maturities between 2025 and 2043 are auction rate notes and similar instruments and are classified as short term investments as the Company has the intent to sell these securities as needed.

Long-term Investments

On May 18, 2000, we committed $3,000,000 to become a limited partner in a limited partnership, called Applied Genomic Technology Capital Fund (AGTC), which will invest principally in companies that apply genomic technologies and information in their offerings of products and services or that are engaged in research and development involving genomic technologies. Capital contributions to the limited partnership are made as requested by the general partner. As of December 31, 2004, we have invested $2,250,000 in this entity ($1,875,000 as of December 31, 2003) and have included this amount in non-current other assets. This investment is accounted for under the cost method, as our ownership is approximately 2%. In order to assess whether or not there has been an other than temporary decline in the value of this investment, we analyze several factors including: (i) the carrying value of the limited partnership's investments in its portfolio companies, (ii) how recently the investments in the portfolio companies have been made, (iii) the post-financing valuations of those investments, (iv) the level of un-invested capital held by the limited partnership and (v) the overall trend in venture capital valuations. Based on these analyses, during the years ended December 31, 2004, 2003, and 2002, we concluded that an other than temporary decline in the value of this

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

investment has occurred and have reduced the carrying value (the cost of our investment in this partnership) by $67,000, $217,000, and $121,000, respectively. Our investment balance aggregated $1,844,000 and $1,537,000 at December 31, 2004 and 2003, respectively. The general partner of the limited partnership is AGTC Partners, L.P. Noubar Afeyan, Ph.D., who is one of our directors, is the Chairman and Senior Managing Director and CEO of Flagship Ventures, a partnership of funds including AGTC and, until its dissolution during 2004, NewcoGen Group Inc. Garo H. Armen, Ph.D., our chairman and chief executive officer, was a director of NewcoGen Group Inc. until its dissolution during 2004.

(6) Plant and Equipment, net

Plant and equipment, net at December 31, 2004 and 2003 consists of the following (in thousands):

	2004	2003	Estimated Depreciable Lives
Furniture, fixtures and other	$ 1,523	$ 1,278	3 to 10 years
Laboratory and manufacturing equipment	6,428	9,142	4 to 10 years
Leasehold improvements	22,324	26,641	2 to 12 years
Software and computer equipment	5,273	3,053	3 years
	35,548	40,114	
Less accumulated depreciation and amortization	(10,560)	(15,268)	
	$ 24,988	$ 24,846	

Plant and equipment, net retired and removed from the accounts aggregated $72,000 and $27,000 (net book value) for the years ended December 31, 2004 and 2003, respectively.

(7) Goodwill and Other Intangible Assets

During 2004, we realized a gain on our sale of the manufacturing rights to the feline leukemia virus vaccine. We utilized acquired state net operating loss carryforwards to reduce the taxable gain and accordingly we have reduced goodwill by $509,500 as the associated deferred tax asset had a 100% valuation allowance recorded against it at acquisition.

The following table presents (in thousands) certain information on our intangible assets as of December 31, 2004. Our intangible assets are being amortized over their estimated useful lives of ten years, with no estimated residual values.

		As of December 31, 2004			As of December 31, 2003		
	Weighted Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortizing intangible assets:							
Core and developed technology	10 years	$11,073	$ 4,217	$6,856	$11,073	$ 3,108	$7,965

Amortization expense related to core and developed technology amounted to $1,109,000, $1,107,000, and $1,107,000 for 2004, 2003 and 2002, respectively. Amortization expense is estimated as $1,107,000 for each of the years 2005 — 2009 and $1,320,000 thereafter.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(8) Income Taxes

As of December 31, 2004, we have available net operating loss carryforwards of approximately $311,305,000 and $221,380,000 for federal and state income tax purposes, respectively, which are available to offset future federal and state taxable income, if any, and expire between 2008 and 2024, and 2005 and 2024, respectively. These net operating loss carryforwards include approximately $88,035,000 for federal income tax purposes, acquired in our mergers. Our ability to use such net operating losses is limited by change in control provisions under Internal Revenue Code Section 382 or may expire unused. In addition, we have approximately $5,539,000 and $2,827,000 of federal and state research and development credits, respectively, available to offset future taxable income. These federal and state research and development credits expire between 2020 and 2025, and 2015 and 2020, respectively. The potential impacts of such provisions are among the items considered and reflected in management's assessment of our valuation allowance requirements.

The tax effect of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities as of December 31, 2004 and 2003, are presented below (in thousands):

	2004	2003
Net operating loss carryforwards	$ 118,994	$ 104,126
Start-up expenses	80	634
Research and development tax credit	8,366	7,652
Other temporary differences, net	(2,107)	282
Gross deferred tax assets	125,333	112,694
Less: valuation allowance	(125,333)	(112,694)
Net deferred tax asset	$ —	$ —

In assessing the realizablility of deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. We consider projected future taxable income and tax planning strategies in making this assessment. In order to fully realize the deferred tax asset, we will need to generate future taxable income sufficient to utilize net operating losses prior to their expiration. Based upon our history of not generating taxable income due to our business activities focused on product development, we believe that it is more likely than not that the deferred tax assets will not be realized due to the uncertainty of future earnings. Accordingly, a valuation allowance has been established for the full amount of the deferred tax assets. The valuation allowance on the deferred tax asset has increased by $12,639,000 during the year ended December 31, 2004 and increased by $31,209,000 during the year ended December 31, 2003. The valuation allowance includes amounts pertaining to tax deductions relating to stock exercises for which any subsequently recognized tax benefit will be recorded as an increase to additional paid-in capital. Of the deferred tax assets related to the federal net operating loss carryforwards, approximately $29,932,000, at December 31, 2004, relates to net operating loss carryforwards acquired in our mergers. If adjustments are made to the valuation allowance related to these net operating loss carryforwards, such adjustment will result in reductions to our goodwill and other acquired intangible assets. Due to the gain realized on our sale of the manufacturing rights to the feline leukemia virus vaccine in March 2004, and the use of acquired state net operating loss carryforwards to reduce the estimated taxable gain, we have reduced goodwill by $509,500 representing the tax

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

benefit realized as the associated deferred tax asset had a 100% valuation allowance recorded against it at acquisition.

Income tax benefit attributable to loss from continuing operations was nil for each of the years ended December 31, 2004, 2003, and 2002, and differed from the amounts computed by applying the U.S. Federal income tax rate of 35% to loss before income taxes as a result of the following (in thousands):

	2004	2003	2002
Computed "expected" federal tax benefit	$ (19,440)	$ (23,077)	$ (19,557)
(Increase) reduction in income taxes benefit resulting from:			
Change in valuation allowance	12,639	31,209	(23,957)
Adjustment to deferred tax asset for net operating loss carryforward waiver election	—	—	41,858
State and local income benefit net of Federal income tax benefit	(3,249)	(3,751)	(3,319)
Other, net	10,050	(4,381)	4,975
	$ —	$ —	$ —

(9) Accrued Liabilities

Accrued liabilities consist of the following at December 31, 2004 and 2003 (in thousands):

	2004	2003
Clinical trials	$ 3,219	$ 3,063
Professional fees	2,600	1,434
Payroll	1,880	1,506
Clinical contractors	1,334	1,928
Accrued loss on Aronex Pharmaceuticals Inc. property lease	502	497
Lexington facility construction	—	1,338
Other	1,327	1,536
	$ 10,862	$ 11,302

(10) Equity

Our authorized capital stock consists of 100,000,000 shares of common stock, $0.01 par value per share, and 25,000,000 shares of preferred stock, $0.01 par value per share. Our board of directors is authorized to issue the preferred stock and to set the voting, conversion and other rights.

As part of the Aronex Pharmaceuticals Inc. merger in 2001, we assumed warrants to purchase our common stock that are exercisable for approximately 104,000 shares of our common stock with a weighted average exercise price of $52.94 per share of which approximately 38,000 expired during 2004, while 57,000 expire in 2005, and 9,000 expire in 2007. In addition, we issued warrants to purchase approximately 26,000 shares of our common stock at a weighted average exercise price of $13.96, which expire during 2005.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In January 2002, we sold 4,000,000 shares of our common stock, $0.01 par value, at $15.00 per share and received net proceeds of approximately $56,011,000.

In January 2003, we sold 6,250,000 shares of our common stock, $0.01 par value, at an average price of $9.92 per share. We received net proceeds of approximately $59,538,000.

In February 2004, we sold 5,400,000 shares of our common stock, $0.01 par value, at an average price of $10.50 per share. We received net proceeds of approximately $53,520,000.

In August 2004, we filed a Form S-3 universal registration statement with the Securities and Exchange Commission for the registration and potential issuance of up to $100 million of our securities (see Note 19).

In a private placement in September 2003, we sold 31,620 shares of our series A convertible preferred stock, par value $0.01 per share, for proceeds of approximately $31,606,000, after deducting offering costs of approximately $14,000. Under the terms and conditions of the Certificate of Designation creating the series A convertible preferred stock, this stock is convertible by the holder at any time into our common stock, is non-voting, carries a 2.5% annual dividend yield, has an initial conversion price of $15.81, per common share, subject to adjustment, and is redeemable by us at its face amount ($31,620,000) on or after September 24, 2013. The Certificate of Designation does not contemplate a sinking fund. The series A preferred stock ranks senior to our common stock. In a liquidation, dissolution or winding up of us, the series A preferred stock's liquidation preference must be fully satisfied before any distribution could be made to the common stock. Other than in such a liquidation, no terms of the series A preferred stock affect our ability to declare or pay dividends on our common stock as long as the series A preferred stock's dividends are accruing. Prior to September 24, 2005, unless there remain fewer than 16,000 shares of series A preferred stock still outstanding, we cannot create a class of stock senior to the series A preferred stock without the approval of a majority of record holders of that stock. The liquidation value of this series A convertible preferred stock is equal to $1,000 per share outstanding plus any accrued unpaid dividends. Accrued and unpaid dividends of Series A Convertible preferred stock aggregated $197,625 or $6.25 per share at December 31, 2004.

(11) Stock-based Compensation Plans

Our 1999 Equity Incentive Plan, as amended, (the 1999 equity plan) authorizes the grant of incentive stock options within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended, and non-qualified stock options for the purchase of an aggregate of 10,000,000 shares (subject to adjustment for stock splits and similar capital changes and exclusive of options exchanged at the consummation of mergers) to employees and, in the case of non-qualified stock options, to consultants and directors as defined in the equity plan. The board of directors has appointed the compensation committee to administer the 1999 equity plan.

The following summarizes activity for options granted to directors and employees, including those with an exercise price equal to the fair value of the underlying shares of common stock at the date of grant ("at-the-money exercise price"), those with an exercise price greater than the fair value of the underlying

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

share of common stock at the date of grant, and those with an exercise price less than the fair value of the underlying share of common stock at the date of grant ("in-the-money exercise price"):

	Options	Options Exercisable at End of Year	Weighted Average Grant-Date Fair Value	Weighted Average Exercise Price
Outstanding December 31, 2001	2,427,997	1,160,736		
Granted	936,150		$ 6.92	$ 11.72
Exercised	(29,328)		—	8.70
Forfeited	(320,307)		—	15.61
Outstanding December 31, 2002	3,014,512	1,492,230		
Granted	1,125,000		5.30	9.23
Exercised	(129,262)		—	8.61
Forfeited	(620,017)		—	21.58
Outstanding December 31, 2003	3,390,233	1,357,937		
Granted	2,056,617		5.07	8.81
Exercised	(193,706)		—	4.12
Forfeited	(808,502)		—	10.56
Outstanding December 31, 2004	4,444,642	1,381,037		

During 2002, 2003 and 2004 all options were granted to employees and directors at exercise prices equal to the fair value of the shares of common stock on the grant date. Compensation expense recognized with respect to options granted to employees and directors totaled approximately $463,000, $358,000 and $482,000 for the years ended December 31, 2004, 2003 and 2002, respectively. These charges relate to options granted prior to 2002 with exercise prices which were less than the fair value of the shares of common stock at the date of grant and modifications to outstanding options. Deferred compensation at December 31, 2004 of $27,000 will be recognized over the remaining vesting period of the options.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following summarizes activity for options granted to outside advisors:

	Options	Options Exercisable at End of Year	Weighted Average Grant-Date Fair Value	Weighted Average Exercise Price
Outstanding December 31, 2001	861,349	860,594		
Granted	115,288		$ 8.26	$ 12.98
Exercised	(48,168)		—	6.38
Outstanding December 31, 2002	928,469	846,288		
Granted	63,000		5.44	7.78
Exercised	(1,405)		—	1.45
Forfeited	(1,334)		—	11.06
Outstanding December 31, 2003	988,730	846,569		
Granted	210,000		8.21	9.98
Exercised	(55,000)		—	1.45
Forfeited	(2,666)		—	11.06
Outstanding December 31, 2004	1,141,064	947,127		

The outstanding options exclude 47,652 options granted to outside advisors with an exercise price which was determined based on the fair value of the underlying shares of common stock beginning on the second anniversary of the grant date as the options vest; these options vested prior to December 31, 1998 with an exercise price of approximately $11.17 per share and compensation expense was charged at such time.

The charge to operations related to options we granted to outside advisors totaled approximately $804,000, $533,000 and $353,000 for the years ended December 31, 2004, 2003, and 2002, respectively.

At December 31, 2004, unrecognized expense for options granted to outside advisors for which performance (vesting) has not yet been completed but the exercise price of the option is known is approximately $1,121,000; such amount is subject to change each reporting period based upon changes in the fair value of our common stock, estimated volatility and the risk free interest rate until the outside advisor completes his or her performance under the option agreement.

A summary of our options outstanding and exercisable, as of December 31, 2004, follows:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$ 1.45 - $ 5.00	543,706	2.0	$ 1.97	540,956	$ 1.95
$ 5.01 - $10.00	2,042,464	8.5	7.75	370,774	7.96
$10.01 - $15.00	2,889,235	6.9	11.81	1,297,480	12.38
$15.01 - $20.00	155,756	5.9	16.37	118,954	16.34
	5,631,161		$ 9.51	2,328,164	$ 9.45

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

We had 4,426,615 and 3,997,092 options outstanding at December 31, 2003 and 2002 respectively with weighted average exercise prices of $9.70 and $11.84 respectively.

The preceding table excludes 2,197 options assumed in our merger with Aronex Pharmaceuticals, Inc. As of December 31, 2004, all of these options were outstanding and exercisable with a weighted average remaining life of 1.6 years and a weighted average exercise price of $68.91 per share.

Since the 1995 reorganization described in Note 1, Founder Holdings Inc. has directly or indirectly owned a significant portion of our common stock. During 1996, Founder Holdings Inc. approved a stock option plan (Founder's Plan). In accordance with U.S. generally accepted accounting principles, the Founder's Plan is accounted for as if it had been adopted by us and treated as a contribution to stockholders' equity. Pursuant to the provisions of the Founder's Plan, Founder Holdings Inc. may grant options to our officers, directors, employees, and consultants to purchase common stock of Founder Holdings Inc. The terms of the options, including exercise price and vesting period, are set at the date of grant. The options have a contractual life of ten years and may not have an exercise price less than the fair value of a share of common stock of Founder Holdings Inc. at date of grant. Options to purchase a maximum of 300 shares may be granted under the Founder's Plan.

During 1996, Founder Holdings Inc. granted options to purchase approximately 160 shares to directors and employees at a weighted average exercise price of $9,006 per share and a weighted average grant-date fair value of approximately $4,301 per share. During 1997, Founder Holdings Inc. granted options to purchase approximately 14 shares to a director at a weighted average grant-date fair value of $16,407 per share. All the options were immediately vested and exercisable. All of the options remain outstanding and none have been exercised.

During 1996, Founder Holdings Inc. granted options to purchase approximately 76 shares to consultants at a weighted average exercise price of $9,006 per share and a weighted average grant-date fair value of approximately $5,535 per share. All of the consultants' options were immediately vested and exercisable. All of the consultants' options remain outstanding and none have been exercised.

Under the 1999 Employee Stock Purchase Plan, employees may purchase shares of common stock at a discount from fair value. There are 300,000 shares of common stock reserved for issuance under the purchase plan. The purchase plan is intended to qualify as an employee stock purchase plan within the meaning of Section 423 of the Internal Revenue Code of 1986, as amended. Rights to purchase common stock under the purchase plan are granted at the discretion of the compensation committee, which determines the frequency and duration of individual offerings under the plan and the dates when stock may be purchased. Eligible employees participate voluntarily and may withdraw from any offering at any time before the stock is purchased. Participation terminates automatically upon termination of employment. The purchase price per share of common stock in an offering will not be less than 85% of the lesser of its fair value at the beginning of the offering period or on the applicable exercise date and may be paid through payroll deductions, periodic lump sum payments or a combination of both. The plan terminates on November 15, 2009. As of December 31, 2004, 95,020 shares of common stock have been purchased under the plan.

Effective June 11, 2003, our stockholders approved our Director's Deferred Compensation Plan permitting each outside director to defer all, or a portion of, their cash compensation until their service as a director ends or until a specified date. 100,000 shares of our common stock have been reserved for issuance under this plan. As of December 31, 2004, no shares have been issued. The plan allows eligible directors to

defer all, or a portion, of their cash compensation into a cash account or a stock account. Amounts deferred to a cash account will earn interest at the rate paid on one-year Treasury bills with interest added to the account annually. Amounts deferred to a stock account will be converted on an annual basis into a number of units representing shares of our common stock equal to the amount of compensation which the participant has elected to defer to the stock account divided by the applicable stock price for our common stock. The applicable price for our common stock means the average of the closing price of our common stock for all trading days during the calendar year preceding the conversion date as reported by the Nasdaq National Market. Pursuant to this plan 17,265 units, each representing a share of our common stock based on a common stock price of $8.63, were credited to participants stock accounts as of December 31, 2004. The compensation charge related to this plan was immaterial in 2004.

(12) License, Research and Other Agreements

In November 1994, we entered into a Patent License Agreement with the Mount Sinai School of Medicine, or Mount Sinai (the Mount Sinai Agreement). Through the Mount Sinai Agreement, we obtained an exclusive worldwide license to patent rights relating to the heat shock protein technology that resulted from the research and development performed by Dr. Pramod Srivastava, our founding scientist and one of our directors. We agreed to pay Mount Sinai a royalty on the net sales of products covered by the licensed patent rights and also provided Mount Sinai with a 0.45% equity interest in the company (approximately 62,000 shares valued at approximately $90,000 at the time of issuance). The term of the Mount Sinai Agreement ends when the last of the licensed patents expires (2018) or becomes no longer valid. If we fail to pay royalties that are due under the agreement, Mount Sinai may issue written notice to us. If we continue to fail to pay royalties after 60 days of the written notice, Mount Sinai can terminate the agreement. The Mount Sinai Agreement requires us to use due diligence to make the products covered by the licensed patent rights commercially available, including a requirement for us to use best efforts to reach a number of developmental milestones which have been achieved. If we fail to comply with the diligence provisions of the agreement, Mount Sinai could take actions to convert our exclusive license to a non-exclusive license after six months written notice. The Mount Sinai Agreement does not contain any milestone payment provisions.

During 1995, Dr. Srivastava moved his research to Fordham University (Fordham). We entered into a sponsored research and technology license agreement with Fordham in March 1995 (the Fordham Agreement) relating to the continued development of the heat shock protein technology and agreed to make payments to Fordham to sponsor Dr. Srivastava's research. Through the Fordham Agreement, we obtained an exclusive, perpetual, worldwide license to all of the intellectual property, including all the patent rights that resulted from the research and development performed by Dr. Srivastava at Fordham. We also agreed to pay Fordham a royalty on the net sales of products covered by the Fordham Agreement through the last expiration date on the patents under the agreement (2018) or when the patents become no longer valid. The agreement does not contain any milestone payment provisions or any diligence provisions. Dr. Srivastava moved his research to the University of Connecticut Health Center during 1997 and, accordingly, the parts of the agreement related to payments for sponsored research at Fordham terminated in mid-1997. During the term of the agreement we paid approximately $2,374,000.

We have two agreements with the University of Connecticut Health Center, or UConn: (1) a research agreement under which we pay UConn to sponsor research in Dr. Srivastava's laboratory and which provides us with an option to license technologies discovered and developed as a result of that research, and (2) a license agreement that provides us with the exclusive, worldwide rights to technologies discovered and

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

developed under the research agreement, the License Agreement. Each agreement is discussed in more detail below.

In February 1998, we entered into a research agreement with UConn, and Dr. Srivastava (the Research Agreement) relating to the continued development of the heat shock protein technology. The Research Agreement provides us with an option to license inventions stemming from the research that we sponsor at UConn and provides certain pre-determined royalty rates for licensed inventions. The Research Agreement had an initial term of five years and called for minimum payments to UConn totaling $5,000,000, payable quarterly at a rate of $250,000 (contingent upon the continuing employment of Dr. Srivastava by UConn). The Research Agreement was amended during 2002 and again on December 31, 2003 to: (1) extend the term of the Research Agreement to December 31, 2003 and then to December 31, 2008, and (2) provide for an annual payment of $1,200,000 payable quarterly at the rate of $300,000 during 2003 and then an annual payment of $1,350,000 payable quarterly at the rate of $337,500 from 2004 thru 2008. UConn may terminate the Research Agreement upon 60 days written notice if it is unable to fulfill the terms of the Research Agreement. We can terminate the Research Agreement by giving 30 days written notice in the event that Dr. Srivastava terminates his employment by UConn or is otherwise unable to continue his research at UConn. Research and development expense in the accompanying 2004, 2003 and 2002 consolidated statements of operations includes approximately $1,350,000, $1,200,000, and $1,000,000, respectively, of costs incurred under the Research Agreement.

In May 2001, we entered into a License Agreement with UConn. Through the License Agreement, we obtained an exclusive worldwide license to patent rights resulting from inventions discovered under the Research Agreement. The term of the License Agreement ends when the last of the licensed patents expires (2019) or becomes no longer valid. UConn may terminate the License Agreement: (1) if, after 30 days written notice for breach, we continue to fail to make any payments due under the License Agreement, or (2) we cease to carry on our business related to the patent rights or if we initiate or conduct actions in order to declare bankruptcy. We may terminate the License Agreement upon 90 days written notice. The License Agreement contains aggregate milestone payments of approximately $1.2 million for each product we develop covered by the licensed patent rights. These milestone payments are contingent upon regulatory filings, regulatory approvals and commercial sales of products. We have also agreed to pay UConn a royalty on the net sales of products covered by the License Agreement as well as annual license maintenance fees beginning in May 2006. Royalties otherwise due on the net sales of products covered by the License Agreement may be credited against the annual license maintenance fee obligations. To date, we have paid approximately $55,000 to UConn under the License Agreement. The License Agreement gives us complete discretion over the commercialization of products covered by the licensed patent rights but also requires us to use commercially reasonable diligent efforts to introduce commercial products within and outside the United States. If we fail to meet these diligence requirements, UConn may be able to terminate the License Agreement.

In March 2003, we entered into an Amendment Agreement that amended certain provisions of both the Research Agreement and the License Agreement. The Amendment Agreement provides that any time we elect to exercise our option to license inventions discovered or developed as a result of research we sponsor at UConn, such inventions will be automatically covered under the terms of our existing License Agreement with UConn. In consideration for execution of the Amendment Agreement and for the license of additional patent rights, we agreed to pay UConn an up-front payment and to make future payments for each patent or patent application with respect to which we exercise our option under the Research Agreement. Through December 31, 2004, we have paid approximately $94,000 to UConn under the Amendment Agreement.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

We entered into various additional research agreements with educational and medical institutions expiring through August 2005. These agreements require initial and quarterly payments totaling approximately $2,467,000 (of which $130,000, $237,000, and $426,000 was paid during the years ended December 31, 2004, 2003 and 2002, respectively, and $254,000 remains committed).

We have entered into various agreements with institutions and contract research organizations to conduct our clinical studies. Under these agreements, subject to the enrollment of patients and performance by the institution of certain services, we have estimated our payments to be approximately $55,965,000 over the term of the studies. For the years ended December 31, 2004, 2003 and 2002, approximately, $7,080,000, $12,180,000, and $7,902,000, respectively, have been expensed in the accompanying consolidated statements of operations related to these clinical studies. Through December 31, 2004, approximately $26,314,000 of this estimate has been paid or accrued. The timing of our expense recognition and future payments related to these agreements is dependent on the enrollment of patients and documentation received from the institutions.

In December 2000, Aronex Pharmaceuticals Inc., a company we acquired in July 2001, entered into a license agreement with Sumitomo Pharmaceuticals Co., Ltd., the Sumitomo Agreement. In September 2003, this agreement was amended and restated. The Sumitomo Agreement grants us the exclusive right to an allowed U.S. patent application that contains certain claims related to Aroplatin. Except for the treatment of hepatoma, the Sumitomo Agreement gives us the exclusive right to make, use, develop, import and sell Aroplatin in the United States. The term of the Sumitomo Agreement ends when the licensed patent expires in 2020. Either party may terminate the Sumitomo Agreement by giving written notice to the other party upon the occurrence of the following events: (1) if the other party makes an assignment for the benefit of creditors, is the subject of bankruptcy proceedings, or has a trustee or receiver appointed for substantially all of its assets, (2) if the other party becomes insolvent, or (3) if the other party materially defaults in its performance under the Sumitomo Agreement. Prior to our acquisition of Aronex Pharmaceuticals Inc., Sumitomo received a $500,000 up-front payment in 2001 from Aronex Pharmaceuticals Inc. and will receive subsequent milestone payments from us in the aggregate of up to $3,500,000 if regulatory filings, regulatory approval and sales in connection with Aroplatin occur. We agreed to pay Sumitomo royalties on the net sales of Aroplatin in the United States upon commercialization of the product.

In June 1988, a predecessor to Aronex Pharmaceuticals Inc. entered into an exclusive license agreement with: (1) The Board of Regents of The University of Texas System, and (2) The University of Texas System Cancer Center, collectively referred to as the “University of Texas”. As amended, the exclusive license agreement grants us the exclusive, worldwide license to patents containing claims that relate to Aroplatin. The term of the exclusive license agreement expires when the last licensed patent expires (2010). Either party may terminate the agreement upon 60 days written notice if the other party materially breaches any material terms of the exclusive license agreement. The agreement requires that we meet certain diligence provisions, specifically the conduct of ongoing and active research, developmental activities, marketing, clinical testing, or a licensing program, directed towards the production and sale of Aroplatin. If we fail to comply with these diligence provisions, the University of Texas may be able to terminate the exclusive license agreement upon 90 days written notice. The University of Texas also has the right to terminate the exclusive license agreement in the event that: (1) we discontinue our business, (2) we have a receiver or trustee appointed for our assets, or (3) we are the subject of a bankruptcy proceeding. We agreed to pay the University of Texas royalties on the net sales of Aroplatin. The applicable royalty percentage is dependent on the level of net sales of Aroplatin. We have also agreed to make a $200,000 milestone payment to the University of Texas if the FDA approves a

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

new drug application for Aroplatin. To date, we have not made any payments to the University of Texas under the exclusive license agreement.

We have various comprehensive agreements with corporate partners that allow the partners to use our QS-21 adjuvant in numerous vaccines including, but not limited to, hepatitis, lyme disease, human immunodeficiency virus (HIV), influenza, cancer, and malaria. These agreements grant exclusive worldwide rights in some fields of use, and co-exclusive or non-exclusive rights in others. The agreements call for royalties to be paid to us by the partner on its future sales of licensed vaccines that include QS-21.

(13) Certain Related Party Transactions

Garo H. Armen, Ph.D., our Chairman and Chief Executive Officer, is a director of Elan Corporation, p.l.c., and is a nominal employee of a different wholly-owned subsidiary of Elan. For the year ended December 31, 2004, no revenues were earned under our agreements with these entities (as noted above) and accordingly, at December 31, 2004, we had no amounts due to us under these agreements.

In March 1995, we entered into a consulting agreement with Dr. Pramod Srivastava, our scientific founder and one of our directors. This agreement was to expire in March 2005 but was extended for an additional one-year period. This agreement will automatically renew for additional on-year periods unless either party decides not to extend the agreement. In 2005, 2004 and 2003, we paid Dr. Srivastava cash bonuses of $135,000, $135,000 and $100,000, respectively and granted him options to purchase 120,000, 120,000 and 50,000, shares, respectively of our common stock for services performed in 2004, 2003 and 2002. These options vest over 4 and 5 years and are exercisable at $6.92, $10.18 and $7.45 per share, respectively.

In September 2004, we entered into a $60,000 one-year service agreement with Techsoft, Inc. d.b.a Medical Systems and NG Techsoft Pvt. for data management services. Navin Gupta is the President and CEO of Techsoft, Inc. d.b.a Medical Systems, Director and Chairman of the Board of NG Techsoft Pvt Ltd. and is the spouse of Renu Gupta, our Senior Vice President of Development. As of December 31, 2004, approximately $35,000 due under this agreement is included in accrued expenses. No amounts were paid under this agreement for the year ended December 31, 2004.

On October 22, 2004, we executed a letter of intent with Symphony Capital LLC for a potential transaction to provide funding for certain of our research programs. One of our directors, Mr. Mark Kessel, is a managing director of Symphony Capital LLC. During February 2005, this potential transaction was terminated. During 2004, we made payments to Symphony Capital LLC of $125,000 for development planning activities. At December 31, 2004, we had accrued $159,000 due to Symphony Capital LLC. During 2005, $196,000 related to such activities, was paid to Symphony Capital LLC for activities up to termination, including amounts accrued at December 31, 2004.

(14) Leases

We lease manufacturing, research and development, and office facilities under various long-term lease arrangements. Rent expense (before sublease income) included in loss from continuing operations was approximately $3,685,000, $4,691,210, and $3,189,000 for the years ended December 31, 2004, 2003, and 2002, respectively.

On December 6, 2002, we entered into a lease agreement, effective August 2003, to lease a 162,000 square foot facility in Lexington, Massachusetts. We currently occupy 94,000 square feet and plan to

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

expand to 132,000 square feet on or before August 2005 with a second planned expansion to 162,000 square feet on or before March 2006. We have transferred our Woburn operations into this facility. Our Woburn manufacturing operations were transferred during the first quarter of 2004 and accordingly, the Woburn lease was extended through March 14, 2004. The future minimum rental payments under our leases of our Framingham and Lexington facilities, which expire in 2010 and 2013, respectively, our Texas facility, which expires 2008, and our New York City Headquarters, which expires in 2006, are as follows (in thousands):

Year ending December 31,	
2005	$ 3,178
2006	3,723
2007	3,376
2008	2,885
2009	2,893
Thereafter	8,183
Total	$ 24,238

In connection with the New York City office space and the Framingham and Lexington facilities we maintain fully collateralized letters of credit of $78,000, $375,000 and $1,005,000, respectively. No amounts have been drawn on the letters of credit as of December 31, 2004.

Included in accrued liabilities and other long-term liabilities on the consolidated balance sheet at December 31, 2004 and 2003 is approximately $1,378,000 and $1,835,000, respectively, representing amounts due under our non-cancelable lease (net of sub-lease income) of the manufacturing, research, and office facility located in The Woodlands, Texas assumed in the Aronex Pharmaceuticals Inc. merger. The liability represents the estimated future amounts due (net of sublease income) at the balance sheet date through to expiry of the lease. During the year ended December 31, 2004, the liability decreased by $457,000 primarily related to payments made for rent and expenses. During the year ended December 31, 2003, the liability increased by $109,000 primarily related to payments made for rent and expenses of approximately $577,000 off-set by an increase in the liability of $686,000 due to a reduction in expected future sub-lease income. During the year ended December 31, 2002, the liability decreased by $393,000 primarily related to payments made for rent and expenses of approximately $621,000 off-set by a net increase in the liability of $228,000 due to a reduction in costs and expected future income related to sub-lease income. Remaining minimum payments (before sub-lease income) are: in 2005 through 2007, $578,000 per year; and $48,000 for 2008.

Beginning in 2002, we have subleased part of our Framingham and Texas facilities and are currently entitled to receive approximately $1,292,000, $1,375,000, $753,000, $535,000, and $516,000 for the years 2005, 2006, 2007, 2008 and 2009, respectively, of sub-lease rental payments. For the year ended December 31, 2004, 2003 and 2002, we earned rental income of $1,356,000, $883,000 and $272,000, respectively, from our subleased facilities which income is recorded in operating expenses as an offset to rental expense.

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(15) Debt

As of December 31, 2004 we have approximately $9,922,000 of debt outstanding.

On July 17, 2003, we entered into a $17,100,000 debt facility with GE Capital pursuant to which we have borrowed $17,042,000 to finance the build-out of our Lexington, Massachusetts facility. As we utilized the debt facility, separate promissory notes were executed. Each note has a term of thirty-six months with the interest rate based on the Federal Reserve's three year Treasury Constant Maturities Rate plus 1.875% fixed at the closing of each note, ranging from 3.92% to 4.42%. Each note is collateralized by a 50% cash security deposit (classified as restricted cash in the accompanying consolidated balance sheets) as well as our fixed assets, accounts receivable, inventory and intangible assets excluding our intellectual property. As of December 31, 2004 we had approximately $9,776,000 outstanding. The aggregate maturities of our outstanding debt for each of the years subsequent to December 31, 2004 are as follows 2005 — $5,264,000, 2006 — $4,468,000 and 2007 — $44,000.

At December 31, 2004, approximately $146,000 of debentures we assumed in our merger with Aquila Biopharmaceuticals are outstanding. These debentures carry interest at 7% and are callable, accordingly they are classified as part of our short-term debt.

(16) Contingencies

Antigenics, our Chairman and Chief Executive Officer Garo Armen, and two investment banking firms that served as underwriters in our initial public offering have been named as defendants in a civil class action lawsuit filed on November 5, 2001 in the Federal District Court for the Southern District of New York on behalf of a class of purchasers of our stock between February 3, 2000 and December 6, 2000. Similar complaints were filed against about 300 other issuers, their underwriters, and in many instances their directors and officers. These cases have been coordinated under the caption *In re Initial Public Offering Securities Litigation*, Civ. No. 21 MC 92 (SAS), by order dated August 9, 2001. The suit against Antigenics and Dr. Armen alleges that the brokerage arms of the investment banking firms charged secret excessive commissions to certain of their customers in return for allocations of our stock in the offering. The suit also alleges that shares of our stock were allocated to certain of the investment banking firms' customers based upon agreements by such customers to purchase additional shares of our stock in the secondary market. The complaint alleges that Antigenics is liable under Section 11 of the Securities Act of 1933, as amended (the Securities Act), and Dr. Armen is liable under Sections 11 and 15 of the Securities Act because our registration statement did not disclose these alleged practices. On April 19, 2002, the plaintiffs in this action filed an amended class action complaint, which contains new allegations. Again, similar amended complaints were filed with respect to the other 300 companies. In addition to the claims in the earlier complaint, the amended complaint alleges that Antigenics and Dr. Armen violated Sections 10(b) and 20 of the Securities Exchange Act and SEC Rule 10b-5 by making false and misleading statements and/or omissions in order to inflate our stock price and conceal the investment banking firms' alleged secret arrangements. The claims against Dr. Armen, in his individual capacity, have been dismissed without prejudice. On July 15, 2002, Antigenics and Dr. Armen joined the Issuer Defendants' Motion to Dismiss the Consolidated Amended Complaints. By order of the Court, this motion set forth all "common issues," i.e., all grounds for dismissal common to all or a significant number of Issuer Defendants. The hearing on the Issuer Defendant's Motion to Dismiss and the other Defendants' motions to Dismiss was held on November 1, 2002. On February 19, 2003, the Court issued its opinion and order on the Issuer Defendants' Motion to Dismiss. The Court granted

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Antigenics motion to dismiss the Rule 10(b)-5 and Section 20 claims with leave to amend and denied our motion to dismiss the Section 11 and Section 15 claims. On June 14, 2004, papers formalizing a proposed settlement among the plaintiffs, Issuer Defendants, and issuers were presented to the Federal District Court for the Southern District of New York, and Antigenics anticipates that a settlement will be reached without incurring significant out-of-pocket costs, after considering insurance. Accordingly, an accrual has not been recorded at December 31, 2004.

On February 19, 2004, Jonathan Lewis, M.D., our former Chief Medical Officer, filed a complaint against us in the United States District Court for the Southern District of New York. The suit alleges that we terminated Dr. Lewis without cause and have failed to pay severance benefits to which Dr. Lewis believes he is entitled. This suit was settled during October 2004. For the year ended December 31, 2004 we recorded a charge in the accompanying consolidated financial statements related to this settlement.

We currently are a party to other legal proceedings as well. While we currently believe that the ultimate outcome of any of these proceedings will not have a material adverse effect on our financial position, results of operations or liquidity, litigation is subject to inherent uncertainty. Furthermore, litigation consumes both cash and management attention.

(17) 401(k) Plan

We sponsor a defined contribution 401(k) savings plan for all eligible employees, as defined. Participants may contribute up to 60% of their compensation, as defined, with a maximum of $13,000 in 2004. Each participant is fully vested in his or her contributions and related earnings and losses. Effective January 1, 2001 we match 75% of the participant's contribution, and effective January 1, 2003, the percentage of participant compensation subject to our matching contribution was changed from 15% to 8% of compensation. Such matching contributions vest over four years. For the years ended December 31, 2004, 2003 and 2002, we charged approximately $477,000, $448,000 and $469,000 to operations for the 401(k) plan.

(18) Acquired In-process Research and Development

On July 30, 2004 we issued 350,000 shares of our common stock and paid $200,000 in cash to Mojave Therapeutics Inc. as consideration to purchase all of its intellectual property and certain scientific assets relating to its heat shock protein based antigen delivery system and other technologies. The total purchase price of the assets was allocated to incomplete acquired technologies under development but not yet technologically feasible or commercialized and which had no alternative future uses. At the date these assets were acquired, none of the purchased technologies under development had achieved technological feasibility and none were being sold on the market. There still remains substantial risk and uncertainty concerning the remaining course of technical development. Because of the great uncertainty associated with these issues and the remaining effort associated with development of these technologies, technological feasibility had not been established at the acquisition date. Accordingly, the value of these purchased assets, $2,888,000, has been charged to acquired in-process research and development during 2004 in the accompanying consolidated statements of operations.

(19) Subsequent Event

On January 25, 2005, we issued $50 million of convertible senior notes in a private placement. Net proceeds from the sale of the notes were approximately $48 million. The notes, which mature in 2025, bear

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

interest semi-annually on February 1 and August 1 each year, at a rate of 5.25% per annum and are initially convertible into common stock at any time at a conversion price of approximately $10.76 per share. Notes surrendered for conversion in connection with certain fundamental changes, as defined, that occur before February 1, 2012 may in certain circumstances be entitled to an increase in the conversion rate per $1,000 principal amount of notes. From February 1, 2012, we may redeem the notes for cash, at a redemption price equal to 100% of the principal amount of the notes, plus any accrued and unpaid interest. On each of February 1, 2012, February 1, 2015 and February 1, 2020, holders may require us to purchase their notes for cash equal to 100% of the principal amount of the notes, plus any accrued and unpaid interest. Holders may require us to repurchase their notes upon a fundamental change, at a repurchase price, in cash, equal to 100% of the principal amount of the notes to be repurchased, plus any accrued and unpaid interest. The notes are senior unsecured obligations and will rank equally with all of our existing and future senior unsecured indebtedness. The notes will be effectively subordinated to all of our existing and future secured indebtedness and all existing and future liabilities of our subsidiaries. The notes do not contain any financial covenants and will not limit our ability to incur additional indebtedness, including senior or secured indebtedness, issue securities, pay dividends or repurchase our securities. The notes and underlying shares of common stock have not been registered under the Securities Act and may not be offered or sold within the United States or to, or for, the account or benefit of, US persons expect pursuant to an exemption form or in a transaction not subject to, the registration requirement of the Securities Act. We are required within 120 days of January 25, 2005 to file a shelf registration statement with the SEC for resales of the notes and the shares of common stock issuable upon conversion of the notes.

(20) Quarterly Financial Data (Unaudited)

The following tables reflects reclassifications of the results of operations of the FeLV activity as discontinued operations for all periods presented.

	Three Months Ended,			
	March 31,	June 30,	September 30,	December 31,
	(In thousands, except per share data)			
2004				
Revenue	$ 109	$ 187	$ 282	$ 129
Loss from continuing operations	(16,229)	(17,044)	(18,474)	(17,004)
Income (loss) from discontinued operations	(926)	13,960	—	(445)
Net loss attributable to common stockholders	(17,353)	(3,281)	(18,672)	(17,646)
Per common share, basic and diluted:				
Loss from continuing operations	$ (0.38)	$ (0.38)	$ (0.41)	$ (0.38)
Income (loss) from discontinued operations	$ (0.02)	$ 0.31	$ —	$ (0.01)
Net loss attributable to common stockholders	$ (0.41)	$ (0.07)	(0.41)	$ (0.39)

ANTIGENICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Three Months Ended,			
	March 31,	June 30,	September 30,	December 31,
	(In thousands, except per share data)			
2003				
Revenue	$ 895	$ 33	$ —	$ 57
Loss from continuing operations	(13,495)	(16,758)	(17,805)	(17,984)
Income (loss) from discontinued operations	4	139	37	(71)
Net loss attributable to common stockholders	(13,491)	(16,619)	(17,794)	(18,254)
Per common share, basic and diluted:				
Loss from continuing operations	$ (0.36)	$ (0.43)	$ (0.45)	$ (0.46)
Income (loss) from discontinued operations	$ —	$ —	$ —	$ —
Net loss attributable to common stockholders	$ (0.36)	$ (0.42)	$ (0.45)	$ (0.46)

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

Not Applicable.

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

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act). Based on this evaluation, our chief executive officer and our chief financial officer concluded that our disclosure controls and procedures were functioning effectively as of the end of the period covered by this annual report to provide reasonable assurance that the Company can meet its disclosure obligations.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in *Internal Control — Integrated Framework*, issued by the Committee of Sponsoring Organizations of the Treadway Commission, our management concluded that our internal control over financial reporting was effective as of December 31, 2004.

KPMG LLP, an independent registered public accounting firm, has audited the consolidated financial statements included in this Annual Report on Form 10-K and, as part of their audit, has issued their report, included herein, (1) on our management's assessment of the effectiveness of our internal control over financial reporting and, (2) on the effectiveness of our internal control over financial reporting.

Changes in Internal Controls Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the fourth quarter of 2004 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Antigenics Inc.:

We have audited management's assessment, included in the accompanying Management's Report on Internal Control Over Financial Reporting, that Antigenics Inc. maintained effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Antigenics Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management's assessment and an opinion on the effectiveness of the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, management's assessment that Antigenics Inc. maintained effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Also, in our opinion, Antigenics Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Antigenics Inc. and subsidiaries as of December 31, 2004 and 2003, and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows for each of the years in the three-year period ended December 31, 2004, and our report dated March 29, 2005 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Princeton, New Jersey
March 29, 2005

PART III

Item 10. *Directors and Executive Officers of the Registrant*

Portions of the response to this item is contained in Item 1A: *"Directors and Executive Officers of the Registrant"* of Part I of this Annual Report on Form 10-K and the remainder is incorporated from the discussion responsive thereto under the caption "Election of Directors" in our Proxy Statement relating to our 2005 Annual Meeting of Stockholders scheduled for June 1, 2005.

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. A copy of this code is available, free of charge, upon written request to our legal department at 630 Fifth Avenue, Suite 2100, New York, NY 10111. We intend to disclose on our website (www.antigenics.com) any amendments to, or waivers from, our code of business conduct and ethics that apply to those officers. The contents of our website are not part of, or incorporated into, this document.

Item 11. *Executive Compensation*

The response to this item is incorporated by reference into this Annual Report on Form 10-K from the discussion responsive thereto under the caption "Executive Compensation" in our Proxy Statement relating to our 2005 Annual Meeting of Stockholders scheduled for June 1, 2005.

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

The response to this item is incorporated by reference into this Annual Report on Form 10-K from the discussion responsive thereto under the caption "Principal Stockholders" in our Proxy Statement relating to our 2005 Annual Meeting of Stockholders scheduled for June 1, 2005.

Item 13. *Certain Relationships and Related Transactions*

The response to this item is incorporated by reference into this Annual Report on Form 10-K from the discussion responsive thereto under the captions "Compensation Committee Interlocks and Insider participation" and "Certain Relationships and Related Transactions" in our Proxy Statement relating to our 2005 Annual Meeting of Stockholders scheduled for June 1, 2005.

Item 14. *Principal Accounting Fees and Services*

The response to this item is incorporated by reference into this Annual Report on Form 10-K from the discussion responsive thereto under the caption "Information Concerning Auditors" in our Proxy Statement relating to our Annual Meeting of Stockholders scheduled for June 1, 2005.

PART IV

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

(a) 1. *Consolidated Financial Statements*

The consolidated financial statements are listed under Item 8 of this report.

2. *Consolidated Financial Statement Schedules*

The consolidated financial statement schedules required under this Item and Item 8 are omitted because they are not applicable or the required information is shown in the consolidated financial statements or the footnotes thereto.

3. *Exhibits*

The exhibits are listed below under Part IV Item 15(b).

(b) Exhibits

Exhibit Index

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of Antigenics. Filed as Exhibit 3.1 to our Current Report on Form 8-K (File No. 0-29089) dated June 10, 2002 and incorporated herein by reference.
3.2	Amended and Restated By-laws of Antigenics Inc. Filed as Exhibit 3.2 to our Current Report on Form 8-K (File No. 0-29089) dated June 10, 2002 and incorporated herein by reference.
3.3	Certificate of Designation, Preferences and Rights of the Series A Convertible Preferred Stock of Antigenics Inc. filed with the Secretary of State of the State of Delaware on September 24, 2003. Filed as Exhibit 3.1 to our Current Report on Form 8-K (File No. 0-29089) dated September 25, 2003 and incorporated herein by reference.
4.1	Form of Common Stock Certificate. Filed as Exhibit 4.1 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
4.2	Form of Warrant to purchase Common Stock, together with a list of holders. Filed as Exhibit 4.2 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
4.3	Right of First Refusal Agreements dated as of May 21, 2004 between Antigenics Inc. and Brad M. Kelly. Filed as Exhibit 4.1 to our Current Report on Form 8-K (File No. 0-29089) dated May 27, 2004 and incorporated herein by reference.
4.4	Form of Debenture. Filed as exhibit 4.1 to the Current Report on Form 8-K dated April 13, 1998 of Aquila Biopharmaceuticals, Inc. (File No. 0-12081) and incorporated herein by reference.
4.5	Form of Common Stock Purchase Warrant. Filed as Exhibit 4.2 to the Current Report on Form 8-K (File No. 0-20111) of Aronex Pharmaceuticals, Inc. dated May 25, 2000 and incorporated herein by reference.
4.6	Form of Common Stock Purchase Warrant to Paramount Capital Inc. Filed as Exhibit 4.3 to the Current Report on Form 8-K (File No. 0-20111) of Aronex Pharmaceuticals, Inc. dated May 25, 2000 and incorporated herein by reference.
4.7	Registration Rights Agreement dated August 2, 1989 by and among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.1 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.8	First Amendment to Registration Rights Agreement dated April 18, 1990, by and among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.2 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.9	Second Amendment to Registration Rights Agreement dated October 31, 1991, by and among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.3 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.10	Third Amendment to Registration Rights Agreement, dated September 10, 1993, among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.4 to the registration statement on Form S-1 (File No. 333-71166) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.

Exhibit No.	Description
4.11	Fourth Amendment to Registration Rights Agreement dated January 20, 1994, among Aronex Pharmaceuticals and certain of its stockholders. Filed as Exhibit 10.5 to the Annual Report on Form 10-K/A for the year ended December 31, 1999 (File No. 0-20111) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.12	Indenture, dated January 25, 2005, between the Registrant and HSBC Bank USA, National Association. Filed as Exhibit 4.1 to Current Report on Form 8-K dated January 25, 2005 and incorporated herein by reference.
4.13	Registration Rights Agreement, dated January 25, 2005, between the Registrant and the initial purchasers. Filed as Exhibit 4.2 to Current Report on Form 8-K dated January 25, 2005 and incorporated herein by reference.
10.1*	1999 Equity Incentive Plan. Filed as Exhibit 10.1 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.1.1*	Amendment No. 1 to Antigenics Inc. 1999 Equity Incentive Plan. Filed as Exhibit 4.1 to our Current Report on Form 8-K (File No. 0-29089) dated June 11, 2003 and incorporated herein by reference.
10.1.2*	Amendment No. 2 to Antigenics Inc. 1999 Equity Incentive Plan. Filed as Exhibit 4.1 to our Current Report on Form 8-K (File No. 0-29089) dated May 27, 2004 and incorporated herein by reference.
10.1.3	Form of Non-Statutory Stock Option. Filed as Exhibit 10.1 to our Current Report on Form 8-K (File No. 0-29089) dated December 15, 2004 and incorporated herein by reference.
10.2*	1999 Employee Stock Purchase Plan. Filed as Exhibit 10.2 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.3	Founding Scientist's Agreement between Antigenics and Pramod K. Srivastava, Ph.D. dated March 28, 1995. Filed as Exhibit 10.3 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.4	Form of Indemnification Agreement between Antigenics and its directors and executive officers. These agreements are materially different only as to the signatories and the dates of execution. Filed as Exhibit 10.4 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference. Current schedule identifying the directors and executive officers filed herewith.
10.5	Lease Agreement between Antigenics and Cummings Property Management, Inc. dated May 28, 1998, as amended on December 10, 1998. Filed as Exhibit 10.5 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.6(1)	Patent License Agreement between Antigenics and Mount Sinai School of Medicine dated November 1, 1994, as amended on June 5, 1995. Filed as Exhibit 10.8 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.7(1)	Sponsored Research and Technology License Agreement between Antigenics and Fordham University dated March 28, 1995, as amended on March 22, 1996. Filed as Exhibit 10.9 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.8(1)	Research Agreement between Antigenics and The University of Connecticut Health Center dated February 18, 1998. Filed herewith.
10.9(1)	License Agreement between Antigenics and Duke University dated March 4, 1999. Filed as Exhibit 10.11 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.10(1)	License Agreement between Antigenics and University of Miami dated April 12, 1999. Filed as Exhibit 10.12 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.

Exhibit No.	Description
10.11*	Antigenics 401(k) Plan. Filed as Exhibit 10.17 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.12*	Antigenics L.L.C. Incentive Equity Plan. Filed as Exhibit 10.18 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.13	Subscription Agreement dated May 18, 2000 between Antigenics and Applied Genomic Technology Capital Fund L.P. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q (File No. 0-29089) for the quarter ended June 30, 2000 and incorporated herein by reference.
10.14	Assignment Agreement among RCPI Trust, GHA Management Corporation and Antigenics dated August 24, 2000. Filed as Exhibit 10.20 to our registration statement on Form S-4 (File No. 333-46168) and incorporated herein by reference.
10.15	Lease Agreement by and between Aquila Biopharmaceuticals, Inc. and NDNE 9/90 Corporate Center LLC effective September 9, 1998. Filed as Exhibit 10.2 to Amendment No. 1 to registration statement on Form S-3 of Aquila Biopharmaceuticals, Inc. (File No. 333-46641) and incorporated herein by reference.
10.16(1)	Exclusive License Agreement, dated October 15, 1986, between Aronex Pharmaceuticals, Inc., The University of Texas System Board of Regents and The University of Texas M.D. Anderson Cancer Center. Filed as Exhibit 10.8 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
10.17(1)	Exclusive License Agreement, dated July 1, 1988, between Aronex Pharmaceuticals, The University of Texas System Board of Regents and The University of Texas M.D. Anderson Cancer Center, together with amendments and extensions thereto. Filed as Exhibit 10.10 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
10.18(1)	Amendment No. 2 to Exclusive License Agreement, dated July 9, 1993, among Aronex Pharmaceuticals, The University of Texas System Board of Regents and The University of Texas M.D. Anderson Cancer Center. Filed as Exhibit 10.20 to the registration statement on Form S-1 (File No. 333-71166) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
10.19(1)	License Agreement, dated December 12, 2000 between Aronex Pharmaceuticals and Sumitomo Pharmaceuticals Co., Ltd. Filed as Exhibit 10.1 to the Current Report on Form 8-K (File No. 0-20111) of Aronex Pharmaceuticals, Inc. dated December 12, 2000 and incorporated herein by reference.
10.20	Sublease Agreement between Antigenics Inc., a Massachusetts corporation (formerly Aquila Biopharmaceuticals, Inc.) and wholly owned subsidiary of Antigenics, and GTC Biotherapeutics, Inc. dated July 16, 2002. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q (File No. 0-29089) for the quarter ended June 30, 2002 and incorporated herein by reference.
10.21	Lease of Premises at 3 Forbes Road, Lexington, Massachusetts dated as of December 6, 2002 from BHX, LLC, as Trustee of 3 Forbes Realty Trust, to Antigenics. Filed as Exhibit 10.1 to our Current Report on Form 8-K (File No. 0-29089) dated January 8, 2003 and incorporated herein by reference.
10.21.1	First Amendment of Lease dated as of August 15, 2003 from BHX, LLC as trustee of 3 Forbes Road Realty, to Antigenics Inc. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q (File No. 0-29089) for the quarter ended March 31, 2004 and incorporated herein by reference.
10.22	Master Security Agreement dated July 17, 2003, between General Electric Capital Corporation and Antigenics Inc. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q (File No. 0-29089) for the quarter ended June 30, 2003 and incorporated herein by reference.

Exhibit No.	Description
10.24*	Antigenics Inc. Directors' Deferred Compensation Plan. Filed as Exhibit 4.2 to our Current Report on Form 8-K (File No. 0-29089) dated June 11, 2003 and incorporated herein by reference.
10.25(1)	Amendment to Founding Scientist's Agreement dated January 1, 2003. Filed as Exhibit 10.29 to our Annual Report on Form 10-K (File No. 0-29089) for the year ended December 31, 2002 and incorporated herein by reference.
10.26	Amendment No. 1 of Research Agreement between Antigenics and the University of Connecticut Health Center dated April 10, 2002. Filed herewith.
10.27(1)	Amendment No. 2 of Research Agreement between Antigenics and the University of Connecticut Health Center dated December 31, 2003. Filed as Exhibit 10.27(1) to our Annual Report on Form 10-K (file number 0-29089) for the year ended December 31, 2003 and incorporated herein by reference.
10.28	Letter agreement, Additional Costs Approved Under Research Agreement between Antigenics and the University of Connecticut Health Center dated February 10, 2005. Filed herewith.
21	Subsidiaries of Antigenics. Filed herewith.
23	Consent of KPMG LLP, independent registered public accounting firm. Filed herewith.
31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended.
31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended.
32.1(2)	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* Indicates a management contract or compensatory plan.

(1) Certain confidential material contained in the document has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended or Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

(2) This certification accompanies the Annual Report on Form 10-K and is not filed as part of it.

SIGNATURES

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

Antigenics Inc.

By: /s/ Garo H. Armen, Ph.D.

Garo H. Armen, Ph.D.
Name: Garo H. Armen, Ph.D.
Title: *Chief Executive Officer and Chairman of the Board*

Dated: March 31, 2005

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities indicated as of March 31, 2005.

Signature	Title
/s/ Garo H. Armen, Ph.D. Garo H. Armen, Ph.D.	Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)
/s/ Peter Thornton Peter Thornton	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)
/s/ Noubar Afeyan, Ph.D. Noubar Afeyan, Ph.D.	Director
/s/ Frank V. AtLee, III Frank V. AtLee, III	Director
/s/ Gamil de Chadarevian Gamil de Chadarevian	Director
/s/ Tom Dechaene Tom Dechaene	Director
/s/ Margaret Eisen Margaret Eisen	Director
/s/ Wadih Jordan Wadih Jordan	Director
/s/ Mark Kessel Mark Kessel	Director

Signature	Title
/s/ Pramod Srivastava, Ph.D.	Director
Pramod Srivastava, Ph.D.	
/s/ Alastair J. J. Wood, MD	Director
Alastair J. J. Wood, MD	

EXHIBIT 10.4

SCHEDULE TO INDEMNIFICATION AGREEMENT

The following is a list of the current directors and executive officers of Antigenics who are party to an Indemnification Agreement, the form of which was filed as Exhibit 10.4 to our registration statement on Form S-1 (File No. 333-91747):

Garo H. Armen, Ph.D.
Pramod K. Srivastava, Ph.D.
Peter Thornton
Russell H. Herndon
Renu Gupta
Roman Chicz
Noubar Afeyan, Ph.D.
Frank V, AtLee III
Gamil G. de Chadarevian
Tom Dechaene
Margaret Eisen
Wadih Jordan
Mark Kessel
Alastair Wood

EXHIBIT 10.8

RESEARCH AGREEMENT

This Agreement is made by and between:

Antigenics, L.L.C., a limited liability company organized and existing under the laws of the State of Delaware, having an office at 630 Fifth Avenue, Suite # 2170, New York, NY 10111, hereinafter referred to as Sponsor.

and

The University of Connecticut Health Center, an agency of the State of Connecticut, having a business address at 263 Farmington Avenue, Farmington, Connecticut, 06030, hereinafter referred to as UCHC.

and

Pramod Srivastava, Ph.D., Professor of Immunology, and Director, Center for Immunotherapy of Cancer and Infectious Diseases, University of Connecticut Health Center, having a business address at MC-1601, University of Connecticut Health Center, 263 Farmington Avenue, Farmington, Connecticut, 06030, hereinafter referred to as Principal Investigator.

The purpose of this Agreement is to promote the increase of useful knowledge relating to a project entitled, "Use of heat shock proteins for the development of therapeutic and prophylactic vaccines for cancer and infectious diseases."

IT IS AGREED:

1.0 The UCHC agrees to undertake certain research (hereinafter referred to as the Project) specifically described in the attached proposal (Appendix A) which by reference is incorporated into this Agreement, and such other work as may be mutually agreed upon in a duly executed amendment to this Agreement.

2.0 The Project and all work assignments shall be carried out under the direction of the Principal Investigator, while employed by UCHC, and by other research staff employed by UCHC (e.g. technician, graduate student, postdoctoral follow, staff assistant, hereinafter collectively referred to as Personnel), as assigned by Principal Investigator.

3.0 The Project covered by this Agreement shall commence on February 12, 1998 and shall extend for a period of 58.5 months, expiring on December 31, 2002.

4.0 UCHC agrees to furnish such available facilities as it shall determine necessary for the work to be done on this Project. During the term of this Agreement, UCHC and the Principal Investigator will permit, upon reasonable notice and at reasonable times, representatives of Sponsor to observe research facilities utilized for and research performed by Principal Investigator pursuant to this Agreement.

5.0 Sponsor agrees to pay UCHC the sum of $5,000,000 for this Project in accordance with the agreed budget (Appendix B), plus any agreed to excess costs as evidenced by a writing signed by both parties; payments to be made as follows:

$250,000	Payable upon execution of Agreement
$250,000	Payable by no later than May 15, 1998
$250,000	Payable by no later than August 15, 1998
$250,000	Payable by no later than November 15, 1998

Payments for all subsequent years shall be due by no later than February 15, May 15, August 15, and November 15 of each year.

Sponsor further agrees to pay preaward costs incurred by Dr. Srivastava upon submission of an invoice in an amount not to exceed $475,000.

Payment of said preaward costs shall be made within ten day of Sponsor's receipt of the invoice.

5.1 Payments are to be made to:

University of Connecticut Health Center
Grant and Contract Administration
ASB3, MC 5335
263 Farmington Ave.
Farmington, CT 06030
Attn.: Ken Landorf, Manager
IRS No.: 52-1725543

6.0 The Principal Investigator shall furnish Sponsor with written reports on the progress of the work on dates as mutually agreed upon and a final report on the entire Project within ninety (90) days after termination of this Agreement.

7.0 The data and information accruing from the Project may be published in writing or orally presented by the Principal Investigator, but Sponsor shall be provided with a copy of any proposed written manuscript at least thirty (30) day prior to submission or the text of any oral disclosure at least fourteen (14) days prior to its presentation and shall have thirty (30) days in the case of written manuscripts and fourteen (14) days in the case of oral presentations for review of patentable items or items deemed confidential and proprietary as defined in Article 8.0.

7.1 If Sponsor believes that any planned publication contains a patentable development, publication, or presentation shall be delayed for a reasonable time to permit the filing of a patent application(s). If the patent application is prepared under direction of UCHC, counsel approved by the Sponsor from the list of firms

having Professional Employment Agreements with the Attorney General of the State of Connecticut for the purposes of patent preparation, prosecution and maintenance of University of Connecticut inventions conceived or reduced to practice in the conduct of the Project shall be used. Sponsor shall have the right to elect to use its own counsel who will then conduct such patent preparation, prosecution, and maintenance. If Sponsor elects to use its own counsel, said counsel shall be subject to UCHC approval, which approval shall not be unreasonably withheld. When such election has been approved by UCHC, Sponsor, and Sponsor's counsel, or their agents shall provide UCHC and its agents on a timely basis with copies of all correspondence and patent application submissions (including but not limited to parent, continuation, continuation-in-part or reissue applications) by and between Sponsor and Sponsor's counsel and/or agents and the U.S. Patent and Trademark Office. Notwithstanding the preceding service requirement, Sponsor and Sponsor's counsel and/or agents shall make diligent efforts to provide all such correspondence and applications to UCHC or UCHC's agents prior to their submission and shall to the extent practicable consult with UCHC and its agents regarding the form of such submissions. UCHC acknowledges and approves Sponsor's election to use as patent counsel the firm of Pennie and Edmonds, New York, NY.

7.2 Sponsor shall reimburse UCHC for all costs associated with UCHC's filing, prosecution and maintenance of patents arising form this work pursuant to Sponsor's request that is carried out by UCHC counsel. If Sponsor has elected to use it's own counsel and UCHC has approved such election, Sponsor shall directly pay all costs associated with the preparation, submission and maintenance of the resulting patent carried out by its counsel.

7.3 UCHC and the Principal Investigator shall not disclose to other or publish any information disclosed to the Principal Investigator by Sponsor which is confidential within the meaning of Article 8.0 without the prior written approval of Sponsor.

8.0 UCHC and Principal Investigator agree to hold in confidence all information which Sponsor may wish to disclose to Principal Investigator in writing and marked "CONFIDENTIAL" under this Agreement except:

a. technical information which at the time of disclosure publicly known or available;

b. technical information which after disclosure is published or otherwise becomes publicly known or available through no fault of Principal Investigator;

c. technical information which was in the possession of the Principal Investigator at the time of disclosure and was not acquired from Sponsor under an obligation of confidence.

9.0 Sponsor shall retain patent rights to all of its technologies currently protected by existing patents or pending patent applications, and for technologies developed by Sponsor outside the terms of this Agreement.

9.1 Pursuant to the work performed under this Agreement UCHC shall retain patent rights to all new technologies developed as a result of intellectual contributions of UCHC's faculty or staff or involving the use of UCHC facilities or resources.

9.2 UCHC shall provide Sponsor with a copy of each written invention disclosure of intellectual property conceived or developed in the conduct of the Project within forty five (45) days of its submittal to the UCHC, in sufficient detail so as to enable one skilled in the art to understand the subject matter of the invention. The UCHC shall also notify Sponsor immediately of any potential statutory bar, including but not limited to, the dates of any publication, presentation or other disclosure of the intellectual property accruing to the project.

9.3 For new inventions, other than incremental improvements which are dominated by existing patents or pending patent applications for which Sponsor holds a license, UCHC agrees to grant and hereby grants to Sponsor an option to secure a royalty-bearing exclusive license, including the right to grant sublicenses, under reasonable terms with the right to make, use and sell, have made, have used, import and offer for sale the claimed invention of any patent or patent application which is based on any invention conceived or reduced to practice in the conduct of the Project, subject to Article 9.1 above. The license (and all sublicenses) will include a royalty rate in an amount to be negotiated in good faith by both UCHC and Sponsor at the time the Sponsor decides to exercise its option and shall remain in effect until the expiration of the last to expire patents licensed to the Sponsor. Such option shall be in effect and exercisable for each invention within one hundred and eighty (180) days from the date of filing a U.S. patent application on each such invention. Upon exercise of such option, the terms and conditions of the license will be negotiated in good faith by the parties. In the absence of agreement within six (6) months from the date of exercise of such option, which time shall be extended upon mutual written agreement, the dispute shall be submitted to a mutually acceptable third-party mediator, which period of mediation shall not exceed 90 days or such longer period as may be mutually acceptable to the parties.

9.4 For inventions which are incremental improvements dominated by existing patents or pending patent applications for which Sponsor holds a license, UCHC agrees to grant and hereby grants to Sponsor an option to secure a royalty-bearing exclusive license with the right to make, use and sell, have made, have used, import and offer for sale the claimed invention conceived or reduced to practice in

the conduct of the Project. Such option shall be in effect and exercisable within one hundred and eighty (180) days from the date of filing a U.S. Patent Application on each such invention. In the case of Licensed Products that incorporate the UCHC Technology but are dominated by patent applications licensed by Sponsor from one other third party, Sponsor shall pay UCHC a royalty calculated at the rate of [ ]* of Net Sales of Licensed Product. In the case of Licensed Products that incorporate the UCHC technology but are dominated by patent applications licensed by Sponsor from two or more third parties, Sponsor shall pay UCHC a royalty calculated at the rate of [ ]* of Net Sales of Licensed Product. Upon exercise of such option, the remaining terms and conditions of the license will be negotiated in good faith by the parties. In the absence of agreement within six (6) months from the date of exercise of such option, which time period shall be extended upon mutual written agreement, the dispute shall be submitted to a mutually acceptable third-party mediator, which period of mediation shall not exceed 90 days.

9.5 For the purposes of this Article 9 the terms, Licensed Product and Net Sales shall be defined as follows:

- Affiliates are defined as any entity which controls, is controlled by or is under common control with Licensee. An entity shall be regarded as in control of another entity if it owns or controls more than fifty percent (50%) of the voting power of such entity.

- Licensed Product(s) means any method, procedure, process, product, or component part thereof conceived or developed by UCHC in the conduct of the Project whose manufacture, sale, use, importation, or offer for sale is covered by the claim of a pending patent application or which could be construed to infringe the licensed patent in the absence of the license.

- Net Sales means total billings for Licensed Product(s), determined in accordance with generally accepted accounting principles, sold by Licensee, its Affiliates and sublicensees, less: (a) discounts allowed in amounts customary in the trade; (b) sales, tariff duties and/or use taxes directly imposed and with reference to particular sales; (c) outbound transportation prepaid or allowed; and (d) amounts allowed or credited on returns. Licensed Products shall be considered "sold" when billed out or invoiced. Sales of Licensed Product(s) between or among Licensee, its Affiliates and sublicensees shall not be subject to any royalty hereunder, and in such cases royalties shall be calculated upon Licensee's or its Affiliates' or sublicensees' Net Sales to an independent third party. Licensee shall be responsible for payment of any royalty accrued on Net Sales of Licensed Products to such independent third party through Licensee's Affiliates or

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* This portion of the Exhibit has been omitted pursuant to a Request for Confidential Treatment under Rule 406 of the Securities Act of 1933, as amended. The complete Exhibit, including the portions for which confidential treatment has been requested, has been filed separately with the Securities Exchange

Commission.

sublicensees. Royalties shall accrue hereunder only once in respect of the same unit of the Licensed Product.

9.6 As to all licenses which may be granted by UCHC to Sponsor under the terms of this Agreement, UCHC retains a perpetual royalty-free non-exclusive right to use the licensed property, product, procedure or process and to use the licensed UCHC technology for basic and clinical research, and the educational purposes of the UCHC, and not for any commercial purpose.

10.0 UCHC and Sponsor agree that the Principal Investigator and Personnel are acting as employees of UCHC and not as agents or employees of Sponsor.

11.0 No advertising or publicity matter having or containing any reference to either party shall be used by the other party without advanced written authorization. Notwithstanding the afore-stipulated restrictions, Sponsor may use publications containing the name of UCHC and other documentation (abstracts, poster presentations, etc.) which are generally accessible to the public without the further review and consent of UCHC. All other advertising and publicity matter shall be submitted to the Office of the Vice Chancellor for Research for review prior to its use or public release. Said documentation shall be reviewed expeditiously, and in no event shall such review be unreasonably delayed. In addition, UCHC may disclose the sponsorship, title, duration and total budget of this project in UCHC's "Annual Report of Research and Scholarly Activity," and in such other reports as may be required by the UCHC's Administration, Board of Trustees or by the Board of Governors of Higher Education.

12.0 UCHC agrees that there shall be no change in the Principal Investigator without prior written approval of Sponsor.

13.0 It is understood that the Project may be extended for additional periods of time under terms mutually agreed upon in writing in a duly executed amendment to this Agreement.

13.1 Renewal proposals shall be submitted by UCHC to Sponsor at least ninety (90) days prior to the expiration of this Agreement.

13.2 Sponsor agrees to give UCHC notice of its intention to continue the Project not less than sixty (60) days prior to the expiration date specified in Article 3.0 hereof or in a later amendment to this Agreement.

14.0 If UCHC is unable to fulfill the terms of this Agreement, then UCHC may terminate the Agreement by giving sixty (60) days notice to Sponsor. If Pramod Srivastava is unable to continue as Principal Investigator, or terminates his employment by UCHC, Sponsor shall have the right to terminate this Agreement by giving thirty (30) days notice to UCHC.

14.1 Upon termination of this Agreement, unexpended funds appropriate by Sponsor to UCHC shall be returned to Sponsor except for outstanding, unpaid commitments to a third party(ies) or to Personnel engaged in the conduct of the Project which

cannot be canceled or otherwise terminated. Upon issuance of notice, UCHC shall not enter into any material new commitments or obligations related to the Project without consent of the

Sponsor.

14.2 Termination of this Agreement shall not affect the rights and obligations of the parties in inventions conceived or made in the conduct of the Project prior to termination.

15.0 This Agreement shall be binding upon and inure to the benefit of the respective parties and their successors.

16.0 This Agreement shall be governed by and construed according to the laws of the State of Connecticut; including, but not limited to the following:

a. Non-discrimination Section 4.1 14a of the General Statutes of Connecticut, as amended. UCHC in its employment practices under this grant Agreement will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, sex, mental retardation, or physical disability (including but not limited to blindness) unless it is shown that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut.

17.0 UCHC is authorized to enter into this Agreement under Section 10a-104, 10a-110 to 10a-l10g of the General Statutes of Connecticut as amended to date.

18.0 Sponsor agrees to indemnify, hold harmless, and pay all legal and other costs or losses incurred by Principal Investigator and Personnel, as investigator(s) in this study, and UCHC as the host institution, against any claim or legal cause of action brought against Principal Investigator, Personnel and UCHC arising out of the use by Sponsor, or by any party acting on behalf of or under authorization from Sponsor, sale or other disposition by Sponsor, or by any party acting on behalf of or under authorization from Sponsor of products made as a result of work conducted under this Agreement.

UCHC agrees to notify Sponsor as soon as it becomes aware of a claim or action and to cooperate with and to authorize Sponsor to carry out sole management and defense and settlement of such claim or defend against any actions brought or filed against its trustees, officers, agents and employees with respect to the subject of indemnity contained herein, whether such claims or actions are rightfully brought or filed.

Neither UCHC, nor its trustees, officers, agents or employees shall compromise or settle any claim or suit related to the Project of this Agreement without the prior written approval of Sponsor.

This Agreement will govern claims brought subsequent to the termination date of this Agreement. This provision shall survive the completion or termination of this project since it cannot be presently ascertained when the last claim will be filed.

19.0 Any notice required to be given hereunder shall be considered properly given if sent by certified letter, first class mail, postage prepaid, to the respective address of each party indicated at the beginning of this Agreement, or to such address as the addressee shall have last furnished in writing to the addressor in like manner.

20.0 Sections 7, 8, 9, 11, 15, 16, 18 and 19 shall survive termination or expiration of this Agreement.

21.0 It is understood that UCHC and the Principal Investigator and Personnel may be or become involved in other activities and projects which entail commitments to other sponsors; however, UCHC represents and warrants that the Principal Investigator and Personnel are not presently

performing, and will not perform during the term of this Agreement, research relating to the Project (see Appendix A) that is sponsored by a commercial, for-profit, third party to whom UCHC is obligated to grant rights in any invention or discovery resulting therefrom, excluding Government rights pursuant to 35 U.S.C. ss.ss. 200 et seq. resulting from federal grant funding or a similar reservation of rights pursuant to grant funding from the State of Connecticut or other non-profit entities.

22.0 The Project will not be conducted in collaboration with a researcher who is not associated with UCHC, unless Sponsor has given prior written approval of such collaboration.

23.0 The parties hereto have caused this Agreement to be executed by duly authorized representatives effective as of the later date indicated below.

ANTIGENICS, L.L.C. - "SPONSOR"

/s/ Garo Armen — 2/18/98

(Signature) (Date)

Name: Garo Armen

Title: CEO

UNIVERSITY OF CONNECTICUT HEALTH CENTER - "UCHC"

/s/ Leonard Paplauskas — 2/17/98

(Signature) (Date)

Name: Leonard P. Paplauskas

Title: Assistant Vice Chancellor for Research

/s/ Pramod Srivastava — 2/16/98

(Signature) (Date)

Name: Pramod Srivastava, Ph.D.

Title: Professor, Center for Immunotherapy of Cancer and Infectious Disease

APPENDIX A

SCOPE OF WORK

Scope of work for ANTIGENICS grant

[

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[
]*

____

* This portion of the Exhibit has been omitted pursuant to a Request for Confidential Treatment under Rule 406 of the Securities Act of 1933, as amended. The complete Exhibit, including the portions for which confidential treatment has been requested, has been filed separately with the Securities Exchange Commission.

[
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____

* This portion of the Exhibit has been omitted pursuant to a Request for Confidential Treatment under Rule 406 of the Securities Act of 1933, as amended. The complete Exhibit, including the portions for which confidential treatment has been requested, has been filed separately with the Securities Exchange Commission.

[
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____

* This portion of the Exhibit has been omitted pursuant to a Request for Confidential Treatment under Rule 406 of the Securities Act of 1933, as amended. The complete Exhibit, including the portions for which confidential treatment has been requested, has been filed separately with the Securities Exchange Commission.

APPENDIX B

BUDGET

For Each of 5 Years

2/12/98 - 12/31/02

SUB CODE	DESCRIPTION	BUDGET

1000	Salaries	$ 315,000
2000	Purchased Services	$ 125,000
3000	Supplies & Minor Equipment	$ 188,151
4000	Sundry (Fringe Benefits)	$ 65,500
9000	Capital Equipment	$ 100,000
	Indirect Cost	$ 206,349
	TOTAL	$1,000,000

EXHIBIT 10.26

AMENDMENT NO. 1 OF RESEARCH AGREEMENT

The Agreement amendments stated herein are made by and between Antigenics, L.L.C., hereinafter referred to as Sponsor and the University of Connecticut Health Center, hereinafter referred to as UCHC.

The purpose of this document is to amend the Research Agreement entered into by and between Sponsor and UCHC on February 18, 1998. All terms and conditions agreed to in the Research Agreement shall remain in full force and effect except for those amended by this document.

ARTICLE 3- ADDITION OF 1 SUPPLEMENT YEAR

3. The investigation covered by this Agreement shall commence on February 12, 1998 and shall extend for a period of 70.5 months, expiring on December 31, 2003.

ARTICLE 5- ADDENDUM TO ARTICLE 5

5.0A Sponsor agrees to pay UCHC the sum of $1,200,000.00 for the project extension year covered by this Amendment No. 1, in accordance with agreed budget (see Attachment 1), payments to be made as follows:

$300,000	Payable no later than February 15, 2003
$300,000	Payable by no later than May 15, 2003
$300,000	Payable by no later than August 15, 2003
$300,000	Payable by no later than November 15, 2003

The Parties hereto have caused this Amendment No. 1 to be executed by duly authorized representatives effective as of the latter date indicated below.

ANTIGENICS, L.L.C.- "SPONSOR"

/s/ Russell Herndon	4/19/02
	(Date)

Name: Russell Herndon
Title: President, COO

UNIVERSITY OF CONNECTICUT HEALTH CENTER- UCHC

/s/ Leonard P. Paplauskas	4/12/02
	(Date)

Name: Leonard P. Paplauskas

Title: Assoc. Vice President for Research Administration

ATTACHMENT 1

Antigenics Budget

$1,200,000

Sub Code	Description	Amount
1000	Salaries & Wages	355,000
4000	Fringe	128,000
2000	Purchases Services	184,381

2162	Travel	35,000
3000	Supplies/Minor Equipment	250,000
	Total Direct Costs	952,381
	Total Indirect Costs	247,619
	Total	$1,200,000

Exhibit 10.28

February 10, 2005

Leonard P. Paplauskas
Associate Vice President for Research Administration
University of Connecticut Health Center
Center for Science and Technology Commercialization
263 Farmington Avenue
Farmington, CT 06030

RE: ADDITIONAL COSTS APPROVED UNDER RESEARCH AGREEMENT

Dear Mr. Paplauskas:

This letter is in reference to that certain Research Agreement by and between University of Connecticut Health Center ("UCHC") and Antigenics Inc., a Delaware corporation ("Antigenics Inc.")(each a "Party" and collectively the "Parties") dated February 28, 1998 ("Agreement"), as amended by Amendment No. 1 Research Agreement dated April 19, 2002, further amended by Amendment Agreement dated March 18, 2003, and further amended by Amendment No. 2 to Research Agreement dated December 30, 2003 (each singly an "Amendment", collectively the "Agreement"). In accordance with the provisions of Section 5.0 of the Agreement, Antigenics Inc. hereby agrees to pay UCHC an additional one-time payment in the sum of One Hundred Thirty-Five Thousand dollars ($135,000) for additional costs associated with activities to be performed under the Agreement in 2005.

Best regards,

/s/ P. Thornton

Peter Thornton
Chief Financial Officer

ANTIGENICS INC., a Delaware corporation

Acknowledged and agreed:

UNIVERSITY OF CONNECTICUT HEALTH CENTER

By: /s/ Leonard P. Paplauskas
_____

Name: Leonard P. Paplauskas

Associate Vice President for Research Administration

EXHIBIT 21

SUBSIDIARIES OF ANTIGENICS

Antigenics Inc., a wholly owned subsidiary of Antigenics, is incorporated in Massachusetts.

Aronex Pharmaceuticals, Inc., a wholly owned subsidiary of Antigenics, is incorporated in Delaware.

Antigenics Therapeutics Limited, a wholly owned subsidiary of Antigenics, is incorporated in Ireland.

EXHIBIT 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors
Antigenics Inc.:

We consent to the incorporation by reference in the registration statements on Form S-8 (File Nos. 333-40440, 333-40442, 333-50434, 333-69580, and 333-106072) and on Form S-3 (File Nos. 333-118171, 333-104832 and 333-69582) of Antigenics Inc. of our reports dated March 29, 2005, with respect to the consolidated balance sheets of Antigenics Inc. and subsidiaries as of December 31, 2004 and 2003, and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows for each of the years in the three-year period ended December 31, 2004, management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2004 and the effectiveness of internal control over financial reporting as of December 31, 2004, which reports appear in the December 31, 2004 annual report on Form 10-K of Antigenics Inc.

/s/ KPMG LLP

Princeton, New Jersey
March 29, 2005

Exhibit 31.1

Certification Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended

I, Garo H. Armen, certify that:

1. I have reviewed this annual report on Form 10-K of Antigenics Inc.;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this annual report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

   a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   b. designed such internal control over financial reporting or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles;

   c. evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this annual report based on such evaluation; and

   d. disclosed in this annual report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of Registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial

reporting.

Date: March 31, 2005

/s/ Garo H. Armen

Garo H. Armen Ph.D.,
Chief Executive Officer

Exhibit 31.2

Certification Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended

I, Peter Thornton, certify that:

1. I have reviewed this annual report on Form 10-K of Antigenics Inc.;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this annual report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

   a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   b. designed such internal control over financial reporting or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles;

   c. evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this annual report based on such evaluation; and

   d. disclosed in this annual report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of Registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial

reporting.

Date: March 31, 2005

/s/ Peter Thornton

Peter Thornton,
Chief Financial Officer

Exhibit 32.1

Certification
Pursuant to 18 U.S.C. Section 1350,
As Adopted Pursuant to Section 906 of the Sarbanes-Oxley of 2002

In connection with the Annual Report on Form 10-K of Antigenics Inc. (the "Company") for the annual period ended December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report") each of the undersigned to his knowledge hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(i) The Report fully complies with the requirements of Section 13 (a) or 15 (d) of the Securities Exchange Act of 1934; and

(ii) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Garo H. Armen, Ph.D.

Garo H. Armen, Ph.D.
Chief Executive Officer

/s/ Peter Thornton

Peter Thornton
Chief Financial Officer

March 31, 2005

A signed original of this written statement required by Section 906 has been provided to Antigenics Inc. and will be retained by Antigenics Inc. and furnished to the Securities and Exchanged Commission or its staff upon request.

The foregoing certification is being furnished to the Securities and Exchange Commission as an exhibit to the Form 10-K and shall not be considered filed as part of the Form 10-K.