ANTIGENICS INC /DE/
Form S-3/A
September 30, 2004

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As filed with the Securities and Exchange Commission on September 29, 2004
Registration No. 333-118171

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 1
to

Form S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

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 Number)*

630 Fifth Avenue, Suite 2100
New York, New York 10111
(212) 994-8200
(Address, including zip code, and telephone number, including area code, of registrant s principal executive offices)

Garo H. Armen

Chief Executive Officer
Antigenics Inc.
630 Fifth Avenue, Suite 2100
New York, New York 10111
(212) 994-8200
(Name, address, including zip code, and telephone number, including area code, of agent for service)
Please send copies of all communications to:

Paul M. Kinsella

Ropes & Gray LLP
One International Place
Boston, Massachusetts 02110
(617) 951-7000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. o

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the Securities Act) other than securities offered only in connection with dividend or interest reinvestment

plans, check the following box. þ

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. o

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in the prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting an offer to buy these securities in any state where an offer is not permitted.

Subject to Completion and Amendment, dated September 29, 2004

PROSPECTUS

350,000 Shares

Antigenics Inc.

Antigenics Common Stock

This prospectus relates to the resale of 350,000 shares of Antigenics common stock, $0.01 par value per share, that we issued in a private placement on July 30, 2004 in connection with our acquisition of assets from Mojave Therapeutics, Inc. These shares may be offered and sold from time to time by the selling securityholders listed in this prospectus. We will not receive any of the proceeds from the sale of these shares.

Our common stock trades on the Nasdaq National Market under the symbol AGEN.

Investing in Antigenics securities involves a high degree of risk. Before purchasing shares of Antigenics common stock, you should carefully read and consider the risk factors identified under Risk Factors beginning on page 3.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus or any accompanying prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The mailing address at our principal offices is 630 Fifth Avenue, Suite 2100, New York, New York 10111. Our telephone number at these offices is 212-994-8200.

The date of this prospectus is , 2004.

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RISK FACTORS

If you purchase Antigenics securities, you will take on financial risk. In deciding whether to invest, you should carefully analyze the following risk factors in addition to the other information included and incorporated by reference in this prospectus. It is especially important to consider these risk factors when you read forward-looking statements.

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

From our inception through June 30, 2004, we have generated net losses totaling $300 million. Our net losses for the six months ended June 30, 2004, and for the years ended December 31, 2003, 2002, and 2001 were $20.2 million, $65.9 million, $55.9 million, and $73.5 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 we plan to initiate two new Phase 3 clinical trials; during 2004, in renal cell carcinoma and during 2005 in melanoma. Furthermore, our ability to generate cash from operations is dependent on if and when we will be able to commercialize our products. We expect that the earliest we may be able to commercialize Oncophage would be in late 2005. 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 June 30, 2004, we had approximately $117 million in cash, cash equivalents and short-term investments. In February 2004, we sold 5,400,000 shares of our common stock, raising net proceeds of approximately $54 million. With our current capital we expect that we could fund our development programs, clinical trials, and other operating expenses through the end of 2005. We plan to raise additional funds prior to that time. For the six months ended June 30, 2004, the sum of our average monthly cash used in operating activities plus our average monthly capital expenditures was approximately $5.5 million. Total capital expenditures for the six months ended June 30, 2004 were $1.3 million. We anticipate additional capital expenditures of up to $3.7 million during the remainder of 2004. 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.

We face regulatory hurdles in the approval of our initial Phase 3 clinical trials in renal cell carcinoma.

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. On October 24, 2003, we submitted additional Oncophage product characterization information to the FDA, 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 our Phase 3 trial in renal cell carcinoma (trial C-100-12) and our Phase 3 trial in melanoma (trial C-100-21), Oncophage has been insufficiently characterized and that the results obtained with an inadequately 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 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 developed until December 2003. The imposition of the partial clinical hold prevented us from enrolling new patients in our Phase 3 clinical trials between September 2, 2003 and November 21, 2003. We believe that we have addressed the comments the

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FDA raised in connection with the partial clinical hold. We believe that our ongoing Phase 3 trial in renal cell carcinoma will support licensure of Oncophage in the context of our broader clinical development plans. The FDA has indicated that, by itself, our ongoing Phase 3 clinical trial in renal cell carcinoma is not sufficient to support a BLA filing. However, upon completion of the final analysis of the data from our initial Phase 3 trial in renal cell carcinoma, we shall review the data closely. Should the results of that trial be clearly positive in terms of clinical outcomes, and should the analysis of the Oncophage lots used in that trial show that the vaccine was appropriately characterized, we intend to submit to the FDA a strong rationale why the data from this trial alone should be considered by them for a potentially successful BLA filing. There are no assurances that this strategy will be successful. In addition, we do not believe that our ongoing Phase 3 clinical trial in melanoma, by itself, will support a BLA filing. We have not yet had formal discussions with the FDA regarding our clinical development plan for melanoma. Accordingly, we do not know if the FDA will find our plan acceptable. These issues may significantly delay or prevent the commercial launch of Oncophage and negatively impact our financial prospects.

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 patient accrual goals. 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 final data from the trial may not demonstrate efficacy and safety. Data from clinical trials are subject to varying interpretations.

Inconclusive or negative final data from the current Phase 3 renal cell carcinoma trial, C-100-12, or interim or final data from the current Phase 3 melanoma trial, C-100-21, could have a significant negative impact on our prospects. If the results in our Phase 3 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 cancer therapeutic vaccine that is personalized for each patient. To date, the FDA has not approved any cancer therapeutic 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 vaccine oncology products therapies, and the partial clinical hold that the FDA had placed 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. To date, we have spent approximately 10 years and $150 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 plan to

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initiate an additional Phase 3 (part 2 Phase 3) trial for Oncophage during the fourth quarter of 2004 in renal cell carcinoma. We intend to use this part 2 Phase 3 trial to support approval of Oncophage in renal cell carcinoma. During 2005, we also intend to initiate a part 2 Phase 3 trial in melanoma in collaboration with large cooperative groups. Even after reviewing the protocols for our planned Phase 3 trials, the FDA and other regulatory agencies may not consider our ongoing trials together with these new trials to be adequate for registration and may disagree with our overall strategy to seek approval for Oncophage in renal cell carcinoma and melanoma. In this event, the potential commercial launch of Oncophage would be significantly delayed, which would likely have a materially negative impact on our ability to generate revenue and our need for 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 two new part 2 Phase 3 trials in renal cell carcinoma and melanoma that we plan to initiate during 2004 and 2005 respectively. 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 products in a timely manner, we will not be able to commercialize them in the timeframe anticipated, and, therefore, our business will suffer.

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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 countries. 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 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 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 patient s 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 drop-out rate in a trial may undermine the ability to gain statistically significant data from the study.

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 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 six months ended June 30, 2004 and the years ended December 31, 2003, 2002, and 2001 were $0.3 million, $3.5 million, $2.6 million, $1.6 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 the global commercialization of Oncophage. 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

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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 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 products 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.

Heat shock proteins occur naturally in the human body and have the potential to activate powerful cellular immune responses. 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 69%. Our inability to manufacture adequate amounts of Oncophage for approximately 31% of the patients randomized to date in the Oncophage treatment arm of the melanoma trial is likely to jeopardize 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. Our success rate subsequent to implementation of this change is approximately 90%.

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

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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 Oncophage could treat would be limited. In addition, if we commercialize Oncophage, 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 69 issued U.S. patents and 82 foreign patents. We also have rights to at least 44 pending U.S. patent applications and 152 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

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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. 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, U.S. Patent No. 6,713,608. We believe that the invention of U.S. Patent No. 6,713,608 is the same as that of earlier-filed U.S. Patents No. 5,747,332, 6,066,716, and 6,433,141, which we believe are owned by the same third party, 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 should declare an interference between our pending patent applications and this latest third-party patent and that the claims of U.S. Patent No. 6,713,608 should 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 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 expires in March 2005 but will be automatically extended 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

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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. 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, with former employees, our commercial partners, and others. 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 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.

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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 compensate 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, autoimmune disorders, and degenerative disorders. Several of these companies have products that utilize similar technologies and/or

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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 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 U.S. and Europe related to Stressgen s heat shock protein technology. In particular, U.S. patents 6,524,825, 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 products 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 June 30, 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 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 June 30, 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.

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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 41%. 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 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. The board 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 September 17, 2004, and for the twelve and six months ended September 17, 2004, the closing price of our common stock has fluctuated between $6.00 and $52.63 per share, $6.00 and $15.67, and $6.00 and $11.46 per share, respectively, with an average daily trading volume for the six months ended June 30, 2004 of approximately 518,000 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:

announcements of decisions made by public officials;

results of our preclinical and clinical trials;

announcements of technological innovations or new commercial products by us or 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.

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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 June 30, 2004, we had approximately 45,088,000 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 June 30, 2004, options to purchase approximately 5,125,000 shares of our common stock upon exercise of options with a weighted average exercise price per share of $9.79 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 June 30, 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. Once that registration statement becomes effective, those shares may be offered and sold from time to time by the selling securityholders 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. 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.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This information statement 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. For may include statements about Antigenics time lines for completing clinical trials, time lines for releasing data from clinical trials, time lines for initiating new clinical trials, future product research and development activities, the expected effectiveness of therapeutic drugs and vaccines in treating diseases, applicability of Antigenics 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 the company s products are both safe and more effective than current standards of care; that it may be unable to obtain the regulatory approvals necessary to conduct additional clinical trials; that Antigenics may not be able to enroll sufficient numbers of patients in its clinical trials; that Antigenics may be unable to obtain the regulatory approvals necessary to commercialize its products because the FDA or other regulatory agencies are not satisfied with Antigenics trial protocols or the results of its trials; that Antigenics may fail to adequately protect its intellectual property or that Antigenics is 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 information statement, including the information set forth under the heading RISK FACTORS beginning on page 3.

You are cautioned not to place significant reliance on these forward-looking statements, which speak only as of the date of this information statement. Antigenics undertakes no obligation to update these statements.

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BUSINESS

Overview

We are a biotechnology firm developing products to treat cancers, infectious diseases and autoimmune disorders. Our most advanced product candidate is Oncophage®, a personalized 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. Our related business activities include research and development, regulatory and clinical affairs, business development, 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, such as improvement or stabilization of disease, following administration of our product candidates in multiple human clinical trials. This includes data demonstrating complete disappearance (a complete response) or substantial shrinkage of tumor lesions (a partial response) in a portion of patients with renal cell carcinoma, melanoma, lymphoma, and chronic myelogenous leukemia (CML). Additionally, in a portion of patients who were rendered disease-free by surgery, we have observed signs of positive impact on disease in resectable pancreatic cancer and stage IV colon cancer. In our studies to date, the vaccine has shown a favorable safety profile. The most common side effects have been mild-moderate injection site reactions and transient low-grade fevers. We believe that these human data further support 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, or 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 (HSP70) attached to a single peptide, or protein fragment, of herpes simplex virus-2, AG-707 is a multivalent vaccine (a type of vaccine that addresses multiple targets) that contains multiple herpes simplex virus-2 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 fourth quarter of 2004 for AG-707 and 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 fourth quarter of 2004.

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

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component is encapsulated in a liposome, which is a spherical particle of a lipid or fatty substance. 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 from much smaller tumor tissue samples. We are also studying pathways through which heat shock proteins activate the immune system as well as combinations of Oncophage and other compounds.

Heat Shock Protein Technology

Heat shock proteins, or 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. Antigens or antigenic peptides are portions of proteins which stimulate an immune response. Because HSPs chaperone peptides, HSPs bind to the broad array of antigens, or antigenic fingerprint of the cell in which they reside.

Although heat shock proteins are normally found inside cells, they also serve an important purpose when found extracellularly, or 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 key to 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, or 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 (HSP70) 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.

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Product Development Portfolio

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

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

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

(2) These trials are closed to enrollment.

(3) We do not intend to initiate new clinical trials of Aroplatin until we complete our review of this program.

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 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, or 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 stringent quality control testing, including sterility testing, we ship Oncophage frozen back to the hospital pharmacy for administration after a patient has fully 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, or 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.

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Oncophage Clinical Programs

Renal Cell Carcinoma

Background. Renal cell carcinoma is the most common type of kidney cancer. The American Cancer Society estimates that kidney cancer will affect roughly 35,000 people in the United States in 2004, and about 12,000 people will die from the disease. 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, or surgical removal of the kidney, followed by observation. For patients with metastatic disease, the only FDA approved treatment is intravenous high-dose interleukin-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. Although not FDA-approved for the treatment of renal cell carcinoma, a lower-dose of interleukin-2 injected subcutaneously, or underneath the skin, either alone or in combination with other cytokines, has become a treatment option. This treatment regimen has been the subject of a number of studies with widely varying outcomes, none of which have demonstrated any survival benefit. At the present time, there is no FDA approved treatment for non-metastatic renal cell carcinoma.

Clinical Trials. In a Phase 1/2 trial conducted at M.D. Anderson Cancer Center, in Houston, Texas, we 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, 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 progession of disease (time to progression) was 2.9 months and the reported median time from surgery to death (survival) was 1.3 years from date of surgery. 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, or ASCO, in June 2003. 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 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 our 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 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. At that time, the FDA requested

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further information regarding Oncophage and the established potency assay. The FDA did not impose any conditions or limitations when it lifted the partial clinical hold in November 2003.

In late December 2003, we announced achievement of 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, 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 Data Monitoring Committee also declared the design and conduct of the trial sound and raised no safety concerns. We remain blinded to the efficacy data from the trial.

This trial has been closed to enrollment. The final analysis for 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 the final analysis for this trial will occur is in early 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 as well as a second Phase 3 (part 2 Phase 3) trial in the same patient population. We plan to initiate this part 2 Phase 3, multicenter, international trial for renal cell carcinoma during the fourth quarter of 2004. We intend to use this part 2 Phase 3 trial to support the approval of Oncophage in renal cell carcinoma. Following the final analysis of our current Phase 3 clinical trial, 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 the part 2 Phase 3 trial is still ongoing. In the event such a determination is made, we would complete preparation and submission of a BLA document. We would expect that the FDA review process of such application would take from 6 to 12 months from the date of filing and that commercialization could commence at the time approval would be granted.

Melanoma

Background. Melanoma is the most serious form of skin cancer. According to the American Cancer Society, melanoma accounts for only about 4 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 55,100 new cases of melanoma in the United States in 2004 and that the disease will kill approximately 7,910 people in 2004. The incidence of melanoma is growing at a rate of 4 to 7 percent per year, which is substantially faster than the growth in incidence rates of most other cancers.

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 20 percent 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

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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. The investigator reported data from the Phase 2 trial showed that 28 patients had residual disease after surgery and that of these patients, five patients responded favorably to Oncophage including two who were reported to have achieved complete responses for more than two years. The investigators also reported that Oncophage vaccination generated anti-melanoma immune responses in about one-half of the patients. Results of this Phase 2 trial were presented by the investigators at the American Society of Clinical Oncologists, or ASCO, meeting in May 2001 and the American Association for Cancer Research, or 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 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 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, 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 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. At that time, the FDA requested further information regarding Oncophage and the established potency assay. The FDA did not impose any conditions or limitations when it lifted the partial clinical hold in November 2003. This trial is closed to enrollment and during 2005, we plan to initiate a second part 2 Phase 3 trial in melanoma in collaboration with a large cooperative group.

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 regarding our clinical trial in renal cell carcinoma.

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 first quarter 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

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survival rate of 51 percent, compared with 8 percent among nonresponders. 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. Among the 10 patients who received Oncophage in the Phase II trial, there were responses reported in six: one partial response, two minor responses and three disease stabilizations. 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 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. 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. In the trial, 15 patients with gastric cancer (stage II to stage IV) 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. 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, or 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. 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 doses per year, expandable to between 40,000 and 50,000 patient doses per year. On average, it takes eight to ten hours of direct processing time to manufacture a patient batch of Oncophage. We currently have 19 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 16 employees, performs a series of release assays designed to ensure that the product meets all applicable specifications. Our quality assurance staff of 9 employees also reviews manufacturing and quality control records prior to batch release in an effort to assure conformance with Good Manufacturing Practices 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.

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AG-858

AG-858 is a personalized therapeutic cancer vaccine based on our heat shock protein technology for the treatment of chronic myelogenous leukemia, or 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 33,440 new cases of all types of leukemia in 2004 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, it was reported that five out of the five evaluable patients showed objective clinical responses. Updated data were then announced in an oral presentation at the ASCO meeting in June 2003 in which responses were reported in seven of the eight patients evaluated. 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 through cytogenetic or molecular tests which measure respectively, the number or presence of leukemia causing CML cells in the patient s blood. 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, Antigenics HSP70-based product candidate, with Gleevec. The trial will evaluate the safety and cytogenetic response 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 early 2005 and to release the data from this trial approximately 12-15 months after completion of enrollment.

Manufacturing

We also 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 doses per year, expandable to between 40,000 and 50,000 patient doses 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 fully 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 reviews manufacturing and quality control records prior to batch release in an effort to assure conformance with Good Manufacturing Practices as mandated by the FDA and key foreign regulatory agencies.

Our AG-858 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-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

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HSPPCs that we manufacture by complexing, or binding, a heat shock protein to a single peptide of HSV-2 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 49 HSV-2 peptides. The multivalent AG-707 is therefore designed to address HSV-2 infection in a broad population of patients. AG-707 is designed to be a 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.

Background. The US Centers for Disease Control and Prevention estimates that 45 million people in the United States ages 12 and older, or one out of five of the total adolescent and adult population, are infected with HSV-2. The World Health Organization estimates that approximately 21 million people worldwide are infected each year. Genital herpes is currently treated with palliative antiviral agents that reduce further replication of the virus.

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 (IND) for AG-707, our multivalent product candidate, for the treatment of genital herpes in the fourth quarter of 2004 and, assuming allowance of the IND by the FDA, we would expect to begin enrolling patients shortly thereafter.

Manufacturing

The synthetic peptide components used in of AG-702/ AG-707 are manufactured for us by a contract manufacturer. The recombinant HSP70 used in AG-702 was also produced by a contract manufacturer. We intend to produce the recombinant HSP70 for AG-707, as well as conduct the fill and finish operation in our new Lexington, Massachusetts facility.

Aroplatin

Aroplatin is a novel formulation of a third-generation platinum chemotherapeutic that is similar to oxaliplatin, a recently approved treatment for colorectal cancer. Laboratory studies indicate that Aroplatin has considerable anti-tumor activity, which is the ability to kill cancer cells in cell culture or reduce the growth of certain cancers in animal models. In some experiments, Aroplatin showed better ability to kill cancer cells than other established platinum chemotherapeutics. 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 which 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 a liposome, or a round shell of phospholipids, the basic components of human cell membranes. Liposome encapsulation has been shown to increase a drug s bioavailability, or the amount of time and specific distribution within the body, which can extend the treatment s 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 cytotoxic agent with the dose-limiting toxicity being bone marrow suppression. Thus, based on its chemical structure which 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 compared with current platinum-based chemotherapeutics such as carboplatin and cisplatin.

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

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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. 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 are currently conducting preclinical experiments with Aroplatin to determine how the formulation of Aroplatin could be improved. Subject to the results of these experiments, we may launch a series of further preclinical experiments to support future clinical trials with an improved formulation or we may make the decision to suspend or delay the current development of Aroplatin. We estimate that preclinical testing will conclude during 2004 followed, if successful, by further clinical development.

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 regularly 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 well 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 over 3,100 patients in more than 90 clinical trials covering a variety of cancer indications and infectious diseases and has been shown 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.

Numerous studies conducted by our licenses and collaborators have shown that the use of QS-21 adjuvant improves the quality of the immune response and reduces the quantity of antigen necessary to stimulate an immune response. Adding QS-21 to antigens generally broadens the type of antibody produced and increases the titer or amount of antibodies produced. These properties are expected to provide better protection against certain pathogens for which no effective vaccine is available.

Partnered QS-21 Programs

A number of pharmaceutical and biotech companies have licensed QS-21 for a variety of human diseases. Companies with active and ongoing QS-21 programs are GlaxoSmithKline, P.L.C., Progenics Pharmaceuticals, Inc., Elan Corporation, plc. and Advanced Bioscience Laboratories. 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.

Manufacturing

We have entered into a supply agreement as of March 2004 for the production of QS-21. To date, we have not purchased any product under this agreement. The manufacturer is capable of producing up to

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2 million doses per batch at this facility. We have retained worldwide manufacturing rights and have the right to subcontract manufacturing for QS-21.

Preclinical Programs

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 will 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 will 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 have launched a significant 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.

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 69 issued United States patents and 82 foreign patents. We also have rights to 45 pending United States patent applications and 152 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 151 issued patents and 197 pending patent applications because a substantial portion of our patent portfolio is directed to alternative and/or non-core technologies.

Table 1

Products or Technologies	Oncophage® & AG-858	AG-707	HSPs in Autoimmune Disorders	HSP Receptors
Number of issued U.S. patents	12	9	1	0
Expiration range	2015 2018	2015 2017	2017	
Number of pending U.S. patent applications	4	3	0	6
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 24 issued U.S. patents and 22 U.S. patent applications 6 issued foreign patents and 53 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.

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Table 2

Products or Technologies	QS-21	Aroplatin
Number of issued U.S. patents	5	3
Expiration range	2008 2017	2010 2020
Number of pending U.S. patent applications	3	6
Number of issued foreign patents	35	18
Expiration range	2008 2012	2006 2012
Number of pending foreign patent applications	23	6

All patents and applications relating to QS-21 are owned by Antigenics. All of the foreign patents and two foreign patent applications relating to Aroplatin™ and all of the U.S. patents and U.S. 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 require almost 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 an equity interest in the company. 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. 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.

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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, 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 due 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.

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 which was amended during 2002 and again on December 31, 2003 to currently : (1) extend the term of the research agreement to December 31, 2008, and (2) provide for 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 (2018) or becomes no longer valid. UConn may terminate the agreement: (1) if, after 30 days written notice, we 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. 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 due 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,

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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. To date, we have paid approximately $52,000 to UConn under the amendment agreement.

With the exception of five 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, a company we acquired in July 2001, entered into a license agreement with Sumitomo Pharmaceuticals Co., Ltd. The license agreement grants us the exclusive right to an issued U.S. patent application that contains certain claims to the active ingredient in 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. As the Sumitomo patent has not issued yet, the term of the license agreement would end 17 years after the date that the Sumitomo patent is issued. 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 defaults in its performance under the license agreement. Prior to our acquisition of Aronex Pharmaceuticals, Sumitomo received a $500,000 up-front payment in 2001 from Aronex Pharmaceuticals 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 due diligence provisions.

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

In June 1988, a predecessor to Aronex Pharmaceuticals 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 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.

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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 however 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 institution 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 as well as a six-month review of marketing applications 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

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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 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 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 are in compliance with current Good Manufacturing Practices. 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 current Good Manufacturing Practices. 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, or OSHA, and the Environmental Protection Agency, or 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. Either or both 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 country to country. Whether or not we have obtained FDA approval, we must obtain approval of a product by comparable regulatory authorities of foreign countries prior to the commencement of

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marketing the product in those countries. 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 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, and Wyeth, have expertise in, and are developing products for the treatment of cancer, infectious diseases, and autoimmune disorders.

Certain companies to which we have licensed QS-21 have also licensed vaccine adjuvants form 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 August 31, 2004, we had 229 employees, of whom 27 have PhDs and 4 have MDs. None of our employees are subject to a collective bargaining agreement. We believe that we have good relations with our employees.

USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares of Antigenics common stock offered by this prospectus. This prospectus relates to resales by the selling securityholders listed below or in a supplement to this prospectus of 350,000 shares of Antigenics common stock that we issued in a private placement on July 30, 2004 in connection with our acquisition of assets from Mojave Therapeutics.

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SELLING SECURITY HOLDERS

This prospectus relates to resales by the selling securityholders listed below of 350,000 shares of Antigenics common stock that we issued in a private placement on July 30, 2004 in connection with our acquisition of assets from Mojave Therapeutics, Inc.

The table below sets forth information about the beneficial ownership of shares of Antigenics common stock by each selling securityholder who has timely provided us with a completed and executed notice and questionnaire stating its intent to use this prospectus to sell or otherwise dispose of shares of Antigenics common stock. Our registration of the shares of Antigenics common stock that were issued in connection with the acquisition of assets from Mojave Therapeutics does not mean that the selling securityholders identified below will sell all or any of these shares.

We have prepared this table using information furnished to us by the selling securityholders. Except as otherwise indicated below, to our knowledge, no selling securityholder nor any of its affiliates has held any position or office with, been employed by or otherwise has had any material relationship with us or our affiliates during the three years prior to the date of this prospectus.

Name(1)	Number of Shares of Antigenics Common Stock Offered Pursuant to this Prospectus	Number of Shares of Antigenics Common Stock Beneficially Owned After the Offering(2)
Mojave Therapeutics, Inc.	198,875	0
Life Science Group	28,209	0
Johnson & Johnson Development Corporation	9,219	0
Patricia M. Cloherty	1,615	0
Frank Landsberger	77	0
John Starynski and Marilyn Pontone	154	0
Gobi Partners II LLC	860	0
Sloan-Kettering Institute for Cancer Research	61,458	0
Apax Europe IV-A, L.P.	28,887	0
Apax Europe IV-B, L.P.	6,080	0
Apax Europe IV-C GmbH & Co. K.G.	2,782	0
Apax Europe IV-D, L.P.	2,185	0
Apax Europe IV-E, L.P.	47	0
Apax Europe IV-F, C.V.	2,039	0
Apax Europe IV-G, C.V.	1,199	0
Apax Europe IV-H GmbH & Co., K.G.	29	0
APA Excelsior IV, L.P.	5,206	0
APA Excelsior IV/ Offshore, L.P.	919	0
Patricof Private Investment Club, L.P.	100	0
Eugene Levy	61	0

(1) Individuals and entities who receive shares of Antigenics common stock covered by this prospectus from a selling securityholder as a gift or in connection with a pledge may sell up to 500 of those shares using this prospectus.

(2) Assumes that the selling securityholder has sold all the shares of common stock listed next to its name and represents additional shares of Antigenics common stock beneficially owned before the offering.

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PLAN OF DISTRIBUTION

We are registering the shares of common stock issued in connection with our acquisition of assets from Mojave Therapeutics for resale by the selling securityholders listed in this prospectus. The aggregate proceeds to the selling securityholders from the sale of the common stock will be the purchase price of the shares less discounts and commissions, if any. Each of the selling securityholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of shares. We will not receive any of the proceeds from the offering of the shares of common stock by the selling securityholders.

The selling securityholders, or their pledgees, donees or transferees of, or other successors in interest to, the selling securityholders, may sell all or a portion of the shares of common stock from time to time to purchasers directly or through broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling securityholders or the purchasers. The selling securityholders will act independently of us in making decisions with respect to the timing, manner and size of each sale.

The selling securityholders and any such broker-dealers or agents who participate in the distribution of shares of common stock may be deemed to be underwriters (as this term is defined in the Securities Act). As a result, any discounts, commissions, concessions or profits they earn on the resale of the shares may be underwriting discounts and commissions under the Securities Act. If the selling securityholders were deemed to be underwriters, the selling securityholders may be subject to statutory liabilities as underwriters under the Securities Act. Selling holders who are underwriters within the meaning of the Securities Act are subject to the prospectus delivery requirements of the Securities Act. The selling securityholders have acknowledged their obligations to comply with the provisions of the Exchange Act and the rules thereunder relating to stock manipulation, particularly Regulation M.

The shares of our common stock may be sold in one or more transactions at fixed prices, prevailing market prices at the time of sale, prices related to the prevailing market prices, varying prices determined at the time of sale, or negotiated prices. These sales may be effected in transactions:

- on any national securities exchange or U.S. inter-dealer system of a registered national securities association on which the shares may be listed or quoted at the time of sale, which may include The Nasdaq National Market;
- in the over-the-counter market;
- in transactions otherwise than on such exchanges or services or in the over-the-counter market;
- through the writing of options, whether the options are listed on an exchange or otherwise; or
- through the settlement of short sales.

These transactions may include block transactions or crosses. Crosses are transactions in which the same broker acts as an agent on both sides of the trade.

In connection with sales of the shares or otherwise, the selling securityholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of shares of our common stock in the course of hedging their positions. The selling securityholders may also sell shares of our common stock short and deliver the shares covered by this prospectus to close out short positions, or loan or pledge shares of our common stock to broker-dealers that in turn may sell the shares.

To our knowledge, there are currently no plans, arrangements or understandings between any selling securityholders and any broker-dealer or agent regarding the sale of the shares by the selling securityholders. Selling securityholders may not sell any, or may not sell all, of the shares of our common stock covered by this prospectus. We cannot assure you that any such selling securityholder will not transfer, devise or gift the shares by other means not described in this prospectus.

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A selling securityholder may decide not to sell any of the shares covered by this prospectus. In addition, any shares covered by this prospectus that qualify for sale pursuant to Rule 144 of the Securities Act may be sold under Rule 144 rather than pursuant to this prospectus.

The selling securityholders and any other person participating in a distribution will be subject to the Exchange Act. The Exchange Act rules include, without limitation, Regulation M, which may limit the timing of purchases and sales of shares of our common stock by the selling securityholders and any such other person. In addition, Regulation M of the Exchange Act may restrict sales activity by a person engaged in the distribution of the shares for a period of up to five business days prior to the commencement of such distribution. This may affect the marketability of the shares of our common stock and the ability of any person or entity to engage in market-making activities with respect to shares of our common stock.

Our outstanding common stock is quoted on the Nasdaq National Market under the symbol AGEN .

Under the agreement contemplated the purchase of assets from Mojave Therapeutics, we agreed to register these shares of our common stock under the Securities Act laws under specific circumstances and at specific times. The agreement and ancillary agreements provide for cross-indemnification of the selling securityholders and us and their and our respective directors, officers and controlling persons against specific liabilities in connection with the offer and sale of the shares, including some liabilities under the Securities Act. We have agreed to pay substantially all of the expenses incidental to the registration, offering and sale of the shares to the public other than commissions, fees and discounts of underwriters, broker-dealers and agents. Our obligation to keep the registration statement of which this prospectus is a part effective is subject to exceptions. In certain cases, we may prohibit offers and sales of the shares pursuant to such registration statement.

VALIDITY OF SECURITIES

Our counsel, Ropes & Gray LLP, Boston, Massachusetts, has passed on the validity of the shares offered by this prospectus.

EXPERTS

The consolidated financial statements of Antigenics Inc. and subsidiaries as of December 31, 2003 and 2002, and for each of the years in the three-year period ended December 31, 2003, have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent accountants, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit report covering the December 31, 2003 consolidated financial statements refers to a change in accounting for purchase method business combinations completed after June 30, 2001, a change in accounting for goodwill and intangible assets effective January 1, 2002 and a change in accounting for asset retirement obligations effective January 1, 2003.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference information from other documents that we file with them, which means that we can disclose important information by referring to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the

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documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 prior to the sale of all the securities covered by this prospectus:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2003 filed with the SEC on March 15, 2004 (File No. 000-29089);

- our Quarterly Reports for the fiscal quarter ended March 31, 2004 filed with the SEC on May 7, 2004 (File No. 000-29089) and for the fiscal quarter ended June 30, 2004 filed with the SEC on August 9, 2004 (File No. 000-29089);

- our Current Reports on Form 8-K filed with the SEC on February 4, 2004 (File No. 000-29089), February 18, 2004 (File No. 000-29089), April 1, 2004 (File No. 000-29089) and May 27, 2004 (File No. 000-29089);

- the description of our common stock contained in our Registration Statement on Form 8-A, filed on January 24, 2000 (File No. 000-29089), including any amendment or reports filed for the purpose of updating such description.

We will provide to you, without charge, upon your written or oral request, a copy of any or all of the documents that we incorporate by reference, including exhibits. Please direct requests to: Investor Relations at Antigenics Inc., 630 Fifth Avenue, New York, New York 10111, where the phone number is (212) 994-8200.

WHERE YOU CAN FIND MORE INFORMATION

You should rely only on the information contained in this prospectus. We have not authorized any person to provide you different information. You should not assume that the information in this prospectus is accurate as of any date other than the date on the cover.

We file annual, quarterly, and special reports and proxy statements and other information with the SEC. You may read and copy any document that we file at the SEC s Public Reference Room at 450 Fifth Street, N.W. Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Our SEC filings are also available on the SEC s web site at http://www.sec.gov.

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. ***Other Expenses of Issuance and Distribution***

The expenses in connection with the securities being registered are as follows:

	Amount to be Paid
Registration fee	299
Printing Expenses	10,000
Legal fees and expenses	20,000
Accounting fees and expenses	15,000
Miscellaneous	201
Total	$45,500

All of the above figures, except the SEC registration fee, are estimated, and we will pay all of the above expenses.

Item 15. ***Indemnification of Directors and Officers***

Section 145 of the Delaware General Corporation Law provides that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the corporation, by reason of the fact that the person is or was a director, officer, employee or agent of the corporation or is or was serving at the corporation s request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including attorneys fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with the action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person s conduct was unlawful. The power to indemnify applies to actions brought by or in the right of the corporation as well, but only to the extent of expenses, including attorneys fees but excluding judgments, fines and amounts paid in settlement, actually and reasonably incurred by the person in connection with the defense or settlement of the action or suit. And with the further limitation that in these actions no indemnification shall be made in the event of any adjudication of negligence or misconduct in the performance of his duties to the corporation, unless a court believes that in light of all the circumstances indemnification should apply.

Article V of Antigenics By-laws provides that Antigenics shall, to the extent legally permitted, indemnify each person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding by reason of the fact that he is or was, or has agreed to become, a director or officer of Antigenics, or is or was serving, or has agreed to serve, at the request of Antigenics, as a director, officer or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprises. The indemnification provided for in Article V is expressly not exclusive of any other rights to which those seeking indemnification may be entitled under any law, agreement or vote of stockholders or disinterested directors or otherwise, and shall inure to the benefit of the heirs, executors and administrators of such persons.

Section 145(g) of the Delaware General Corporation Law and Article V of By-laws of Antigenics provide that the company shall have the power to purchase and maintain insurance on behalf of its officers, directors, employees and agents, against any liability asserted against and incurred by such persons in any such capacity.

Antigenics has entered into indemnification agreements with each of its directors and executive officers and has obtained insurance covering its directors and officers against losses and insuring Antigenics against certain of its obligations to indemnify its directors and officers.

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Section 102(b)(7) of the Delaware General Corporation Law provides that a corporation may eliminate or limit the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided that such provisions shall not eliminate or limit the liability of a director (i) for any breach of the director s duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived an improper personal benefit. No such provision shall eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision becomes effective.

Section 6 of Article FIFTH of the Certificate of Incorporation of Antigenics eliminates a director s personal liability for monetary damages to Antigenics and its stockholders to the fullest extent permitted under the Delaware General Corporation Law.

Item 16. ***Exhibits***

Exhibit Number	Description of Document
4.1	Amended and Restated Certificate of Incorporation of Antigenics Inc. Filed as Exhibit 3.1 to our Current Report on Form 8-K dated June 10, 2002 (File No. 000-29089) and incorporated herein by reference.
4.2	Amended and Restated By-laws of Antigenics Inc. Filed as Exhibit 3.2 to our Current Report on Form 8-K dated June 10, 2002 (File No. 000-29089) and incorporated herein by reference.
4.3	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.
4.4	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.
4.5	Form of Debenture. Filed as Exhibit 4.1 to the Current Report on Form 8-K of Aquila Biopharmaceuticals, Inc. (File No. 0-12081) and incorporated herein by reference.
4.6	Form of Common Stock Purchase Warrant. Filed as Exhibit 4.3 to Current Report on Form 8-K dated April 17, 2000 (File No. 0-20111) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.7	Form of Common Stock Purchase Warrant. Filed as Exhibit 4.2 to Current Report on Form 8-K dated April 17, 2000 (File No. 0-20111) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.8	Registration Rights Agreement dated August 2, 1989 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	First Amendment to Registration Rights Agreement dated April 18, 1990, by and among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.3 to the Registration Statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.10	Second Amendment to Registration Rights Agreement dated October 31, 1991, by and among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.4 to the Registration Statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.11	Third Amendment to Registration Rights Agreement, dated September 10, 1993, among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.24 to the Registration Statement on Form S-1 (File No. 333-71166) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.

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Exhibit Number	Description of Document
4.12	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.
4.13	Form of Warrant to Purchase of Common Stock issued to Paramount Capital Inc. Filed as Exhibit 1.2 to the Registration Statement on Form S-1 (File No. 333-67599) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.15	Right of First Refusal Agreement dated as of May 21, 2004, between Antigenics Inc. and Brad M. Kelley, 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.
5.1	Opinion of Ropes & Gray LLP. Included with original filing of this Registration Statement.
23.1	Consent of KPMG LLP.
23.2	Consent of Ropes & Gray. Included in the opinion filed as Exhibit 5.1.
24.1	Power of Attorney. Included with original filing of this Registration Statement.

Item 17. ***Undertakings***

(a) The undersigned hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3, Form S-8 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant s annual report pursuant to Section 13(a) or

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Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, as of September 29, 2004.

ANTIGENICS INC.

By: /s/ GARO H. ARMEN, PH.D

Garo H. Armen
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated and as of September 29, 2004.

Signature	Title
/s/ GARO ARMEN, PH.D. Garo Armen, Ph.D.	Chief Executive Officer and Chairman of the Board of Directors (Principal Executive, Financial, and Accounting Officer)
/s/ PETER THORNTON Peter Thornton	Chief Financial Officer (Principal Financial and Accounting Officer)
* Noubar Afeyan, Ph.D.	Director
* Frank AtLee	Director
* Gamil de Chadarevian	Vice Chairman of the Board of Directors
* Tom Dechaene	Director
* Margaret Eisen	Director
* Wadih Jordan	Director
* Mark Kessel	Director

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Signature	Title
*	Director
Pramod Srivastava, Ph.D.	

*By: /s/ GARO ARMEN, PH.D.

Garo Armen, Ph.D.
Attorney-in-Fact