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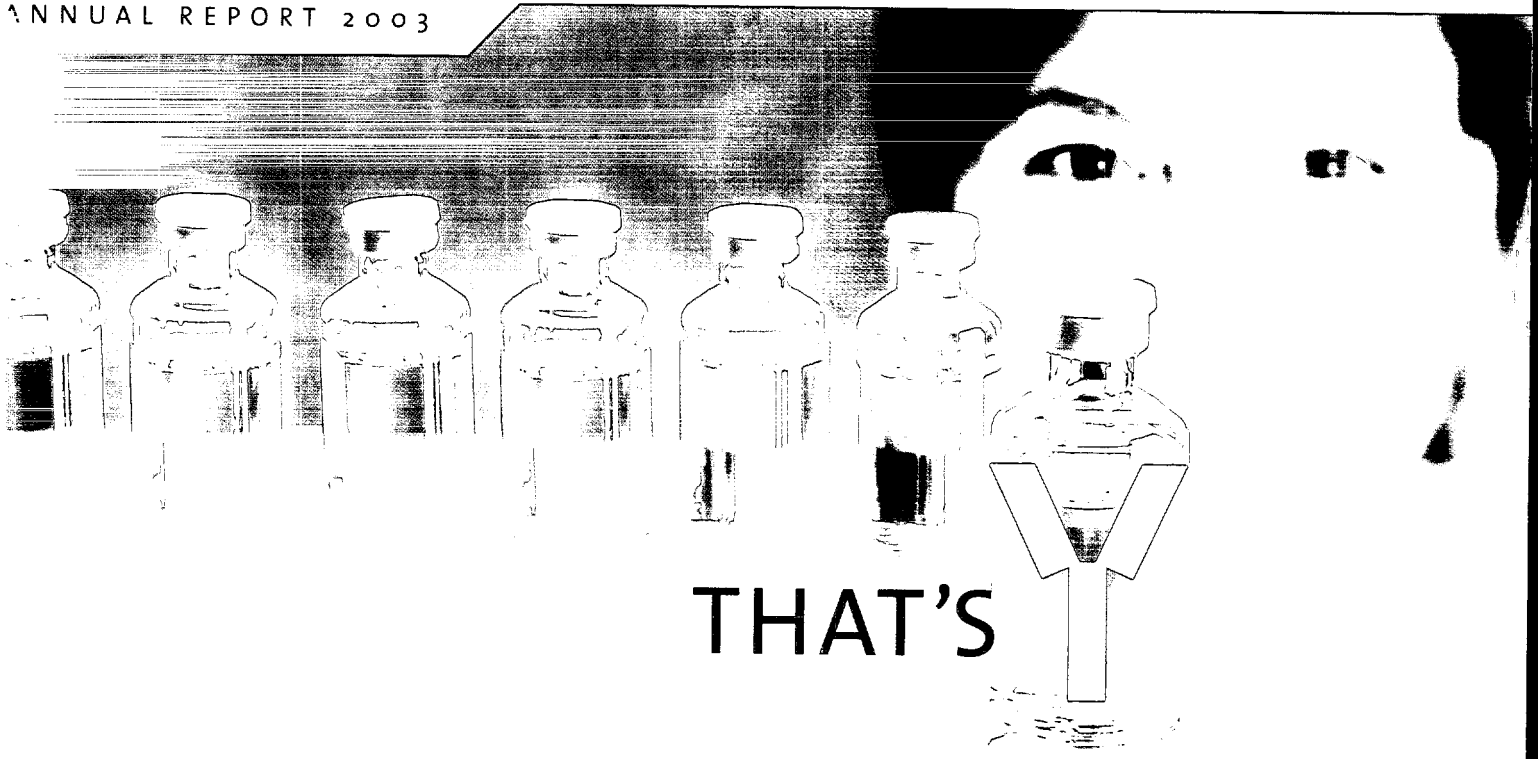
ANNUAL REPORT 2003



THAT'S

Abgenix INC

DELIVERING ON THE
PROMISE OF ANTIBODIES

AN INTEGRATED DISCOVERY AND DEVELOPMENT PLATFORM. PARTNERSHIPS WITH SOME OF THE BIGGEST NAMES IN THE INDUSTRY. A GROWING PORTFOLIO OF DIVERSE ANTIBODY THERAPEUTICS.

At Abgenix, we're completely focused on antibodies—the "Y"-shaped molecules moving to the forefront of medicine. We've integrated a proven platform for antibody discovery and early development that's supported by state-of-the-art manufacturing capabilities. We've established an extensive network of alliances with leading pharmaceutical and biotechnology companies. And we're building a robust portfolio of antibody products that spans multiple therapeutic areas, from cancer to inflammation to kidney disease. This combination of platform, partnerships, and product pipeline is unparalleled. That's "Y" we're seeing such success as we work to deliver on the promise of antibodies.

WE'RE FULFILLING THE

PROMISE OF ANTIBODIES.

Raymond M. Withy, Ph.D.
Chief Executive Officer,
President and Director

DEAR FELLOW STOCKHOLDER:

In 2003, Abgenix made significant progress in our transformation into a fully integrated product development company:

- We completed our infrastructure for the discovery, development and, most recently, the manufacture of antibody-based drugs by opening our state-licensed manufacturing facility;
- Our fully human monoclonal antibody, ABX-EGF or panitumumab, advanced toward commercialization and, in early 2004, entered into pivotal trials;
- We are using our new manufacturing facility to scale up production of panitumumab in preparation for a potential commercial launch;
- We filed an Investigational New Drug (IND) application and began clinical testing in early 2004 for ABX-PTH, a fully human antibody to parathyroid hormone for the treatment of secondary hyperparathyroidism (SHPT);
- We broadened our network of drug development partnerships to strengthen and expand our future product portfolio, most notably with global oncology leader AstraZeneca. AstraZeneca joined us in a major alliance targeting the development of, potentially, more than 50 new oncology antibodies;
- Several of our technology licensing partners also advanced their Abgenix antibody research activities. For example, Pfizer moved its second antibody candidate into the clinic and, in early 2004, announced its third IND filing for an antibody generated by our technology; and
- We agreed to do clinical manufacturing runs for two of our many technology licensees in our new manufacturing facility.

While taking these major steps, we finished the year with a strong cash position and started 2004 with $348 million in cash, cash equivalents and marketable securities.

As Abgenix continues to progress, we remain focused on our primary goal: working to deliver on the promise of antibodies to improve human health in a transforming biopharmaceutical marketplace. We pursue this vision with confidence, knowing that our integrated antibody system can generate, select and produce high affinity, fully human antibody product candidates for a variety of disease targets. We have a comprehensive strategy in place that we believe puts us on track to achieve our goals and

to develop a broad and diverse portfolio of drugs to treat serious health conditions.

LEAD PRODUCT ENTERS LATE STAGE TRIALS

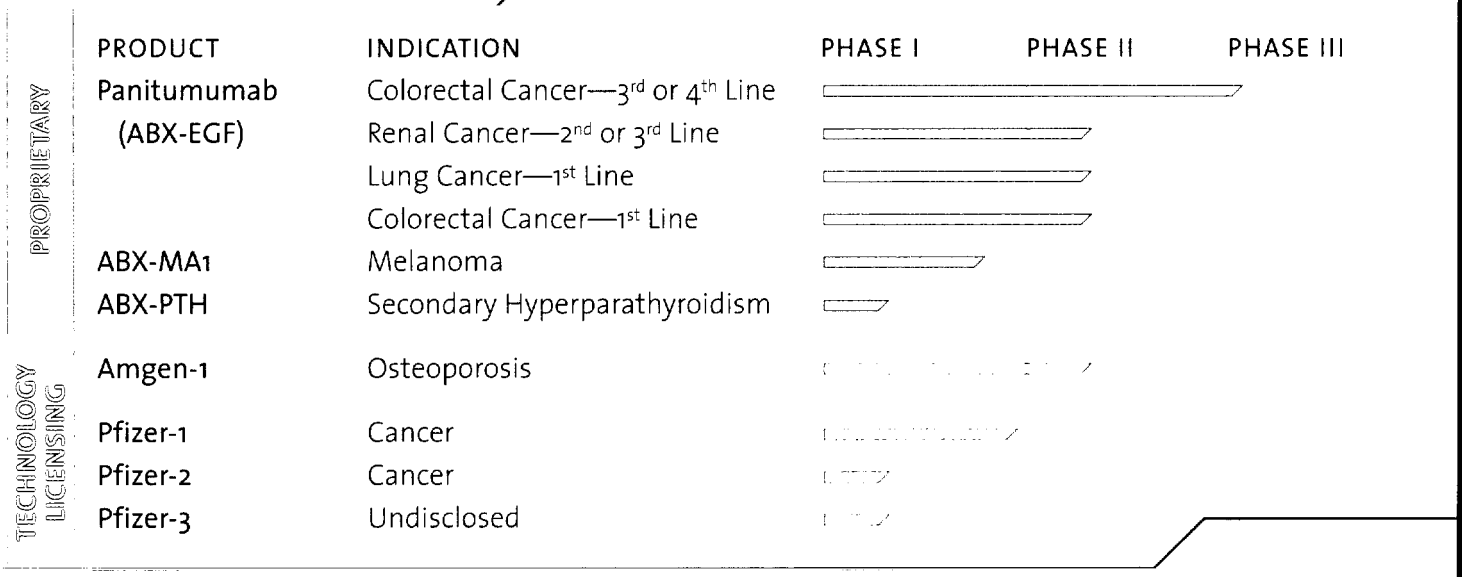
Our lead product candidate, panitumumab (formerly ABX-EGF), illustrates how we work to deliver on our mission by applying our integrated antibody platform. Codeveloped with Amgen, panitumumab is the first fully human monoclonal antibody directed against the epidermal growth factor receptor (EGFr). Panitumumab is being evaluated as both a monotherapy and combination therapy for various cancers, including colorectal, lung and kidney/renal. Encouraging proof-of-concept data with panitumumab as a monotherapy in colorectal cancer patients was presented at the American Society of Clinical Oncology (ASCO) 2003 annual meeting. Based on these interim results, pivotal clinical trials began in early 2004.

Panitumumab's fully human nature may result in a better safety profile than that of chimeric or humanized antibodies. Panitumumab's pharmacokinetics also support an every-other-week dosing regimen, which is currently being used in the US pivotal trial evaluating it as a third-line monotherapy in colorectal cancer patients. A pivotal study of panitumumab as third-line colorectal cancer monotherapy has also been launched outside the United States. The US trial, which received a Special Protocol Assessment (SPA) from the FDA, could form the basis of a regulatory submission, while results of the ongoing phase 2 studies in lung, kidney/renal and colorectal cancer patients should help inform decisions about the drug's development in other indications.

In 2003, we also clarified responsibilities in our 50/50 codevelopment deal for panitumumab: Amgen will lead clinical development and commercialization, while Abgenix will lead clinical and commercial manufacturing. In addition, the $60 million credit facility that we put in place with Amgen to help fund our 50 percent share of the panitumumab program costs will help us to manage our cash resources. The loan can be repaid with future profits if panitumumab reaches commercialization; it is forgiven if the drug does not reach the market.

With pivotal studies now under way, our team is dedicated to making a major contribution toward panitumumab's late stage development and potential commercial launch by manufacturing the product to be used in patient care. With Amgen's support and assistance, we are applying

CLINICAL PORTFOLIO



Antibodies generated through licensing agreements are being developed and may be commercialized by the licensee. Abgenix may receive milestone payments and royalties from future product sales. Clinical status from public sources.

significant resources toward the quality and manufacturing effort as we prepare for potential commercial launch of this new targeted therapy.

EXPANDING THE PIPELINE

Beyond panitumumab, we further expanded our network of strategic development partnerships in 2003 to gain access to the biological expertise as well as the research scale required to build our portfolio. These partnerships, including Chugai, Sosei, Microscience and AstraZeneca, position Abgenix to explore the potential of antibodies across multiple therapeutic areas. They also set the stage for capturing economic value from any future products through a network of diverse deal structures.

Reflecting on 2003, our most notable partnership is the broad oncology development collaboration we entered into with AstraZeneca. This alliance calls for the joint discovery and development of therapeutic antibodies for up to 36 cancer targets, with an additional 18 potential codevelopment candidates. The three-year target selection phase is now under way. As part of the partnership, AstraZeneca invested $100 million in Abgenix. Abgenix may also receive payments and significant mid-term cash flows from the agreement, starting as early as 2006. Finally, we believe this partnership validates the integrated antibody system we have put in place and highlights our leadership position as the partner of choice in antibodies.

Turning to the overall portfolio of fully human antibodies generated by our technology, there are now seven antibody product candidates in clinical trials. The most advanced in development, panitumumab, entered pivotal clinical trials earlier this year. Two of these antibodies are proprietary to and being developed solely by Abgenix: ABX-MA1, which is being studied in a Phase I clinical study in malignant melanoma, and ABX-PTH, an antibody we are developing for the treatment of secondary hyperparathyroidism (SHPT) that entered the clinic in early 2004. An additional four antibodies from our technology outlicensing agreements are in clinical trials being conducted by Pfizer and Amgen. Abgenix and its collaborators now have a large number of antibodies at various stages of preclinical development. Importantly, we also made significant progress during the past year prioritizing our own preclinical portfolio, as we prepare to advance the more promising of those antibodies in our pipeline – either on our own or in partnership with others.

We have great expectations for the coming year and our goals are substantial. With Amgen, we expect to fund a broad clinical program for panitumumab in multiple tumor types and we hope to see results from the ongoing trials reported this year and beyond. We believe that our alliance with AstraZeneca will also lead to the identification and advancement of several new antibody candidates during 2004. Our antibody product candidate, ABX-PTH, is expected to advance in clinical trials and pave the way for our portfolio to broaden outside oncology.

Our business is on track and we remain optimistic as we look to the future. As we transform Abgenix into a product development company, we know our success is due to the exceptional people who give Abgenix its leadership status: our employees, our partners and the patients whose unmet medical needs motivate us to achieve our goals. Our progress is possible only because of the dedicated efforts of our employees and the confidence and support of our stockholders. Thank you for enabling Abgenix to continue to deliver on the promise of antibodies.

Raymond M. Withy, Ph.D.
Chief Executive Officer,
President and Director

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

FORM 10-K

(Mark one)

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

For the fiscal year ended December 31, 2003

OR

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

For the transition period from to .

Commission file number: 000-24207

ABGENIX, INC.
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	**94-3248826** (IRS employer Identification number)
6701 Kaiser Drive, Fremont, CA (Address of principal executive office)	**94555** (Zip Code)

(510) 608-6500
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) if the Act: None

Securities registered pursuant to Section 12(g) of the act: Common Stock, $0.0001 par value;

Preferred Stock Purchase Rights
(Title of Class)

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

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act. Yes ☒ No ☐

The aggregate market value of the voting stock held by non-affiliates of the Registrant as of June 30, 2003 was $820,364,407. The number of shares of Common Stock, $0.0001 par value, outstanding on February 27, 2004, was 88,305,099.

Documents incorporated by reference: Portions of the Proxy Statement for Registrant's Annual Meeting of Shareholders to be held June 7, 2004 (the Proxy Statement), are incorporated herein by reference into Part III.

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PART I

Item 1. Business.

The following description of our business should be read in conjunction with the information included elsewhere in this annual report on Form 10-K. The description contains certain forward-looking statements that involve risks and uncertainties. When used in this annual report on Form 10-K, the words "intend," "anticipate," "believe," "estimate," "plan" and "expect" and similar expressions as they relate to us are included to identify forward-looking statements. Our actual results could differ materially from the results discussed in the forward-looking statements as a result of certain of the risk factors set forth below and in the documents incorporated herein by reference, and those factors described under "Additional Factors that Might Affect Future Results". In this annual report on Form 10-K, references to "Abgenix," "we," "us" and "our" are to Abgenix, Inc. and its subsidiaries.

Abgenix

We are a biopharmaceutical company that is focused on the discovery, development and manufacture of human therapeutic antibodies for the treatment of a variety of disease conditions, including cancer, inflammation, metabolic disease, autoimmune diseases, cardiovascular disease and infectious diseases.

We have proprietary technologies that facilitate rapid generation of highly specific, antibody therapeutic product candidates that contain fully human protein sequences and that bind to disease targets appropriate for antibody therapy. In this annual report on Form 10-K we refer to these candidates as fully human antibody therapeutic product candidates. We developed our XenoMouse® technology, a technology using genetically modified mice, to generate fully human antibodies. We also own a technology that enables the rapid identification of antibodies with desired function and characteristics, referred to as SLAM™ technology. In our XenoMax™ technology, we use SLAM technology to select and isolate antibodies with particular function and characteristics from antibody-producing cells generated by XenoMouse animals. We believe our antibody-generation technologies enhance our capabilities in product development. We intend to use our technologies to build a large and diversified product portfolio that we expect to develop and commercialize largely through joint development and commercialization arrangements with pharmaceutical companies and others. We generally expect to self-fund preclinical and clinical activities to determine preliminary safety and efficacy before entering into joint development and commercialization agreements. In some cases we may conduct product development entirely on our own. To date, we have initiated clinical trials with four fully human antibodies generated from XenoMouse technology. We are co-developing ABX-EGF, or panitumumab, our leading, most advanced proprietary antibody product candidate, under a development and commercialization agreement with Immunex Corporation, a wholly-owned subsidiary of Amgen, Inc. We also have two product candidates in early stage clinical trials. In addition, we have entered into a variety of contractual arrangements with multiple pharmaceutical, biotechnology and genomics companies involving our XenoMouse and XenoMax technologies. Two of our customers, Pfizer, Inc. and Amgen, have initiated clinical trials with fully human antibodies generated from XenoMouse animals.

We were incorporated on June 24, 1996, and on July 15, 1996, were organized pursuant to a stock purchase and transfer agreement with Cell Genesys, Inc. In 1989, Cell Genesys started our business and operations and conducted our business and operations internally within its organization as a separate company. In 1991, Cell Genesys and JT Immunotech USA Inc., the predecessor company to JT America Inc. and a medical subsidiary of Japan Tobacco, formed Xenotech, an equally owned joint venture, to develop genetically modified strains of XenoMouse mice, and to commercialize products generated from these mice. At the time of our organization, Cell Genesys assigned to us substantially all of its rights in Xenotech. On December 31, 1999, we became the sole owner of Xenotech by buying JT America's interest in Xenotech.

Overview of Product Development

Preclinical Research

Our product development activities begin with preclinical research and development. Our preclinical research and development efforts have been focused on:

- the identification of antigens, which are proteins or other molecules that are potential targets for antibody therapy;
- the generation of antibodies that bind to those antigens; and
- laboratory testing or screening of the antibodies we generate to identify those with function and characteristics that make them promising candidates for further development.

We identify antigens largely through licensing or collaboration agreements with other companies that have ownership interests or intellectual property rights in antigens that are of interest to us, or have particular methods of identifying potential antigens. We also source antigens through information available in the public domain. We conduct our own preclinical antigen validation research and we generate and screen antibodies through use of our XenoMouse and XenoMax technologies. After we have identified antibodies of interest, we conduct in vitro experiments and in vivo experiments using animal models to provide further data about the potential therapeutic value of the antibodies for treatment of a variety of diseases or indications. Our preclinical activities also include improvement of production methods and support of collaborations.

Proprietary Product Development

We have three proprietary antibody therapeutic product candidates that are currently in clinical trials.

- ABX-EGF (panitumumab). Our leading proprietary antibody therapeutic product candidate is ABX-EGF, which has received the USAN name panitumumab. Generated using XenoMouse technology, ABX-EGF is a fully human antibody therapeutic product candidate for the treatment of a variety of cancers. We are co-developing this candidate with Immunex under a development and commercialization agreement. The status of clinical trials for ABX-EGF is as follows:
  - Various cancers—We initiated a Phase 1 clinical trial for ABX-EGF in cancer in July 1999. In 2003, we expanded enrollment to investigate additional dose levels and enrollment is ongoing.
  - Renal cell cancer—We initiated a Phase 2 clinical trial evaluating the effect of ABX-EGF as monotherapy in patients with renal cell cancer in April 2001 and enrollment is ongoing.
  - Non-small cell lung cancer—Immunex initiated a Phase 2 clinical trial for ABX-EGF in non-small cell lung cancer in combination with standard chemotherapy, compared to standard chemotherapy alone, in July 2001. We expect to close enrollment shortly. Treatment is ongoing.
  - Colorectal cancer—Immunex initiated a Phase 2 clinical trial evaluating the effect of ABX-EGF as monotherapy in patients with metastatic colorectal cancer who have previously failed chemotherapy in December 2001. Enrollment is closed and treatment is ongoing. Immunex initiated a separate Phase 2 clinical trial evaluating the effect of ABX-EGF in combination with standard chemotherapy, as first-line treatment in patients with metastatic colorectal cancer, in January 2002, in which enrollment is ongoing.

    In January 2004 Immunex initiated a pivotal study of ABX-EGF as a third-line monotherapy in patients with colorectal cancer. The trial initiation follows the receipt of a

Special Protocol Assessment letter from the U.S. Food and Drug Administration, or FDA, endorsing the design of the trial to support a regulatory submission for potential accelerated approval. At the same time Immunex initiated a second pivotal study outside the United States in support of a global registration program.

- Prostate cancer—We initiated a Phase 2 clinical trial evaluating the effect of ABX-EGF in patients with hormone resistant prostate cancer in January 2002, in which treatment is ongoing. Based on a preliminary analysis, we have recently closed enrollment in this trial. The preliminary findings do not meet our planned threshold to support pursuing the drug as a monotherapy in this indication.

- ABX-MA1. Generated using XenoMouse technology, ABX-MA1 is a fully human antibody therapeutic product candidate for the treatment of a variety of cancers. We filed an investigational new drug application, or IND, in December 2001 and initiated a Phase 1 clinical trial evaluating the effect of ABX-MA1 in patients with metastatic melanoma in February 2002. Enrollment is closed and treatment is ongoing.

- ABX-PTH. Generated using XenoMouse technology, ABX-PTH is a fully human antibody therapeutic product candidate for the treatment of a secondary hyperparathyroidism. We filed an IND in December 2003 and initiated a Phase 1 clinical trial evaluating the effect of ABX-PTH in patients with secondary hyperparathyroidism in February 2004.

"Phase 1" indicates safety and pharmacokinetics testing in a limited patient population. "Phase 2" indicates safety, dosing and efficacy testing in a limited patient population. "Phase 3" indicates efficacy and safety testing in a larger patient population. A "pivotal study" is designed to indicate efficacy and safety in a larger patient population. Phase 3 studies designed for registration purposes are considered pivotal studies. Phase 2 studies specifically designed for registration purposes can be pivotal studies.

We have entered into a broad collaboration with AstraZeneca UK Limited for the development of antibody therapeutics for the treatment of oncology pursuant to which we have an opportunity to co-develop products with AstraZeneca, as well as provide preclinical and clinical research support for the development of product candidates by AstraZeneca. In addition, we have entered into co-development agreements for the joint development of antibody product candidates with a variety of companies including Chugai Biopharmaceuticals, Inc. and Sosei Co., Ltd. We intend to enter into additional joint development agreements for other product candidates. We will expend significant capital to conduct clinical trials or share in the costs of conducting clinical trials for our proprietary product candidates. We expect that this will substantially increase our operating expenses over the next few years in comparison to prior periods.

Customer Product Development

We license our XenoMouse technology to pharmaceutical and biotechnology companies interested in developing antibody-based products. In addition to our proprietary antibody therapeutic product candidates in clinical trials, there are four customer-developed antibodies generated with XenoMouse technology in clinical trials or the subject of an IND as follows:

- Pfizer—We generated two XenoMouse-derived fully human antibody therapeutic product candidates that Pfizer has advanced into clinical trials. In addition, Pfizer filed an IND to initiate clinical testing of a third XenoMouse-derived fully human antibody therapeutic product candidate in January 2004.

- Amgen—We generated a XenoMouse-derived fully human antibody therapeutic product candidate that binds to an undisclosed antigen that Amgen has advanced into clinical trials.

Overview of Production Services

Our antibody production activities, also referred to as production services, include closely integrated process sciences and manufacturing capabilities for the manufacture of therapeutic product candidates. We use this capability for the manufacture of our own proprietary products candidates and also offer these services to our collaborators and others. We believe the close integration between process sciences and manufacturing enables us to streamline the production process. Within our pilot plant, our process sciences services include cell line development, optimization and production scale up. The resulting process can be transitioned to our manufacturing facility, portions of which are now operational. This facility is designed to manufacture product candidates for clinical trials and to support the early commercial launch of a limited number of products in compliance with applicable FDA good manufacturing practices. The facility has been approved by the State of California for the manufacture of product for use in human clinical trials.

Abgenix Strategy

Our objective is to be a leader in the discovery, development and manufacture of antibody-based biopharmaceutical products and to bring to market a diversified portfolio of antibody-based therapeutics. Key elements of our strategy to accomplish this objective include the following:

Developing a diversified portfolio of proprietary product candidates through collaborations. Our strategy is to build our product portfolio and generate revenues by entering collaborations such as the co-development agreement we have with Amgen and Immunex for ABX-EGF. These proprietary product collaborations involve antibodies that bind to antigens to which we obtain rights from our collaborators or from publicly available sources. We are targeting serious medical conditions, including cancer, inflammation, metabolic diseases, autoimmune disease, cardiovascular disease, growth factor modulation, neurological diseases and infectious diseases. We intend to enter additional joint development and commercialization agreements after generating antibodies and performing limited preclinical and clinical development. In some limited circumstances, we may develop the product through later stage clinical trials and license the product candidate to pharmaceutical or biotechnology companies for marketing. By entering into co-development and marketing arrangements, we can pursue multiple product candidates in the development stage, enabling us to spread our risk of product development, make cost-effective use of available human and capital resources and generate licensing and milestone revenues in the short term. We have also entered into a collaboration and license agreement with AstraZeneca for the discovery, development and commercialization of fully human monoclonal antibodies to treat cancer. This alliance involves the discovery and development of up to 36 therapeutic antibodies to treat cancer targets, to be commercialized by AstraZeneca, and potentially the co-development and commercialization of up to 18 therapeutic antibodies on an equal cost and profit sharing basis.

Enhancing our product portfolio by applying our technology to antigens we source. Another aspect of our strategy is to develop antibody therapeutic product candidates by using our XenoMouse and XenoMax technologies to generate antibodies to targets made available to us under antigen sourcing contracts. This strategy includes sourcing antigens by entering into contractual agreements with leading academic researchers and companies involved in the identification and development of novel antigens, such as those we have entered with several genomics and biopharmaceutical companies. We may also gain access to novel antigens through co-development relationships. Using this strategy, we believe we can create a package that includes antigen rights, human antibodies, and preclinical and clinical data for use by us in self-funded product development efforts or for marketing to potential collaborators for the joint development of proprietary product candidates.

Leveraging XenoMouse and XenoMax technologies through licensing and other contracts. We plan to continue to make our platform technologies available to others and generate revenues by entering into

contracts with pharmaceutical and biotechnology companies interested in using our XenoMouse and XenoMax technologies to develop antibody-based products. We have established agreements with numerous customers covering a broad range of antigens. To date, many of these parties have entered into new or expanded agreements with us that allow them to specify additional antigens for antibody development. These agreements typically provide for immunizations of XenoMouse animals with one or more antigens provided by the customer. Customers generally have an option for a period of time to acquire product licenses for any antibody product they wish to develop and commercialize. We expect to enter into additional XenoMouse and XenoMax agreements over time. During the initial, three-year phase of our collaboration with AstraZeneca, our out-licensing agreements will generally be limited to antigens outside the cancer field. We plan to continue to enhance our platform technologies through in-licensing, acquisitions and internal development.

Production Services. Our new manufacturing facility and our existing pilot plant provide integrated process sciences and manufacturing capabilities for the development and manufacture of our proprietary product candidates. We are using some available capacity to manufacture a proprietary product, ABX-EGF, which we are co-developing with Immunex. We intend to use other available capacity to manufacture other proprietary products that may be the subject of future co-development agreements. We also offer our production services to existing customers and to others to further enable their own development efforts and to absorb plant capacity not used or reserved for our proprietary product candidates.

Background

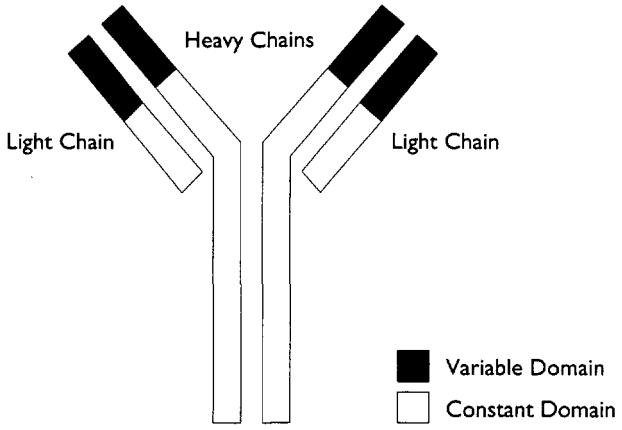
The Normal Antibody Response

The human immune system protects the body against a variety of infections and other illnesses. Specialized cells, which include B-cells and T-cells, work in concert with the other components of the immune system to recognize, neutralize and eliminate from the body numerous foreign substances, infectious organisms and malignant cells. In particular, B-cells generally produce protein molecules, known as antibodies, which are capable of recognizing substances potentially harmful to the human body. Such substances are called antigens. Upon being bound by an antibody, antigens can be neutralized or blocked from interacting with and causing damage to the body. In order to effectively neutralize or eliminate an antigen without harming normal cells, the immune system must be able to generate antibodies that bind tightly (i.e., with high affinity) to one specific antigen (i.e., with specificity).

All antibodies have a common core structure composed of four subunits, two identical light (L) chains and two identical heavy (H) chains, named according to their relative size. The heavy and light chains are assembled within the B-cell to form an antibody molecule that consists of a constant

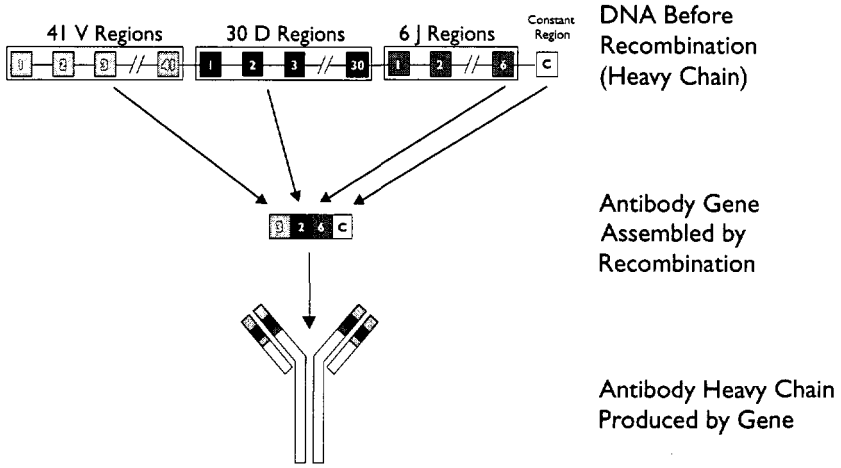
region and a variable region. As shown in the diagram below, one can represent an antibody molecule schematically in the form of a "Y" structure.

Antibody Structure



The base of the "Y," together with the part of each arm immediately next to the base, is called the constant region because its structure tends to be very similar across all antibodies. In contrast, the variable regions are at the end of the two arms and are unique to each antibody with respect to their three-dimensional structures and protein sequences. Because variable regions define the specific binding sites for a variety of antigens, there is a need for significant structural diversity in this portion of the antibody molecule. The immune system achieves such diversity primarily through a unique mode of assembly involving a complex series of recombination steps for various gene segments of the variable region, including the V, D and J segments (see the diagram below).

Genetic Makeup of XenoMouse



The human body is repeatedly exposed to a variety of different antigens. Accordingly, the immune system must be able to generate a diverse repertoire of antibodies that are capable of recognizing these multiple antigen structures with a high degree of specificity. The immune system has evolved a two-step mechanism in order to accomplish this objective. The first step, immune surveillance, is achieved through the generation of diverse circulating B-cells, each of which assembles different antibody gene segments in a semi-random fashion to produce and display on its surface a specific antibody. As a result, the body generates a large number of distinct, albeit lower affinity, circulating antibodies so as to

recognize essentially any foreign antigen that enters the body. While capable of recognizing the antigens as foreign, these lower affinity antibodies are generally incapable of effectively neutralizing them.

This limitation of the immune surveillance process is generally overcome by the normal immune system in a second step called "affinity maturation." Triggered by the initial binding to a specific antigen, the immune system then primes the small fraction of B-cells that recognize this antigen to progressively generate antibodies with higher and higher affinity through a process of repeated mutation and selection. As a result, the reactive antibodies develop increasingly higher specificity and affinity with the latter being potentially a hundred to a thousand times higher than those generated in the immune surveillance process. These more specific, higher affinity antibodies have a greater likelihood of effectively neutralizing or eliminating the antigen while minimizing the potential of damaging healthy cells.

Antibodies as Products

Recent advances in the technologies for creating and producing antibody products, coupled with a better understanding of how antibodies and the immune system function in key disease states, have led to renewed interest in the commercial development of antibodies as therapeutic products. According to a survey by the Pharmaceutical Research and Manufacturers of America, antibodies accounted for over 20% of all biopharmaceutical products in clinical development in February 2000. We are currently aware of seventeen antibody therapeutic products approved for marketing in the United States. These products are Orthoclone, ReoPro, Rituxan, Zenapax, Herceptin, Synagis, Remicade, Simulect, Mylotarg, Campath, Zevalin, Humira, Raptiva, Erbitux, Bexxar, Xolair and Avastin. These products are currently being marketed for a wide range of medical disorders such as autoimmune disease, cardiovascular disease, cancer and infectious diseases.

We believe that, as products, antibodies have several potential clinical and commercial advantages over traditional therapies. These advantages may include the following:

- faster product development;
- fewer unwanted side effects as a result of high specificity for the disease target;
- greater patient compliance and higher efficacy as a result of favorable pharmacokinetics;
- ability to deliver various payloads, including drugs, radiation and toxins, to specific disease sites; and
- ability to elicit a desired immune response.

Limitations of Current Approaches to Development of Antibody Therapeutic Products

Despite the early recognition of antibodies as promising therapeutic agents, a number of commercial and technical limitations have thus far hampered most approaches to developing antibodies as products. Researchers aimed their initial efforts at the development of hybridoma cells from mice. Such hybridoma cells are immortalized mouse antibody-secreting B-cells. Researchers derive these hybridoma cells from normal mouse B-cells that have been fused with a perpetually-growing cell so that they are capable of reproducing over an indefinite period of time. They are then cloned to produce a homogeneous population of identical cells that produce antibodies called monoclonal antibodies that are identical in their structure and functional characteristics.

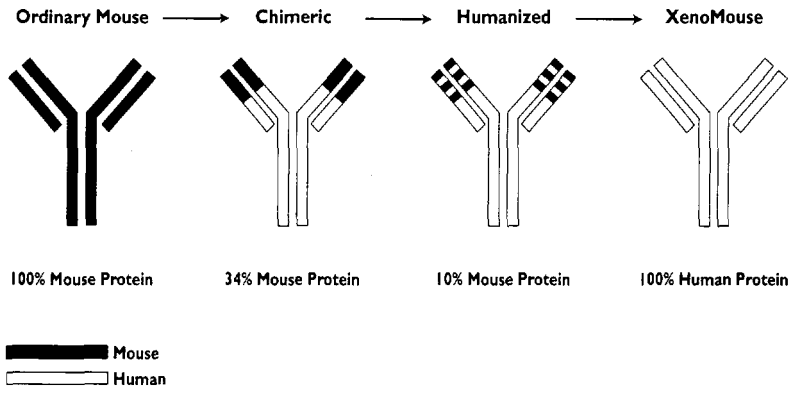
While mouse monoclonal antibodies can be generated to bind to a number of antigens, they contain mouse protein sequences and tend to be recognized as foreign by the human immune system. As a result, the human body quickly eliminates them and they have to be administered frequently. When patients are repeatedly treated with mouse antibodies, they will begin to produce antibodies that effectively neutralize the mouse antibody, a reaction referred to as a Human Anti-Mouse Antibody, or

HAMA, response. In many cases, the HAMA response prevents the mouse antibodies from having the desired therapeutic effect and may cause the patient to have an allergic reaction. The potential use of mouse antibodies is thus best suited to situations where the patient's immune system is compromised or where only short-term therapy is required. In such settings, the patient is often incapable of producing antibodies that neutralize the mouse antibodies or has insufficient time to do so.

Recognizing the limitations of mouse monoclonal antibodies, researchers have developed a number of approaches to make them appear more human-like to a patient's immune system. For example, improved forms of mouse antibodies, referred to as "chimeric" and "humanized" antibodies, are genetically engineered and assembled from portions of mouse and human antibody gene fragments. While these chimeric and humanized antibodies are more human-like, they still retain a varying amount of the mouse antibody protein sequence, and accordingly may continue to trigger the HAMA response.

Additionally, the humanization process can be expensive and time consuming, requiring at least two months and sometimes over a year of secondary manipulation after the initial generation of the mouse antibody. Once the humanization process is complete, the remodeled antibody gene must then be expressed in a recombinant cell line appropriate for antibody manufacturing, adding additional time before the production of preclinical and clinical material can be initiated. In addition, the combination of mouse and human antibody gene fragments can result in a final antibody product that is sufficiently different in structure from the original mouse antibody that a decrease in specificity or a loss of affinity results.

Evolution of Antibody Technologies



Human Antibodies

The HAMA response can potentially be avoided through the generation of antibody therapeutic products with fully human protein sequences. Such fully human antibodies may increase the market acceptance and expand the use of antibody therapeutics. Researchers have developed several antibody technologies to produce antibodies with 100% human protein sequences (see the diagram above). One approach to generating human antibodies, called "phage display" technology, involves the cloning of human antibody genes into bacteriophages, viruses that infect bacteria, in order to display antibody fragments on the surfaces of bacteriophage particles. This approach attempts to mimic in vitro the immune surveillance and affinity maturation processes that occur in the body. Because phage display technology cannot take advantage of the naturally occurring in vivo affinity maturation process, the antibody fragments initially isolated by this approach are typically of moderate affinity. In addition, further genetic engineering is required to convert the antibody fragments into fully assembled antibodies and significant manipulation, taking from several months to a year, may be required to increase their affinities to a level appropriate for human therapy. Before preclinical or clinical material

can be produced, the gene encoding the antibody derived from phage display technology must, as with a humanized antibody, be introduced into a recombinant cell line.

Two additional approaches involving the isolation of human immune cells have been developed to generate human antibodies. One such approach is the utilization of immunodeficient mice that lack both B- and T-cells. Researchers transplant human B-cells and other immune tissue into these mice which are then subsequently immunized with target antigens to stimulate the production of human antibodies. However, this process is generally limited to generating antibodies only to nonhuman antigens or antigens to which the human B-cell donor had previously responded. Accordingly, this approach may not be suitable for targeting many key diseases such as cancer, and inflammatory and autoimmune disorders for which appropriate therapy might require antibodies to human antigens. The other approach involves collecting human B cells that have been producing desired antibodies from patients exposed to a specific virus or pathogen. As with the previous approach, this process may not be suitable for targeting diseases where antibodies to human antigens are required, and therefore is generally limited to infectious disease targets which will be recognized as foreign by the human immune system.

The Abgenix Solution—XenoMouse and XenoMax Technologies

Our approach to generating human antibodies with fully human protein sequences is to use genetically engineered strains of mice in which mouse antibody gene expression is suppressed and functionally replaced with human antibody gene expression, while leaving intact the rest of the mouse immune system. Rather than engineering each antibody product candidate, these transgenic mice capitalize on the natural power of the mouse immune system in surveillance and affinity maturation to produce a broad repertoire of high affinity antibodies. By introducing human antibody genes into the mouse genome, transgenic mice with such traits can be bred indefinitely. Importantly, these transgenic mice are capable of generating human antibodies to human antigens because the only human products expressed in the mice (and therefore recognized as "self") are the antibodies themselves. The mouse thus recognizes any other human tissue or protein as a foreign antigen and the mouse will mount an immune response. Abnormal production of certain human proteins, such as cytokines and growth factors or their receptors, has been implicated in various human diseases. Neutralization or elimination of these abnormally produced or regulated human proteins with the use of human antibodies could ameliorate or suppress the target disease. Therefore, the ability of these transgenic mice to generate human antibodies against human antigens could offer an advantage to drug developers compared with some of the other approaches described previously. A challenge with this approach, however, has been to introduce enough of the human antibody genes in appropriate configuration into the mouse genome to ensure that these mice are capable of recognizing the broad diversity of antigens relevant for human therapies.

To make our transgenic mice a robust tool capable of consistently generating high affinity antibodies that can recognize a broad range of antigens, we equipped the XenoMouse with approximately 80% of the human heavy chain antibody genes and a significant amount of the human light chain genes. We believe that the complex assembly of these genes together with their semi-random pairing allows XenoMouse animals to recognize a diverse repertoire of antigen structures. XenoMouse technology further capitalizes on the natural in vivo affinity maturation process to generate high affinity, fully human antibodies. In addition, we have developed multiple strains of XenoMouse animals, each of which is capable of producing a different class of antibody to perform different therapeutic functions. We believe that our various XenoMouse strains will provide maximum flexibility for drug developers in generating antibodies of the specific type best suited for a given disease indication.

Antibodies derived from XenoMouse animals originate solely from the human immunoglobulin genes that have been introduced into the animal. Consequently, antibodies generated using XenoMouse

technology are fully human and are, therefore, expected to be less likely to be recognized as foreign and to elicit an antibody response to the therapeutic antibody than antibodies containing mouse proteins. However, an antibody response to a particular fully human antibody sequence could still occur, resulting in formation of a human anti-human antibody (HAHA) response, which neutralizes the effect of the antibody and may result in an allergic reaction.

We obtain the antibodies generated by XenoMouse animals by extracting the antibody-producing B cells. We can transform these B-cells into hybridomas to generate the quantities of antibodies needed for standard methods of assaying and selecting antibodies for further development. Hybridoma technology captures only about 1% of the antibodies originally generated by the mouse. Alternatively, we can submit the B-cells to our proprietary Selected Lymphocyte Antibody Method (SLAM) technology, which we acquired through our November 2000 acquisition of Abgenix Biopharma Inc. SLAM technology cultures the B-cells directly and rapidly assays them over a period of several days using a microplate-based, high throughput system. Using SLAM, we can typically increase the number of different antigen-reactive monoclonal antibodies identified in a single experiment by 100 to 1000-fold compared to hybridoma technology.

We use the term XenoMax technology to refer to the use of XenoMouse technology together with SLAM technology. Our XenoMax technology enhances the speed and capability of generating fully human, high affinity antibodies. XenoMax technology allows researchers to rapidly scan the majority of the immune repertoire of an immunized XenoMouse animal, and to identify B-cells that produce antibodies with the desired functional properties and optimal affinities. Using rapid microplate-based assays to measure and rank antibodies according to design goals (e.g., potency, affinity, specificity), XenoMax technology can identify individual B-cells producing extremely high-quality antibodies. It can also recover the antibody encoding genes. Within three to five weeks after immunizing XenoMouse animals, XenoMax technology can produce a ranked set of recombinant antibody candidates resulting from the harvested B-cells. We believe XenoMax technology can speed product development timelines by allowing researchers to move directly into preclinical assessment of panels of suitable recombinant candidate antibody products, each ready for manufacturing scale-up. XenoMax technology samples up to 2 million B-cells per immunized XenoMouse animal, dramatically increasing the number of antibodies from which to choose optimal therapeutic product candidates. In contrast to phage display technology, antibodies derived from XenoMax technology retain their native pairing of heavy and light chains, and do not require *in vitro* affinity and/or potency maturation.

Other approaches to generating fully human antibodies from mice that we understand are being pursued by competitors include: (i) transgenic mice containing heavy human chain and human light chain genes on a "minilocus" (which are mice that possess a relatively small number of representative human heavy and light chain genes in their genome), (ii) "transchromosomic" mice that contain large numbers of human heavy chain and light chain genes on one or more separate, or extra, chromosomes, and (iii) "UltiMab™" mice that are generated as a result of breeding "minilocus" containing mice with "transchromosomic" mice. "Transchromosomic" mice were developed by Kirin Brewing Co., Ltd. It is our understanding that "UltiMab" mice were developed by a collaboration between Medarex, Inc. and Kirin Brewing Co. and are currently used by Medarex, Kirin, GenPharm International, Inc. and GenMab A/S. Also, Xenerex Biosciences, a subsidiary of Avanir Pharmaceuticals, and XLT Biopharmaceuticals Ltd. use technologies in which human B cells and T cells are implanted in mice with compromised immune systems.

In addition to the generation of human antibodies from mice, we understand that competitors such as Cambridge Antibody Technology Group plc, MorphoSys AG and Dyax Corporation utilize phage display technology for the generation of human antibodies from phage display libraries derived from human samples. BioSite Incorporated, through a collaboration with Medarex, generates human antibody phage display libraries from immunized "UltiMab" mice. It is our understanding that these libraries are not used for deriving therapeutic antibody products.

Our Technology Advantages

We believe that our technologies offer the following advantages:

Producing antibodies with fully human protein sequences. Our XenoMouse technology, unlike chimeric and humanization technologies, allows the generation of antibodies with 100% human protein sequences. We believe that antibodies created using XenoMouse technology are less likely to cause a HAHA response than antibodies created with other technologies even when administered repeatedly to patients without compromised immune systems. More than 700 patients have been tested with our antibody product candidates and we have observed HAHA responses in two patients, each of whom was tested in our phase 1 clinical trial of ABX-MA1. Given this data, we expect antibodies produced using XenoMouse technology to offer a better safety profile and to be eliminated less quickly from the human body, reducing the frequency of dosing.

Generating a diverse antibody response to essentially any disease target appropriate for antibody therapy. Because we have introduced a substantial majority of human antibody genes into XenoMouse animals, we believe that the technology has the potential to generate high affinity antibodies that recognize a broad range of structures. In addition, through immune surveillance, we expect XenoMouse technology to be capable of generating antibodies to almost any medically relevant antigen, human or otherwise. For a given antigen, having multiple antibodies to choose from could be important in selecting the optimal antibody product.

Generating high affinity antibodies that do not require further engineering. XenoMouse technology uses the natural in vivo affinity maturation process to generate antibody product candidates, usually in two to four months. These antibody product candidates may have affinities as much as a hundred to a thousand times higher than those seen in phage display. In contrast to antibodies generated using humanization and phage display technology, we and our customers can produce XenoMouse antibodies without the need for any subsequent engineering, a process that at times has proven to be challenging and time consuming. By avoiding the need to further engineer antibodies, we reduce the risk that an antibody's structure and therefore functionality will be altered between the initial antibody selected and the final antibody placed into production.

Enabling more efficient product development. XenoMouse technology can potentially produce multiple product candidates more quickly than humanization and phage display technology and we and our customers can conduct preclinical testing on several antibodies in parallel to identify the optimal product candidate that will be tested in clinical trials.

Providing flexibility in choosing manufacturing processes. Once we have identified an antibody with the desired characteristics, we can produce preclinical material either directly from hybridomas or from recombinant cell lines. Humanized and phage display antibodies, having been engineered, cannot be produced in hybridomas. In addition to potential timesaving, production in hybridomas avoids the need to license certain third party intellectual property rights covering certain processes for production of antibodies in recombinant cell lines.

Enhancing the speed and capability of generating fully human, high affinity antibodies. Our XenoMax technology allows researchers to rapidly scan the majority of the immune repertoire of an immunized XenoMouse animal to identify B-cells that produce antibodies with the desired functional properties and optimal affinities. We believe XenoMax technology can speed product development timelines by allowing researchers to move directly into preclinical assessment of panels of suitable recombinant candidate antibody products, each ready for manufacturing scale-up.

Providing an integrated production platform. Our integrated production platform has been designed to minimize the risks associated with process, scale and site changes. We believe that our platform, which integrates a comprehensive range of process sciences services, including cell line, cell culture,

purification, formulation and assay development, and our manufacturing facility can enable us to rapidly advance product candidates from cell line generation to production. This integrated approach may reduce the variability and risk associated with technology transfer and improve production quality and efficiency.

Proprietary Product Development Programs

We are currently developing antibody therapeutics for a variety of indications. The table below sets forth the current development status of our proprietary product candidates:

Proprietary Product Candidate	Indication	Status
ABX-EGF (panitumumab) . .	Various cancers	Phase 1
	Renal cell cancer	Phase 2
	Non-small cell lung cancer	Phase 2[(1)]
	Colorectal cancer	Phase 2[(1)]
	Colorectal cancer (with chemotherapy)	Phase 2[(1)]
	Prostate cancer	Phase 2
	Colorectal cancer (outside the US)	Pivotal[(1)]
	Colorectal cancer	Pivotal[(1)]
ABX-MA1	Metastatic melanoma	Phase 1
ABX-PTH	Secondary hyperparathyroidism	Phase 1

(1) Clinical trial managed by Immunex.

"Phase 1" indicates safety and pharmacokinetics testing in a limited patient population. "Phase 2" indicates safety, dosing and efficacy testing in a limited patient population. "Phase 3" indicates efficacy and safety in a larger patient population. A "pivotal study" is designed to indicate efficacy and safety in a larger patient population. Phase 3 studies designed for registration purposes are considered pivotal studies. Phase 2 studies specifically designed for registration purposes can be pivotal studies.

ABX-EGF

Tumor cells that overexpress the epidermal growth factor receptor, or EGFr, on their surface often depend on EGFr's activation for growth. EGFr is expressed in a variety of cancers including lung, breast, ovarian, bladder, prostate, colorectal, kidney and head and neck. The activation of EGFr is triggered by the binding to EGFr by epidermal growth factor, or EGF, or Transforming Growth Factor alpha, or TGFa, both of which are expressed by the tumor or by neighboring cells. We believe that blocking the ability of EGF and TGFa to bind with EGFr may offer a treatment for certain cancers. ABX-EGF, a fully human monoclonal antibody generated using XenoMouse technology, binds to EGFr with high affinity and has been shown to inhibit tumor cell proliferation in vivo and cause eradication of EGF dependent human tumors established in mouse models. Published studies have shown that ABX-EGF can inhibit growth of EGF-dependent human tumors cells in mouse models. ABX-EGF has also demonstrated the ability to reverse cancer cell growth and cause eradication of established tumors in mice even when administered after significant tumor growth has occurred. Furthermore, in these models where tumors were eradicated, researchers did not observe any relapse of the tumor after discontinuation of the antibody treatment. Of the more than 500 patients treated with ABX-EGF in clinical trials, two have experienced infusion related reactions, in each case controllable by premedication.

Clinical Status. In July 1999, we initiated a Phase 1 dose-escalating human clinical trial examining the safety, pharmacokinetics and biological activity of multiple doses of ABX-EGF as monotherapy in patients with a variety of advanced cancers. We first reported data on this ongoing study in November 2001 and presented updated information at the annual meeting of the American Society for

Clinical Oncology in May 2002. Forty-six patients had been recruited to this study at that time. ABX-EGF appeared to be well tolerated at weekly doses ranging up to 3.5 mg/kg. We did not observe any allergic reactions, clinically significant infusion-related reactions or human anti-human antibody formation. At doses greater than or equal to 2.0 mg/kg, typical EGF receptor mediated skin rashes were seen in 100% of patients. Six patients who had received ABX-EGF (doses of 0.1 or 0.75, 2.5 or 3.5 mg/kg) achieved a partial response, minor response or disease stabilization.

On the basis of preliminary results from the ongoing Phase 1 clinical study, we and Immunex initiated five Phase 2 studies in April, July and December 2001 and January 2002. The first Phase 2 study is evaluating the effect of ABX-EGF monotherapy in patients with renal cell cancer. An interim analysis of this study was reported at the annual meeting of the American Society of Clinical Oncology in May 2002. A total of 88 patients with metastatic renal cell cancer had been treated in this ABX-EGF monotherapy study at the time. ABX-EGF was given weekly in doses of 1.0, 1.5, 2.0, and 2.5 mg/kg to cohorts of approximately 20 patients each. ABX-EGF was administered for eight weeks or until patients demonstrated progressive disease. Eighty-nine percent of patients included in this study had received prior systemic therapy and the majority of patients had received more than one prior systemic regimen. ABX-EGF was generally well tolerated. No allergic reactions, clinically significant infusion-related reactions, or human anti-human antibody formation were observed. A dose-related typical EGFr mediated skin rash was observed with an incidence of 100% at a dose level of 2.5 mg/kg. Single agent biological activity was seen in this heavily pre-treated patient population with 3 partial responses, 2 minor responses and 50% stable disease reported.

Another Phase 2 study is evaluating the effect of ABX-EGF monotherapy in patients with metastatic colorectal cancer who have previously failed chemotherapy. An interim analysis of this study was reported at the annual meeting of the American Society of Oncology in May 2003. Forty-four patients were included in this analysis. Forty patients were efficacy evaluable, which was prospectively defined as having received at least 5 of 8 planned weekly doses of ABX-EGF during the first 8 weeks of treatment. ABX-EGF was given weekly at 2.5 mg/kg. Four of 40 (10%) efficacy evaluable patients achieved a partial response at week 8, which was confirmed 4 weeks later. Fifty-five percent of patients had stable disease at week 8. On the basis of this efficacy result, Abgenix and Immunex designed a pivotal trial program for ABX-EGF in third line monotherapy treatment of colorectal cancer. In January 2004, Immunex received approval of the design and initiation of a pivotal study for possible accelerated approval by the FDA under a "Special Protocol Assessment". Immunex also initiated a second pivotal study outside the United States in support of a global registration program for ABX-EGF in the treatment of patients with late stage colorectal cancer.

We are also conducting a Phase 2 study in patients with non small cell lung cancer receiving either standard chemotherapy with carboplatin and paclitaxel alone or in combination with ABX-EGF. A separate Phase 2 study is evaluating the effect of ABX-EGF in combination with standard chemotherapy, as first-line treatment in patients with metastatic colorectal cancer. Another Phase 2 study is evaluating the effect of ABX-EGF monotherapy in patients with hormone resistant prostate cancer. Based on a preliminary analysis, we have recently closed enrollment in this trial. The preliminary findings do not meet our planned threshold to support pursuing this product candidate as a monotherapy in this indication.

ABX-MA1

Melanoma is the most serious cancer of the skin. Currently, it is the seventh most common cancer in the United States. The projected 2003 incidence rate in the U.S. is 54,200 and the projected mortality rate is 7,600. Melanoma can spread in the body through the blood and lymphatic system. Organ involvement by metastasis, most commonly to the lungs and liver, is the leading cause of death from the disease. Melanomas that have not spread beyond the site at which they developed are curable by surgical excision. Melanoma that has spread to distant sites is infrequently curable with surgery,

although long-term survival is occasionally achieved by resection of metastases. Radiation therapy may provide symptomatic relief for metastases to brain, bones and viscera. Although advanced melanoma is relatively resistant to standard chemotherapy, some biologic therapies, such as interferon alfa and interleukin-2 have been reported to produce a low percentage of objective responses.

ABX-MA1 targets a protein called MUC18, a cell surface adhesion molecule that is highly expressed on metastatic melanoma cells but not on normal skin cells. MUC18 has been demonstrated to play a critical role in melanoma growth and metastasis by regulating the adhesion and interaction between melanoma cells and surrounding skin cells and new blood vessel cells. In preclinical studies, binding of the MUC18 antigen by ABX-MA1 inhibited primary melanoma tumor growth and the formation of tumor metastases. MUC18 is also expressed on sarcomas, including smooth muscle and blood vessel-derived sarcomas, prostate cancer and renal cell cancers.

Clinical Status. In December 2001, we filed an IND and in February 2002 we initiated a Phase 1 clinical trial of ABX-MA1 for the treatment of patients with metastatic melanoma. Enrollment is closed and treatment is ongoing.

ABX-PTH

Secondary Hyperparathyroidism (SHPT) is a chronic disorder that is frequently observed in patients with chronic renal disease. As renal function declines, abnormal calcium and phosphorus metabolism and impaired vitamin D synthesis combine to increase serum parathyroid hormone (PTH). Typically, the condition begins to manifest before dialysis and worsens while on hemodialysis often resulting in enlarged parathyroid glands that are refractory to treatment. SHPT can lead to significant morbidity including bone disease, soft tissue calcification and increased cardiovascular disease.

According to the US Renal Data System, in 2001, there were over 300,000 hemodialysis patients in the US, a significant proportion of whom suffer from SHPT. Currently available therapies including calcium supplements, nonabsorbable phosphate binders and vitamin D, have limited efficacy, poor compliance or significant toxicities.

ABX-PTH, which targets and neutralizes the action of parathyroid hormone in preclinical studies, is being developed for the treatment of secondary hyperparathyroidism (SHPT). This fully human antibody has a novel mechanism of action that, in preclinical studies, neutralizes PTH by directly lowering serum levels of free PTH without increasing serum calcium or phosphate, as some current therapies do. We believe that ABX-PTH could provide a significant therapeutic advance for the SHPT population by directly reducing bioactive PTH levels, rather than relying on the indirect mechanisms provided by current therapies.

Clinical Status. In December 2003, we filed an IND and in February 2004 we initiated a Phase 1 clinical trial of ABX-PTH for the treatment of patients with SHPT.

Summary of Contractual Arrangements

Overview

We have entered into a variety of contractual arrangements covering numerous antigens with more than thirty customers to use our XenoMouse and XenoMax technologies to generate and/or develop the resulting fully human antibodies. Pursuant to our XenoMouse contracts, we and our customers intend to generate antibodies for development as product candidates for the treatment of cancer, inflammation, autoimmune diseases, cardiovascular disease, growth factor modulation, neurological diseases, metabolic diseases and infectious diseases. We have also entered into contracts with two customers to provide process sciences and manufacturing services. We expect that substantially all of our revenues for the foreseeable future will result from payments under these and other contracts. We have also licensed technology from third parties for use in conjunction with our proprietary

technologies. The terms of our current contractual arrangements vary, but can generally be categorized as follows:

- Proprietary Product Development—In 2000, we entered into a joint development and commercialization agreement with Immunex for the co-development of ABX-EGF, a fully human antibody we created. We amended this agreement in October 2003. Under the amended agreement, Immunex has decision-making authority for development and commercialization activities. As under the original agreement, we are obligated to pay 50% of the development and commercialization costs and are entitled to receive 50% of any profits from sales of ABX-EGF. Under the amended agreement, Immunex is required to make available up to $60.0 million in advances that we may use to fund a portion of our share of development and commercialization costs for ABX-EGF after we have contributed $20.0 million toward development costs in 2004. As of February 29, 2004, we have not received any advances from Immunex. The amount of any such advances, plus interest, may be repaid out of profits resulting from future product sales; however, we are not obligated to repay any portion of the advances if ABX-EGF does not reach commercialization. Under a separate agreement with Immunex, we will manufacture clinical supplies for the collaboration and, for the first five years after commercial launch, commercial supplies with Immunex's support and assistance. The costs of manufacturing clinical and commercial supplies will also be shared. We have entered into co-development and commercialization arrangements for the development of proprietary products that are in various early stages with other collaborators, including Microscience Limited, Sosei, Dendreon Corporation, U3 Pharma AG and Chugai. Development activities under these agreements are in various early stages.
- Oncology Alliance—We entered into a collaboration and license agreement with AstraZeneca in October 2003 for the discovery, development and commercialization of fully human monoclonal antibodies to treat cancer. This alliance involves the joint discovery and development of therapeutic antibodies for up to 36 cancer targets to be commercialized exclusively worldwide by AstraZeneca. We will conduct early stage preclinical research on behalf of AstraZeneca with respect to some or all of these targets. For any resulting products, we may receive milestone payments at various stages of development and royalties on future product sales. Under the agreement, we also may conduct early clinical trials, process development and clinical manufacturing, as well as commercial manufacturing during the first five years of commercial sales, for which the agreement provides that AstraZeneca will compensate us at competitive market rates. The collaboration also gives us the right to select and develop an additional pool of antibodies against up to 18 targets, which the companies may elect to further develop on an equal cost and profit sharing basis. During the three-year period of selection of targets for development we will work exclusively with AstraZeneca to generate and develop antibodies for therapeutic use directed against antigens in the field of oncology, subject to various exceptions, including among others for antigens that are or become subject to existing collaborations, antigens that we and AstraZeneca decide not to pursue in the collaboration, and certain process development and manufacturing services. In connection with this collaboration, AstraZeneca made a $100.0 million investment in Abgenix securities. Upon the achievement of certain milestones, we may also require AstraZeneca to invest up to an additional $60.0 million in our convertible preferred stock.
- Antigen Sourcing Contracts—We have entered into several target sourcing contracts with genomics and biopharmaceutical companies that may enable us to generate a pipeline of proprietary fully human antibody therapeutic product candidates. Typically, pursuant to these contracts we generate fully human antibodies to the antigens provided or identified by our collaborators. The contracts typically contain provisions that allow either us or our collaborator to evaluate and select particular antibodies from the pool of generated antibodies for further development and commercialization. The party selecting an antibody for further development or

commercialization will generally pay to the other party license fees, milestone payments and royalty payments on any eventual product sales, in exchange for rights to develop and commercialize the product. In connection with these arrangements, we may also agree to make equity investments in collaborators for strategic reasons. For example, we have made equity investments in CuraGen Corporation and MDS Proteomics Inc. in connection with our collaborations with these parties.

- Technology Out-Licensing—We have licensed our XenoMouse technology to third parties for the purpose of generating antibody product candidates to one or more specific antigens provided by the customer. Pursuant to these contracts, we and our customers intend to generate antibody product candidates for the treatment of cancer, inflammation, autoimmune diseases, cardiovascular disease, growth factor modulation, neurological diseases and infectious diseases. In some cases in which we license XenoMouse technology, we provide our mice to the customer, which then carries out immunizations with its specific antigens. In other cases, we immunize the mice with the customer's antigens for additional compensation. We may also use our XenoMax technology on the customer's behalf. The customer generally has an option for a period of time to acquire a product license for any antibody identified using XenoMouse technology that the customer wishes to develop and commercialize. The financial terms of these agreements may include license fees, option fees and milestone payments paid to us by the customers. Based on our agreements, these payments and fees would average from approximately $7.0 million to $10.0 million per antigen if our customer takes the antibody into development and ultimately to commercialization. Additionally, our license agreements entitle us to receive royalties on any future product sales by the customer. We also have the right of first offer with regard to production services for antibodies developed pursuant to certain of these agreements. We may also agree to make equity investments in some of our customers, or they may agree to make equity investments in us, in connection with these licensing arrangements. As of February 29, 2004, we had entered into one agreement in which we licensed our SLAM technology to one party on a non-exclusive basis for the purpose of generating and using antibodies other than antibodies derived from XenoMouse technology or other technology that involves the use of non-human animals, and on a co-exclusive basis for the purpose of antigen discovery. We currently do not intend to license our SLAM technology for use by any other parties. We have also entered into an agreement in which we exclusively licensed to one party rights under patent applications and patents held by us to develop and commercialize therapeutic antibodies to parathyroid hormone-related protein.
- Production Services Contracts—We have entered into contracts with two customers under which we are currently providing process sciences and manufacturing services. One of these contracts is related to an antibody product candidate that we developed with the customer pursuant to an existing antigen sourcing contract. The other relates to an antibody the customer developed under a XenoMouse license agreement. Under these production services contracts we will deliver a variety of process development, cell banking and manufacturing services for selected antibody product candidates. The agreements provide for the customer to pay us certain fees for production services. Under one of these agreements we will be entitled to royalties on the sale of products subject to the agreement. We also have the right of first offer with regard to production services for additional antibodies developed by one of these customers. We intend to enter into agreements to provide process sciences and manufacturing services to other existing and new customers to absorb production services capacity we are not using for our proprietary product candidates.
- Technology In-Licensing—We also license technology from other parties that we use in conjunction with our proprietary technology to develop, manufacture and commercialize therapeutic antibody candidates. The other party may also agree to produce antibody therapeutic candidates for us using its own technology. For example, we have entered into license and

options agreements with ImmunoGen, Inc. pursuant to which we may develop and commercialize products based upon certain proprietary immunotoxins. These agreements often obligate us to pay license fees, and milestone payments and royalty fees to the counterparty upon the occurrence of specified conditions, including upon our sale of products derived from use of the licensed technology. We may also agree to make an equity investment in the other party for strategic reasons in connection with these arrangements. For example, we purchased shares of common stock of ImmunoGen in connection with our agreement with that company.

Summary of Payment Terms of Contractual Arrangements

We derive our contract payments from our proprietary product development agreements, our technology out-licensing contracts, our target sourcing contracts and our production services contract. Under these agreements, contract payments generally consist of license, option, milestone, service and royalty payments. To date, we have received license, option, milestone and production service payments from various parties but have yet to receive royalty payments. Contract payments are recognized as revenue in accordance with applicable revenue recognition policies under which the recognition of certain payments as revenue may not occur immediately upon receipt. These policies are further described in Note 1 to the financial statements.

License, Option and Milestone Payments

Pursuant to our technology out-licensing contracts and our target sourcing contracts, in 2003 we recognized individual license, option and milestone payments ranging from approximately $3,000 to $3.1 million and representing between approximately 0.02% and 18.25% of our recognized contract revenues for 2003, respectively.

Under our co-development agreement with Immunex, we recognized revenues of $3.1 million in 2003, which represented approximately 18% of our contract revenues for that year. We do not expect to record revenue from Immunex in 2004 because we expect Immunex's expenses under the co-development agreement to exceed ours. Under our proprietary co-development agreement with SangStat Medical Corporation for the development of ABX-CBL, an in-licensed mouse antibody, we recognized revenues of $723,000 in 2003, which represented approximately 4% of our contract revenues for that year. We do not expect to record any revenues from SangStat in 2004 as a result of our decision to discontinue the development of ABX-CBL.

Under our oncology alliance with AstraZeneca, we are entitled to milestone payments if AstraZeneca successfully develops products derived from our technology. The amount of each milestone payment depends on the nature of the milestone event and may be subject to reduction if AstraZeneca terminates our participation in the program to develop such product following certain changes in control of Abgenix or if we materially breach the collaboration agreement. To date, we have not received any milestone payments under the collaboration agreement. We also may conduct early clinical trials, process development and clinical manufacturing, as well as commercial manufacturing during the first five years of commercial sales, for which we will be reimbursed at competitive market rates.

We expect to receive future license, option and milestone payments from our customers and collaborators; however, the amount and timing of these payments, if any, is uncertain because they depend to a large extent on the success of the research and development efforts of these parties.

Production Services Payments

To date we have entered into two production services contracts. Pursuant to these agreements, we will be paid for the production services we provide pursuant to schedules set forth in the applicable contract.

Royalty Payments

While most of our proprietary product development, technology out-licensing and target sourcing contracts and our oncology alliance entitle us, under certain circumstances, to royalty payments, we have not received any royalty payments to date and do not anticipate receiving any such payments for a least a few years. We have entered into a production services contract that entitles us, under certain circumstances, to royalty payments. We will not be entitled to royalty payments unless our customers or collaborators are successful in developing and commercializing products derived from our technology. The royalty rate applicable to a product under our oncology alliance may be subject to reduction if AstraZeneca terminates our participation in the program to develop such product following certain changes in control of Abgenix or if we materially breach the collaboration agreement. The likelihood that we or our collaborators will be successful is dependent on the outcome of research and development efforts and regulatory decisions with respect to our product candidates, and is therefore uncertain and speculative.

Summary of Expense Terms of Contractual Arrangements

We have incurred expenses, including license, option or milestone payments, under our in-license agreements and we may incur future expenses of this sort under our target sourcing contracts. We may also incur future expenses in the form of royalty fees under one or more of these agreements. In addition, we will incur expenses under joint development agreements that are shared with our co-developers and we will incur expenses under our collaboration with AstraZeneca, which provides for us to pay the cost of early stage preclinical research.

License, Option and Milestone Payments

Under our in-licensing agreements and target sourcing contracts, in 2003, we made individual license, option or milestone payments ranging from approximately $8,000 to $600,000 and representing approximately 0.01% and 0.60% of our research and development expenses for 2003, respectively.

Royalty Payments

While most of our technology in-licensing and proprietary product development contracts include provisions for the payment of royalties by us under certain circumstances, we have not made any royalty payments to date and believe we are at least a few years away from selling any products that would require us to make any royalty payments. Whether we will ever be obligated to make royalty payments to third parties is subject to the future success of our research and development efforts, as well as the favorable decisions of regulators and, accordingly, is inherently uncertain.

Circumstances that Trigger Milestone Payments under Contractual Arrangements

Oncology Alliance

Under our oncology alliance with AstraZeneca, milestone payments may become payable to us with respect to products developed and commercialized by AstraZeneca in the following circumstances:

- AstraZeneca delivers to us notice of its intent to continue development of such product after completion of the first Phase 2 clinical trial for the product;
- Commencement of the first Phase 3 clinical trial for a product candidate;
- Acceptance of a biologics license application, or BLA, in Canada, France, Germany, Italy, Japan, the United Kingdom or the United States; and
- The receipt of all applicable regulatory approvals for sale of the product in the first of Canada, France, Germany, Italy, Japan, the United Kingdom or the United States.

Under our oncology alliance with AstraZeneca, milestone payments may become payable by us with respect to products candidates that were discontinued by AstraZeneca and that we developed and commercialized in the following circumstances:

- We deliver to AstraZeneca notice of our intent to proceed with further development and commercialization;
- Commencement of the first Phase 3 clinical trial for a product candidate; and
- The receipt of all applicable regulatory approvals for sale of the product in the first of Canada, France, Germany, Italy, Japan, the United Kingdom or United States.

Target Sourcing Contracts

Under our target sourcing contracts, milestone payments with respect to therapeutic products may become payable, to us or by us, in the following circumstances:

- Filing of the first IND for a new product;
- Commencement of Phase 1, Phase 2 or Phase 3 clinical trials;
- Submission of the first BLA for a new product; and
- Receipt of marketing approval for a new product.

Under these contracts, milestone payments with respect to diagnostic products may become payable, to us or by us, in the following circumstances:

- Submission of the first application for pre-marketing approval for a new product; and
- Receipt of the first marketing approval for a product.

Proprietary Product Development Agreements

Our proprietary co-development agreement with Immunex provides for no milestone or royalty payments by either party, unless one party elects not to develop or commercialize ABX-EGF.

Technology Out-Licensing Agreements

Under our technology out-licensing agreements, milestone payments may become payable to us in the following circumstances:

- Submission of an IND for a new product;
- Enrollment of first patient in Phase 2 or Phase 3 clinical trials;
- Submission of first BLA or new drug application, NDA, for a new product; and
- Receipt of first required approval to sell products in a particular country or region.

Technology In-Licensing

Under our technology in-licensing agreements, milestone payments may become payable by us in the following circumstances:

- Submission of an IND for a new product or initiation of Phase 1 clinical trials
- Initiation of Phase 2 or Phase 3 clinical trials; and
- Receipt of first required approval to sell products in a particular country or region.

Termination Provisions of Contractual Arrangements

General

Our agreements generally do not have definite termination dates; rather, these agreements typically terminate upon the expiration of the underlying royalty obligations. Whether these royalty obligations will be triggered and, if so, when, is dependent on the successful development and commercialization of products from the subject technology.

Oncology Alliance

Our oncology alliance with AstraZeneca does not have a definite termination date; rather it terminates upon the expiration of the underlying royalty obligations. Whether these royalty obligations will be triggered and, if so, when, is dependent on the successful development and commercialization of products under the oncology alliance. Each party has the right to terminate all or part of the oncology alliance upon the other party's uncured material breach or bankruptcy. AstraZeneca has the right to terminate all or part of the oncology alliance upon our change in control or acquisition or, with respect to a product, if the product is unsafe. Upon our change in control or acquisition or in the case of a material breach by us of the oncology alliance with respect to a particular product, AstraZeneca has the right to terminate our participation in the program to develop such product.

Target Sourcing Contracts

Our target sourcing contracts generally terminate upon the expiration of all royalty obligations, if any, due under the relevant contract.

Co-Development Arrangements

Under our agreement with Immunex for the co-development of ABX-EGF, each party has the right to terminate the agreement with certain prior notice. If one party chooses to terminate the agreement, the other party would have the right to continue developing the antibody at its own expense and would owe the terminating party royalty payments based on the sales of the underlying product. In addition, either party may terminate the agreement upon a material breach by the other party that has not been cured.

Production Services Agreements

To date we have entered into two production services contracts. Pursuant to one of these agreements, either party can terminate for material breach or insolvency, or if the production services become impossible for scientific or technical reasons. Pursuant to the other, our customer can terminate for convenience, either party can terminate for material breach or in the event of certain technical difficulties and we can terminate if certain previously unknown health, safety or legal issues arise.

Out-Licensing Agreements

Under our out-licensing agreements, the licensee typically can terminate the agreement at any time and we generally can terminate upon a breach by the licensee. Absent early termination, our out-licensing agreements typically continue in effect until the expiration of the licensee's payment obligations.

In-Licensing Agreements

In some cases, we can terminate in-licensing agreements after a certain period of time. Other in-licensing agreements do not provide for early termination by us (except in the case of the other

party's breach), but provide that the agreement terminates upon the expiration of all of our royalty payment obligations.

Xenotech and Japan Tobacco

In June 1991, in connection with the formation of Xenotech, both Cell Genesys and Japan Tobacco contributed cash, and Cell Genesys contributed the exclusive right to certain of its technology for the research and development of genetically modified strains of mice that can produce fully human antibodies. Cell Genesys assigned its rights in Xenotech to us in connection with our formation as an independent company in 1996. Through 1998, we made capital contributions to Xenotech, and provided research and development to Xenotech related to the development of XenoMouse technology in exchange for cash payments.

Under several agreements with Japan Tobacco that became effective December 31, 1999, we acquired Japan Tobacco's fifty percent interest in the Xenotech joint venture and became the sole owner of Xenotech and the XenoMouse technology. Under these agreements, Japan Tobacco acquired a license to use certain existing XenoMouse technology and future XenoMouse technology that we develop and a license to certain new technology related to the generation of mouse models of certain human diseases, in exchange for cash payments and future royalty obligations.

Gene Therapy Rights Agreement with Cell Genesys

In connection with the formation of Abgenix by Cell Genesys, Abgenix entered into the Gene Therapy Rights Agreement, or GTRA, which provides Cell Genesys with certain rights to commercialize products based on antibodies generated with XenoMouse technology in the field of gene therapy. Under the GTRA, Cell Genesys has certain rights to direct us to make antibodies to two antigens per year and has an option for a license to commercialize antibodies binding to such antigens in the field of gene therapy. The GTRA obligates Cell Genesys to make certain payments to us for these rights, including reimbursement of license fees and royalties on future product sales. The GTRA also prohibits us from granting any third-party licenses for antibody products based on antigens where the primary field of use is gene therapy. In the case of third-party licenses granted by us where gene therapy is a secondary field, the GTRA obligates us to share with Cell Genesys a portion of the cash milestone payments and royalties resulting from any products in the field of gene therapy.

Intellectual Property

We rely on patents and trade secrets to protect our intellectual property rights. We own eleven issued patents in the United States, one granted patent in Europe, three granted patents in Japan and numerous granted patents in other foreign countries. In addition we have 80 pending patent applications in the United States and 262 pending patent applications abroad relating to XenoMouse technology. Our wholly-owned subsidiary, Xenotech, owns two issued U.S. patents and several granted patents in other foreign countries and has two pending U.S. patents applications and several foreign patent applications related to methods of treatment of bone disease in cancer patients. Our wholly owned subsidiary Abgenix Biopharma, owns one issued U.S. patent and has two pending patents in Canada relating to the SLAM technology. Our wholly owned subsidiary IntraImmune Therapies, Inc. has two pending applications in the United States and ten pending applications in other foreign countries related to intrabody technology, which may give antibodies access to intracellular targets. In addition, we have eleven issued U.S. patents, several granted patents in other foreign countries, five pending patent applications in the United States and eighteen pending patent applications abroad that we jointly own with Japan Tobacco relating to antibody technology or genetic manipulation. While we rely on U.S. and foreign patent laws to protect our proprietary technology, any patents, if issued, may provide us with little protection, especially in foreign countries.

We also attempt to protect our technologies by maintaining trade secrets and proprietary know-how. However, the agreements we enter into for these purposes may not be enforced or our counter parties may breach them. In addition, these agreements may not prevent third parties from discovering our trade secrets or know-how or independently developing the same or similar technologies.

Scientists have conducted research for many years in the antibody and transgenic animal fields. This has resulted in a substantial number of issued patents and an even larger number of pending patent applications. Patent applications in the United States are, in most cases, maintained in secrecy until patents are issued. The publication of discoveries in the scientific or patent literature frequently occurs substantially later than the date on which the underlying discoveries were made. Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties. Our technologies may unintentionally infringe the patents or violate other proprietary rights of third parties. Such infringement or violation may prevent us and our contract parties from pursuing product development or commercialization. Such a result would materially harm our business, financial condition and results of operations.

GlaxoSmithKline plc, or Glaxo, has a family of patents relating to certain methods for generating monoclonal antibodies that Glaxo is asserting against Genentech, Inc. in litigation that was commenced in 1999. On May 4, 2001, Genentech announced that a jury had determined that Genentech had not infringed Glaxo's patents and that all of the patent claims asserted against Genentech are invalid. We understand that Glaxo has filed a notice of appeal with the Court of Appeals for the Federal Circuit. If any of the claims of these patents are finally determined in the litigation to be valid, and if we were to use manufacturing processes covered by the patents to make our products, we may then need to obtain a license should one be available. Our failure to obtain a license at all or on commercially reasonable terms could impede commercialization of one or more of our products in any territories in which these claims were in force.

Genentech, Johnson & Johnson, Glaxo and Transkaryotic Therapies, Inc. and the Trustees of the Columbia University in the City of New York each owns or controls a U.S. patent that relates to recombinant cell lines or methods of generating recombinant cell lines for the production of antibodies. If we were to use a production system covered by any of these patents, we may then need to obtain a license should one be available. Under these circumstances, our failure to obtain a license at all or on commercially reasonable terms could impede commercialization of one or more of our products in any territories in which these patent claims were in force.

Genentech owns a U.S. patent that issued in June 1998 relating to inhibiting the growth of tumor cells that involves an anti-EGF receptor antibody in combination with a cytotoxic factor. ImClone Systems, Inc. owns or is licensed under a U.S. patent that issued in April 2001, relating to inhibiting the growth of tumor cells that involves an anti-EGF receptor antibody in combination with an anti-neoplastic agent. A corresponding European patent was published for grant in March 2002 and Abgenix and others are opposing that patent in the European Patent Office. A corresponding patent was also issued in Canada. However, we do not believe that the Genentech patent or any of the ImClone patents would be successfully asserted against any of our current or planned activities relating to ABX-EGF or future commercial sales of ABX-EGF. If a court determines that the claims of either the Genentech patent or the ImClone patents cover our activities with ABX-EGF and are valid, such a decision may require us to obtain a license to Genentech's patent or ImClone's patents, as the case may be, to label and sell ABX-EGF for certain combination therapies. Our failure to obtain a license at all or on commercially reasonable terms could impede our commercialization of ABX-EGF.

In 2000, the Japanese Patent Office granted a patent to Kirin Beer Kabushiki Kaisha, one of our competitors, relating to non-human transgenic mammals. In October 2003, the United States Patent and Trademark Office issued a corresponding patent to Kirin. Kirin has filed corresponding patent

applications in Europe and Australia. Our licensee, Japan Tobacco, has filed opposition proceedings against the Kirin patent. We cannot predict the outcome of those opposition proceedings, which may take years to be resolved.

Extensive litigation regarding patents and other intellectual property rights has been common in the biotechnology and biopharmaceutical industries. The defense and prosecution of intellectual property suits, United States Patent and Trademark Office interference proceedings and related legal and administrative proceedings in the United States and internationally involve complex legal and factual questions. As a result, such proceedings are costly and time-consuming to pursue and their outcome is uncertain. Litigation may be necessary to:

- enforce patents that we own or license;
- protect trade secrets or know-how that we own or license; or
- determine the enforceability, scope and validity of the proprietary rights of others.

If we become involved in any litigation, interference or other administrative proceedings, we will incur substantial expense and the efforts of our technical and management personnel will be significantly diverted. An adverse determination may subject us to loss of our proprietary position or to significant liabilities, or require us to seek licenses that may not be available from third parties. An adverse determination in a judicial or administrative proceeding or our failure to obtain necessary licenses could restrict or prevent us from manufacturing and selling our products, if any. Costs associated with such arrangements may be substantial and may include ongoing royalties. Furthermore, we may not be able to obtain the necessary licenses on satisfactory terms, if at all. These outcomes will materially harm our business, financial condition and results of operations.

Patent Cross-License and Settlement Agreement with GenPharm

In March 1997, we along with Cell Genesys, Xenotech and Japan Tobacco, signed a comprehensive patent cross-license with GenPharm. Under the cross-license, we have licensed on a non-exclusive basis certain patents, patent applications, third-party licenses and inventions pertaining to the development and use of certain transgenic rodents, including mice that produce fully human antibodies. We use our XenoMouse technology to generate fully human antibody products and have not licensed the use of, and do not use, any transgenic rodents developed or used by GenPharm. All of our financial obligations in connection with the cross-license were recognized in 1997.

Government Regulation

Our product candidates under development are subject to extensive and rigorous domestic government regulation and will be subject to further regulation if approved for commercial sale. The FDA regulates, among other things, the development, testing, manufacture, safety, efficacy, record keeping, labeling, storage, approval, advertising, promotion, sale and distribution of biopharmaceutical products. If we market our products abroad, they will also be subject to extensive regulation by foreign governments. Non-compliance with applicable requirements can result in fines, warning letters, recall or seizure of products, clinical study holds, total or partial suspension of production, refusal of the government to grant approvals, withdrawal of approval, and civil and criminal penalties.

We believe our antibody therapeutic products will be classified by the FDA as "biologic products" as opposed to "drug products." The steps ordinarily required before a biological product may be marketed in the United States include:

- preclinical testing;
- the submission to the FDA of an IND which must become effective before clinical trials may commence;

- adequate and well-controlled clinical trials to establish the safety and efficacy of the biologic;
- the submission to the FDA of a BLA for the approval to market the product; and
- FDA approval of the application, including inspection and licensing of the manufacturing facility for the sale of product and approval of all product labeling.

Preclinical testing includes laboratory evaluation of product chemistry, formulation and stability, as well as animal studies to assess the potential safety and efficacy of each product. Laboratories that conduct preclinical safety tests must comply with FDA regulations regarding good laboratory practices. We submit the results of the preclinical tests, together with manufacturing information, analytical data and clinical study plans, to the FDA as part of the IND and the FDA reviews those results before the commencement of clinical trials. Unless the FDA objects to an IND, the IND will become effective 30 days following its receipt by the FDA. If we submit an IND, our submission may not result in FDA authorization to commence clinical trials. Also, the lack of an objection by the FDA does not mean it will ultimately approve an application for marketing approval. Furthermore, we may encounter problems in clinical trials or in manufacturing clinical supplies that cause us or the FDA to delay, suspend or terminate our trials.

Clinical trials involve the administration of the investigational product to humans under the supervision of a qualified principal investigator. We must conduct clinical trials in accordance with Good Clinical Practice regulations under protocols submitted to the FDA as part of the IND. In addition, each clinical trial must be approved and conducted under the auspices of an Institutional Review Board and with patient informed consent. The Institutional Review Board will consider, among other things, ethical factors, the safety of human subjects and the possibility of liability of the institution conducting the trial.

We conduct clinical trials in three sequential phases that may overlap. Phase 1 clinical trials may be performed in healthy human subjects or, depending on the disease, in patients. The goal of a Phase 1 clinical trial is to establish initial data about safety and tolerance of the biologic agent in humans. In Phase 2 clinical trials, we seek evidence about the desired therapeutic efficacy of a biologic agent in limited studies of patients with the target disease. We make efforts to evaluate the effects of various dosages and to establish an optimal dosage level and dosage schedule. We also gather additional safety data from these studies. The Phase 3 clinical trial program consists of expanded, large-scale, multi-center studies of persons who are susceptible to or have developed the disease. The goal of these studies is to obtain definitive statistical evidence of the efficacy and safety of the proposed product and dosage regimen.

Historically, the results from preclinical testing and early clinical trials have often not predicted results obtained in later clinical trials. A number of new drugs and biologics have shown promising results in preclinical studies or early clinical trials, but subsequently failed to establish sufficient safety and efficacy data to obtain necessary regulatory approvals. Data obtained from preclinical and clinical activities are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. In addition, we may encounter delays or rejections by regulatory authorities as a result of many factors, including changes in regulatory policy during the period of product development.

Completion of clinical trials may take several years or more. The length of time generally varies substantially according to the type, complexity, novelty and intended use of the product candidate. Many factors may delay our commencement and rate of completion of clinical trials including:

- the number of patients that ultimately participate in the trial;
- the duration of patient follow-up that seems appropriate in view of the results;
- the number of clinical sites included in the trials; and

- the length of time required to enroll suitable patient subjects.

We have limited experience in conducting and managing clinical trials. We rely in part on third parties, including our collaborators, to assist us in managing and monitoring clinical trials. Our reliance on third parties may result in delays in completing, or failing to complete, clinical trials if they fail to perform under our agreements with them.

Only five of our product candidates, ABX-EGF, ABX-MA1, ABX-PTH, ABX-CBL and ABX-IL8, have been in clinical trials. With respect to ABX-EGF, ABX-MA1 and ABX-PTH, we have not obtained enough data from these clinical trials to date to demonstrate safety and efficacy under applicable FDA guidelines. As a result, such data will not support an application for regulatory approval without further clinical trials. With respect to ABX-CBL and ABX-IL8, the results of the clinical trials we conducted did not support further clinical studies. Clinical trials that we conduct or that third parties conduct on our behalf for any product candidate may not demonstrate sufficient safety and efficacy to obtain the requisite regulatory approvals. Regulatory authorities may not permit us to undertake any additional clinical trials for our product candidates.

Our product candidates may fail to demonstrate safety and efficacy in clinical trials. For example, in January 2002 and May 2002, respectively, we announced that clinical trials of our proprietary product candidate ABX-IL8 as treatment for rheumatoid arthritis and psoriasis did not support further clinical studies of that product candidate. Additionally, in February 2003, we completed a preliminary analysis of the Phase 2/3 clinical trial of ABX-CBL and concluded that the study did not meet its primary endpoint and did not support further clinical studies of that product candidate. These and other potential failures may delay development of other product candidates, and hinder our ability to conduct related preclinical testing and clinical trials. As a result of such failures, we may also be unable to obtain additional financing. The failure of clinical trials can also result in research and development charges, such as those we incurred in the second quarter of 2002 in connection with our decision to wind down our clinical trials for ABX-IL8. Any delays in, or termination of, our clinical trials could materially harm our business, financial condition and results of operations.

We have ongoing research projects that may produce product candidates, and we have not submitted INDs or begun clinical trials for these projects. We may not successfully complete our preclinical or clinical development efforts. We may not file further INDs and we may not commence clinical trials as planned.

We and our third-party manufacturers also are required to comply with the applicable FDA current good manufacturing practice regulations and other regulatory requirements. Good manufacturing practice regulations include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Manufacturing facilities are subject to inspection by the FDA and the facilities must pass an inspection by the FDA before they can be used in commercial manufacturing of any product. Manufacturing facilities in California, including our facility, are also subject to the licensing requirements of and inspection by the California Department of Health Services. We or our third-party manufacturers may not be able to comply with the applicable good manufacturing practice requirements and other regulatory requirements. If we or our third-party manufacturers fail to comply, our business, financial condition and results of operations will be materially harmed.

For clinical investigation and marketing outside the United States, we may be subject to the regulatory requirements of other countries, which vary from country to country. The regulatory approval process in other countries includes requirements similar to those associated with FDA approval set forth above.

Competition

The biotechnology and pharmaceutical industries are highly competitive and subject to significant and rapid technological change. We are aware of several pharmaceutical and biotechnology companies that are actively engaged in research and development in areas related to antibody therapy. These companies have commenced clinical trials of antibody therapeutic product candidates or have successfully commercialized antibody therapeutic products. Many of these companies are addressing the same diseases and disease indications as we or our customers are. Also, we compete with companies that offer antibody generation services to companies that have antigens. These competitors have specific expertise or technology related to antibody development and introduce new or modified technologies from time to time. These companies include GenPharm; Kirin Brewing Co.; GenMab; Cambridge Antibody Technology Group; Protein Design Labs, Inc.; MorphoSys; Xenerex Biosciences; XLT Biopharmaceuticals Ltd.; and Alexion Pharmaceuticals, Inc.

Some of our competitors have received regulatory approval of or are developing or testing product candidates that may compete directly with our product candidates. For example, ImClone, in collaborations with Bristol-Meyers Squib Company and Merck KgAa, AstraZeneca, Glaxo and a collaboration of OSI Pharmaceuticals, Inc., Genentech, and Roche have antibody and small molecule product candidates in clinical development that may compete with ABX-EGF, which is also in clinical trials. Recent development activities with cancer drugs that may compete with ABX-EGF include the following:

ImClone and Bristol-Myers Squibb have received approval to market Erbitux, ImClone's antibody product candidate, for the treatment of metastatic colorectal cancer, in the United States. ImClone and Bristol-Myers Squibb have also announced the submission of an application for approval to market Erbitux in Canada.

Merck KgAa has announced that it has submitted an application for the authorization to market Erbitux for the treatment of metastatic colorectal cancer in the European Union and that it has received approval to market Erbitux in Switzerland for treatment of metastatic colorectal cancer.

Genentech has received approval to market Avastin for use with chemotherapy as a first-line treatment for colorectal cancer.

AstraZeneca has received approval to market Iressa, a small molecule product candidate that may compete with ABX-EGF, in many markets in the world, including the United States, Japan, Australia and Canada, for the treatment of advanced non-small cell lung cancer.

Genentech and OSI have initiated a rolling submission of an NDA for Tarceva in the United States for the treatment of advanced non-small cell lung cancer. A "rolling" submission, which allows for completed sections of an NDA to be submitted on a sequential basis, is available to drug candidates that are intended to meet an unmet medical need for treatment of a serious and life-threatening condition and have received Fast Track designation from the FDA.

In addition, Amgen has received approval to market Sensipar, or cinacalcet HCI, a small molecule product candidate for the treatment of secondary hyperparathyroidism, which may compete with ABX-PTH.

Many of these companies and institutions, either alone or together with their customers, have substantially greater financial resources and larger research and development staffs than we do. In addition, many of these competitors, either alone or together with their customers, have significantly greater experience than we do in:

- developing products;
- undertaking preclinical testing and human clinical trials;

- obtaining FDA and other regulatory approvals of products; and
- manufacturing and marketing products.

Accordingly, our competitors may succeed in obtaining patent protection, receiving FDA approval or commercializing products before we do. If we commence commercial product sales, we will be competing against companies with greater marketing and manufacturing capabilities, areas in which we have limited or no experience.

We also face, and will continue to face, competition from academic institutions, government agencies and research institutions. There are numerous competitors working on products to treat each of the diseases for which we are seeking to develop therapeutic products. In addition, any product candidate that we successfully develop may compete with existing therapies that have long histories of safe and effective use. Competition may also arise from:

- other drug development technologies and methods of preventing or reducing the incidence of disease;
- new small molecules; or
- other classes of therapeutic agents.

Developments by competitors may render our product candidates or technologies obsolete or non-competitive. We face and will continue to face intense competition from other companies for agreements with pharmaceutical and biotechnology companies, for establishing relationships with academic and research institutions, and for licenses to proprietary technology. These competitors, either alone or with their customers, may succeed in developing technologies or products that are more effective than ours.

Pharmaceutical Pricing and Reimbursement

In both domestic and foreign markets, sales of our product candidates will depend in part upon the availability of reimbursement from third-party payors. Third-party payors include government health administration authorities, managed care providers, private health insurers and other organizations. These third-party payors are increasingly challenging the price and examining the cost-effectiveness of medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. We may need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of our products. These studies may require us to incur significant costs. Our product candidates may not be considered cost-effective. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development. Domestic and foreign governments continue to propose and pass legislation designed to reduce the cost of healthcare. Accordingly, legislation and regulations affecting the pricing of pharmaceuticals may change before our proposed products are approved for marketing. Adoption of such legislation could further limit reimbursement for pharmaceuticals. The failure of the government and third party payors to provide adequate coverage and reimbursement rates for our product candidates would adversely affect the market acceptance of our products. The failure of our products to receive market acceptance would materially harm our business, financial condition and results of operations.

Manufacturing

We are establishing our own manufacturing facility for the manufacture of product candidates for clinical trials and to support the potential early commercial launch of a limited number of products, in each case, in compliance with FDA and European good manufacturing practices. In May 2000, we signed a long-term lease for the building that contains this manufacturing facility. Construction has been completed and portions of the facility are operational. We are also conducting validation of the

facility and completed significant stages of validation in 2003. In October 2003, following an inspection by the State Department of Health Services, we received a Drug Manufacturing License from the State of California. The license permits us to manufacture and ship clinical material from our manufacturing facility. The total cost of the facility, including design fees, permits, validation, construction, leasehold improvements and equipment, will be approximately $155.0 million. Validation of this facility may take longer than expected, and the planned and actual construction costs of building and qualifying the facility for regulatory compliance may be higher than expected. We currently have excess production services capacity and this condition may persist for an extended period. If the commercial launch of one of our product candidates proves successful, we will likely need to use one or more third-party facilities to produce these products in sufficient quantities.

The process of manufacturing antibody therapeutic products is complex. While the managers of the facility have gained extensive manufacturing experience in prior positions with other companies, we have no experience in the clinical or commercial scale manufacturing of our existing product candidates, or any other antibody therapeutic products. We will need to hire, train and retain additional qualified manufacturing, quality control and quality assurance personnel. We will also need to manufacture such antibody therapeutic products in a facility and by a process that comply with FDA, European and other regulations. Although we are currently manufacturing an antibody product candidate in this facility in compliance with those regulations, we may not be able to maintain compliance with those regulations. Our manufacturing operations will be subject to ongoing, periodic unannounced inspection by the FDA and state agencies to ensure compliance with good manufacturing practices. Our inability to complete the establishment of our manufacturing operations and maintain them in compliance with applicable regulations within our planned time and cost parameters could materially harm our business, financial condition and results of operations.

Until recently, we have relied on a single contract manufacturer, Lonza Biologics plc, to produce ABX-CBL, ABX-IL8 and ABX-EGF under good manufacturing practice regulations, for use in our clinical trials. In June 2003, we canceled our manufacturing supply agreement with Lonza, pursuant to which we had exclusive access to a cell culture production suite, because we determined that with the opening of our own manufacturing plant and changes in our product candidate portfolio, we no longer needed access to the Lonza facility. We have also relied on other contract manufacturers from time to time to produce other product candidates for use in our clinical trials. For example, Fred Hutchinson Cancer Research Center has produced ABX-MA1 for use in our clinical trials. While portions of our Fremont manufacturing facility are now operational and we are manufacturing material that we intend to use in clinical trials, we cannot assure you that we will be able to qualify the facility for regulatory compliance. For that reason or others, we may use Lonza or another third-party manufacturer if necessary in the future.

Third-party manufacturers may encounter difficulties in scaling up production, including problems involving production yields, quality control and assurance, shortage of qualified personnel, compliance with FDA and other applicable regulations, production costs, and development of advanced manufacturing techniques and process controls. If we continue to use third-party manufacturers, they may not perform as agreed or may not remain in the contract manufacturing business for the time required by us to successfully produce and market our product candidates. Any failure of third-party manufacturers to deliver required quantities of our product candidates for clinical use on a timely basis and at commercially reasonable prices, and our failure to find replacement manufacturers or successfully implement our own manufacturing capabilities, would materially harm our business, financial condition and results of operations.

Employees

As of December 31, 2003, we employed 403 persons, all of whom we employed on a full-time basis. Approximately 321 employees were engaged in research and development and manufacturing,

and 82 supported administration, legal, finance, management information systems and human resources. We also use temporary contractor personnel to fill staffing needs from time-to-time.

Our success will depend in large part upon our ability to attract and retain employees. We face competition in this regard from other companies, research and academic institutions, government entities and other organizations. We believe that we maintain good relations with our employees.

Executive Officers

The names and ages of our executive officers are as follows:

Name	Age	Position(s)
Raymond M. Withy, Ph.D.	48	Director, President and Chief Executive Officer
C. Geoffrey Davis, Ph.D.	52	Chief Scientific Officer
Gayle M. Mills..	49	Vice President, Business Development
Patrick M. Murphy	49	Senior Vice President, Production Services
Gisela M. Schwab, M.D.	47	Chief Medical Officer
Susan L. Thorner	55	Vice President, General Counsel and Secretary

Raymond M. Withy, Ph.D. has served as a member of our Board since November 2001, as Chief Executive Officer since May 2002 and as our President and Chief Operating Officer since January 2001. From January 2000 to December 2000 he served as our Chief Business Officer and from June 1996 to January 2000 as our Vice President, Corporate Development. He also serves as a director of Xenotech. From May 1993 to June 1996, Dr. Withy served in various positions at Cell Genesys, most recently as Director of Business Development. From 1991 to May 1993, Dr. Withy was a private consultant to the biotechnology industry in areas of strategic planning, business development and licensing. From 1984 to 1991, Dr. Withy was an Associate Scientific Director at Genzyme Corporation, a biotechnology company. Dr. Withy received a B.S. degree in Chemistry and Biochemistry and a Ph.D. degree in Biochemistry, both from the University of Nottingham.

C. Geoffrey Davis, Ph.D. has served as our Chief Scientific Officer since January 2000 and from June 1996 until December 2000 as our Vice President, Research. From January 1995 to June 1996, Dr. Davis was Director of Immunology at the Xenotech Division of Cell Genesys. From November 1991 to December 1994, he served at Repligen Corporation, a biotechnology company, first as Principal Investigator and then as Director of Immunology. Dr. Davis received a B.A. degree in Biology from Swarthmore College and a Ph.D. degree in Immunology from the University of California, San Francisco.

Gayle M. Mills has served as our Vice President, Business Development since September 2000. From 1998 to September 2000, Ms. Mills was Vice President, Business Development at EOS Biotechnology, a biopharmaceutical company. From 1995 to 1998, Ms. Mills was Vice President, Business Development and Strategic Marketing for the Neurobiology Unit at Roche Bioscience. Ms. Mills served as Director, Business Development both at Affymax Technologies from 1993 to 1995 and at Syntex Corp. from 1991 to 1993. Ms. Mills received a B.S. degree in Business Administration from the College of Notre Dame and an M.B.A. degree from Santa Clara University.

Patrick M. Murphy has served as our Senior Vice President, Production Services since July 2003 and from May 2000 until July 2003 as our Vice President, Production Services. From 1981 to May 2000, Mr. Murphy held various positions in manufacturing and operations at Genentech, a biotechnology company, most recently as Director, Strategic Operations. Mr. Murphy received a B.S. degree in Biochemistry from the State University of New York.

Gisela M. Schwab, M.D. has served as our Chief Medical Officer since January 2002 and from November 1999 until December 2001 as our Vice President, Clinical Development. From

September 1992 to October 1999, Dr. Schwab held various positions at Amgen Inc., a biotechnology company, most recently as Director, Clinical Research and Therapeutic Area Team Leader for Oncology/Hematology. Dr. Schwab received an M.D. degree from the University of Heidelberg in Germany. She is board certified in Hematology and Oncology and has performed research in molecular biology at the National Cancer Institute in Bethesda, Maryland, and at the French National Institute for Health and Research in Paris.

Susan L. Thorner joined us as our Vice President, General Counsel and Secretary in February 2001. From August 1999 to February 2001, Ms. Thorner was Special Counsel at the law firm of Farella Braun & Martel. From August 1998 to August 1999, Ms. Thorner was Director of Legal Affairs at Ross Stores, Inc. and from August 1994 to August 1998 held various positions, most recently Director of Corporate Law, at Apple Computer, Inc. Ms. Thorner was previously a partner at two law firms, Morrison & Foerster in San Francisco and Hughes Hubbard & Reed in New York City. Ms. Thorner received her J.D. degree from Harvard Law School.

Additional Factors That Might Affect Future Results

Risks Related to our Finances

We are an early stage company without commercial therapeutic products, and we cannot assure you that we will develop sufficient revenues in the future to sustain our business.

You must evaluate us in light of the uncertainties and complexities present in an early stage biopharmaceutical company. Our product candidates are in early stages of development. We will need to make significant additional investments in research and development, preclinical testing and clinical trials, and in regulatory and sales and marketing activities, to commercialize current and future product candidates. Our product candidates, if successfully developed, may not generate sufficient or sustainable revenues to enable us to be profitable.

We have a history of losses and we expect to continue to incur losses for the foreseeable future.

We have incurred net losses since we were organized as an independent company, including in the last five years net losses of $20.5 million in 1999, $8.8 million in 2000, $60.9 million in 2001, $208.9 million in 2002 and $196.4 million in 2003. As of December 31, 2003, our accumulated deficit was $564.8 million. Our losses to date have resulted principally from:

- research and development costs relating to the development of our XenoMouse and XenoMax technologies and antibody product candidates;
- general and administrative costs relating to our operations;
- impairment charges related to our strategic investments in CuraGen, ImmunoGen, and MDS Proteomics; and
- manufacturing start-up costs related to our new manufacturing facility including depreciation, outside contractor costs and personnel costs for activities such as quality assurance and quality control.

We expect to incur additional losses for the foreseeable future as a result of our research and development costs and manufacturing start-up costs, including costs associated with conducting preclinical development and clinical trials, which will continue to be substantial, and charges related to purchases of technology or other assets. We intend to invest significantly in our products prior to entering into licensing agreements. This will increase our need for capital and will result in losses for at least the next several years. We expect that the amount of operating losses will fluctuate significantly from quarter to quarter as a result of increases or decreases in our research and development efforts, the execution or termination of licensing, manufacturing and other contractual arrangements, the

progress or lack of progress of product development candidates in our collaboration with AstraZeneca and the initiation, success or failure of clinical trials.

We are currently unprofitable and may never be profitable, and our future revenues could fluctuate significantly.

Prior to June 1996, Cell Genesys owned our business and operated it as a separate business unit. Since that time, we have funded our research and development activities primarily from private placements and public offerings of our securities and from revenues generated by our licensing and other contractual arrangements.

We expect that substantially all of our revenues for the foreseeable future will result from payments under licensing and other contractual arrangements and from interest income. To date, payments under licensing and other agreements have been in the form of option fees, reimbursement for research and development expenses, license fees and milestone payments. Payments under our existing and any future customer agreements will be subject to significant fluctuation in both timing and amount. Our revenues may not be indicative of our future performance or of our ability to continue to achieve contractual milestones. Our revenues and results of operations for any period may also not be comparable to the revenues or results of operations for any other period. Our revenues for any period may not be sufficient to cover our operating costs, including the costs of operating our manufacturing plant. We may not be able to:

- enter into further co-development, licensing, manufacturing or other agreements;
- successfully complete preclinical development or clinical trials;
- obtain required regulatory approvals;
- successfully manufacture or market product candidates; or
- generate additional revenues or profitability.

Our failure to achieve any of the above goals would materially harm our business, financial condition and results of operations.

We may require additional financing, and an inability to raise the necessary capital or to do so on acceptable terms would threaten the continued success of our business.

We will continue to expend substantial resources to support research and development and establish and operate our manufacturing facility, including costs associated with preclinical development and clinical trials. In the years ended December 31, 2003, 2002, and 2001, we incurred expenses of $99.6 million, $128.5 million and $96.2 million, respectively, on research and development. For the year ended December 31, 2003, our manufacturing start-up costs were $72.5 million. Regulatory and business factors will require us to expend substantial funds in the course of completing required additional development, preclinical testing and clinical trials of, and attaining regulatory approvals for, product candidates. The amounts of the expenditures that will be necessary to execute our business plan are subject to numerous uncertainties that may adversely affect our liquidity and capital resources. Our future liquidity and capital requirements will depend on many factors, including:

- the scope and results of preclinical development and clinical trials;
- the retention of existing and establishment of further co-development, licensing, manufacturing and other agreements, if any;
- continued scientific progress in our research and development programs;
- the size and complexity of these programs;
- the cost of establishing and implementing our manufacturing capabilities and complying with good manufacturing practice regulations;

- the cost of conducting commercialization activities and arrangements;
- the time and expense involved in seeking regulatory approvals;
- competing technological and market developments;
- the time and expense of filing and prosecuting patent applications, and enforcing and defending against patent claims;
- our investment in, or acquisition of, other companies;
- the amount of product or technology in-licensing in which we engage; and
- other factors not within our control.

We believe that our current cash balances, cash equivalents, marketable securities, and the cash generated from our licensing and other contractual arrangements, will be sufficient to meet our operating and capital requirements for at least one year. However, because of the uncertainties in our business, including the uncertainties listed above, we cannot assure you that this will be the case. In addition, we may choose to obtain additional financing from time to time. We may choose to raise additional funds through public or private equity or debt financing, licensing and other agreements, a bank line of credit, sale-lease back financing, mortgage financing or other arrangements. We cannot be sure that any additional funding, if needed, will be available on terms favorable to us or at all. Furthermore, any additional equity or equity-related financing may be dilutive to our stockholders, and debt financing, if available, may subject us to restrictive covenants. We may also choose to obtain funding through licensing and other contractual arrangements. Such agreements may require us to relinquish our rights to certain of our technologies, products or marketing territories. Our failure to raise capital when needed would harm our business, financial condition and results of operations.

Our indebtedness may harm our financial condition and results of operations.

We have $200 million of convertible debt convertible subordinated notes due March 15, 2007 and debt service obligations related thereto. In February 2004, we incurred an additional $50.0 million of indebtedness to AstraZeneca, in the form of a convertible subordinated note, which we issued to AstraZeneca in connection with our redemption of the shares of our Series A-2 preferred stock we issued to AstraZeneca in October 2003. There is no interest payable on the note except in the event of a payment default. Our level of indebtedness will have several important effects on our future operations, including, without limitation:

- we will have additional cash requirements to support the payment of any interest or amortization required with respect to outstanding indebtedness;
- increases in our outstanding indebtedness and leverage will increase our vulnerability to adverse changes in general economic and industry conditions, as well as to competitive pressure; and
- depending on the levels of our outstanding debt, our ability to obtain additional financing for working capital, capital expenditures, general corporate and other purposes may be limited.

Our ability to make payments of principal and interest on our indebtedness depends upon our future performance, which will be subject to general economic conditions, industry cycles and financial, business and other factors affecting our operations, many of which are beyond our control. If we are unable to generate sufficient cash flow from operations in the future to service our debt, we may be required, among other things:

- to seek additional financing in the debt or equity markets;
- to refinance or restructure all or a portion of our indebtedness, including our convertible subordinated notes;

- to sell selected assets; or
- to reduce or delay planned capital expenditures.

Such measures might not be sufficient to enable us to service our debt. In addition, any such financing, refinancing or sale of assets might not be available on economically favorable terms.

Our strategic investments expose us to equity price risk and our investments in those companies may be deemed impaired, which would affect our results of operations.

We are exposed to equity price risk on our strategic investments in CuraGen, ImmunoGen and MDS Proteomics and we may elect to make additional similar investments in the future. In 1999 and 2000, we purchased an aggregate amount of $80.0 million of the common stock of CuraGen and ImmunoGen as strategic investments. In 2002, declines in the fair value of the CuraGen and ImmunoGen common stock were deemed to be other than temporary, primarily because the stock of each company traded below our cost basis for more than six months. Accordingly, we recorded a total impairment charge for the year ended December 31, 2002 of $67.3 million. The public trading prices of the shares of both companies have fluctuated significantly since we purchased them and could continue to do so. If these shares trade below their new cost bases in future periods, we may incur additional impairment charges relating to these investments. As of December 31, 2003, these investments were recorded at fair value in long-term investments on the balance sheet, and any net unrealized holding gains and losses are reported as a component of stockholders' equity.

In 2001, we invested $15.0 million in MDS Proteomics, a privately held company, in connection with our collaboration with that company. Because MDS Proteomics is a private company and its securities are not publicly traded, the value of our investment is inherently more difficult to estimate than an investment in a publicly traded company. As of December 31, 2003 and June 30, 2002, we estimated that the value of our investment had declined to zero and $7.9 million, respectively and that an impairment of our investment had occurred. Accordingly, we recorded an impairment charge of $7.9 million and $7.1 million, respectively, on our investment in the fourth quarter of 2003 and the second quarter of 2002, respectively. The amount of the charge was based on the difference between the estimated value as determined by our management and our most recent cost basis or original cost basis. This investment was recorded in long term investments on the balance sheet at December 31, 2002.

Risks Related to the Development and Commercialization of our Products

Our XenoMouse and XenoMax technologies may not produce safe, efficacious or commercially viable products, which will be critical to our ability to generate revenues from our products.

Our XenoMouse and XenoMax technologies are new approaches to developing antibodies as products for the treatment of diseases and medical disorders. We have not commercialized any antibody therapeutic products based on our technologies. Moreover, we are not aware of any commercialized, fully human antibody therapeutic products that have been generated from any technologies similar to ours. Our antibody therapeutic product candidates are still in various stages of development and many are in an early development stage. We have initiated clinical trials with respect to four proprietary fully human antibody therapeutic product candidates, and our collaborators have initiated clinical trials with respect to four other fully human antibody therapeutic product candidates generated by XenoMouse technology. We cannot be certain that either XenoMouse technology or XenoMax technology will generate antibodies against every antigen to which they are exposed in an efficient and timely manner, if at all. Furthermore, XenoMouse technology and XenoMax technology may not result in any meaningful benefits to our current or potential customers or in product candidates that are safe and efficacious for patients. Our failure to generate antibody therapeutic

product candidates that lead to the successful commercialization of products would materially harm our business, financial condition and results of operations.

If we do not successfully develop our products, or if they do not achieve commercial success, our business will be materially harmed.

Our development of current and future product candidates, either alone or in conjunction with collaborators, is subject to the risks of failure inherent in the development of new pharmaceutical products and products based on new technologies. These risks include:

- delays in product development, clinical testing or manufacturing;
- unplanned expenditures in product development, clinical testing or manufacturing;
- failure in clinical trials or failure to receive regulatory approvals;
- emergence of superior or equivalent product development technologies or products;
- inability to manufacture on our own, or through others, product candidates on a clinical or commercial scale;
- inability to market products due to third-party proprietary rights;
- election by our customers not to pursue product development;
- failure by our customers to develop products successfully; and
- failure to achieve market acceptance.

Because of these risks, our research and development efforts and those of our customers and collaborators may not result in any commercially viable products. Our failure to successfully complete a significant portion of these development efforts, to obtain required regulatory approvals or to achieve commercial success with any approved products would materially harm our business, financial condition and results of operations.

In addition, our decisions to terminate our clinical programs for developing ABX-IL8, a fully human antibody product candidate for inflammatory disorders, and ABX-CBL, an in-licensed antibody product candidate for graft versus host disease, have reduced the diversity of our product portfolio. We hope to be able to make up for this loss of diversity through the number and variety of potential new product candidates we have in preclinical development. For example, ABX-PTH, which targets the action of parathyroid hormone in patients with chronic renal disease, is a new product candidate that we moved from the preclinical stage into a clinical study in 2004 in patients with secondary hyperparathyroidism. However, to the extent that we are unable to maintain a broad and diverse range of product candidates, our success would depend more heavily on one or a few product candidates.

Before we commercialize and sell any of our product candidates, we must conduct clinical trials, which are expensive and have uncertain outcomes.

Conducting clinical trials is a lengthy, time-consuming and expensive process. Before obtaining regulatory approvals for the commercial sale of any products, we must demonstrate through preclinical testing and clinical trials that our product candidates are safe and effective for use in humans. We have incurred and will continue to incur substantial expense for, and we have devoted and expect to continue to devote a significant amount of time to, preclinical testing and clinical trials.

Historically, the results from preclinical testing and early clinical trials have often not been predictive of results obtained in later clinical trials. A number of new drugs and biologics have shown promising results in clinical trials, but subsequently failed to establish sufficient safety and efficacy data to obtain necessary regulatory approvals. Data obtained from preclinical and clinical activities are

susceptible to varying interpretations, which may delay, limit or prevent regulatory approval. In addition, we may encounter regulatory delays or rejections as a result of many factors, including changes in regulatory policy during the period of product development.

Completion of clinical trials may take several years or more. The length of time generally varies substantially according to the type, complexity, novelty and intended use of the product candidate. However, we estimate that clinical trials of the type we generally conduct are typically completed over the following timelines:

Clinical Phase	Estimated Completion Period
Phase 1	1-2 Years
Phase 2	1-2 Years
Phase 3	2-4 Years

Many factors may delay our commencement and rate of completion of clinical trials, including:

- the number of patients that ultimately participate in the trial;
- the duration of patient follow-up that seems appropriate in view of the results;
- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patient subjects; and
- the availability of adequate supplies of the product candidate being tested.

We have limited experience in conducting and managing clinical trials. We rely on third parties, including our collaborators, to assist us in managing and monitoring clinical trials. Our reliance on these third parties may result in delays in completing, or in failure to complete, these trials if the third parties fail to perform under our agreements with them.

In addition, we have ongoing research projects that may lead to product candidates, but we have not submitted INDs nor begun clinical trials for these projects. Our preclinical or clinical development efforts may not be successfully completed, we may not file further INDs and clinical trials may not commence as planned.

Three of our proprietary product candidates, ABX-EGF, ABX-MA1 and ABX-PTH, are in various stages of clinical trials. We have discontinued development of two proprietary product candidates, ABX-CBL and ABX-IL8. To date, data obtained from these clinical trials have been insufficient to demonstrate safety and efficacy under applicable FDA guidelines. As a result, these data will not support an application for regulatory approval without further clinical trials. Clinical trials that we conduct or that third parties conduct on our behalf may not demonstrate sufficient safety and efficacy to obtain the requisite regulatory approvals for any of our product candidates. We expect to commence new clinical trials from time to time in the course of our business as our product development work continues. However, regulatory authorities may not permit us to undertake any additional clinical trials for our product candidates.

Our product candidates may fail to demonstrate safety or efficacy in clinical trials. For example, we completed analysis of the Phase 2b clinical trials of ABX-IL8 in psoriasis and concluded that the results did not warrant continued development in psoriasis and decided in 2002 not to proceed with studies in other disease indications. Similarly, in February 2003, we completed a preliminary analysis of the results from the Phase 2/3 clinical trial of ABX-CBL and concluded that the study did not meet its primary endpoint. Therefore, we and our co-developer, SangStat do not plan any further development of ABX-CBL. Failures of clinical trials of any product candidate could delay the development of other product candidates or hinder our ability to obtain additional financing. In addition, failures in our

clinical trials can lead to additional research and development charges. Any delays in, or termination of, our clinical trials could materially harm our business, financial condition and results of operations.

We may rely on third-party manufacturers, and we may have difficulty conducting clinical trials of our product candidates if a manufacturer does not perform in accordance with our expectations.

Until recently, we relied on a single contract manufacturer, Lonza, to produce ABX-CBL, ABX-IL8 and ABX-EGF under good manufacturing practice regulations for use in our clinical trials. In June 2003, we canceled our manufacturing supply agreement with Lonza, pursuant to which we had exclusive access to a cell culture production suite, because we determined that with the opening of our own manufacturing plant and changes in our product candidate portfolio, we no longer needed access to the Lonza facility. We have also relied on other contract manufacturers from time to time to produce our product candidates for use in our clinical trials. For example, Fred Hutchinson Cancer Research Center has produced ABX-MA1 for use in our clinical trials. While portions of our Fremont manufacturing facility are now operational and we are manufacturing material that we intend to use in clinical trials, we cannot assure you that we will be able to qualify this facility for regulatory compliance. For that reason or others, we may use Lonza or another third-party manufacturer if necessary in the future.

Third-party manufacturers may encounter difficulties in scaling up production, including problems involving production yields, quality control and assurance, shortage of qualified personnel, compliance with FDA and other applicable regulations, production costs, and development of advanced manufacturing techniques and process controls. If we continue to use third-party manufacturers, they may not perform as agreed or may not remain in the contract manufacturing business for the time required by us to successfully produce and market our product candidates. Any failure of third-party manufacturers to deliver the required quantities of our product candidates for clinical use on a timely basis and at commercially reasonable prices, and our failure to find replacement manufacturers or successfully implement our own manufacturing capabilities, would materially harm our business, financial condition and results of operations.

Our own ability to manufacture is uncertain, which may make it more difficult for us to develop and sell our products.

We are establishing our own manufacturing facility for the manufacture of product candidates for clinical trials and to support the potential early commercial launch of a limited number of products, in each case, in compliance with FDA and European good manufacturing practices. In May 2000, we signed a long-term lease for the building that contains this manufacturing facility. Construction has been completed and portions of the facility are operational. We are also conducting validation of the facility and completed significant stages of validation in 2003. In October 2003, following an inspection by the State Department of Health Services, we received a Drug Manufacturing License from the State of California. The license permits us to manufacture and ship clinical material from our manufacturing facility. We expect the total cost of the facility, including design fees, permits, validation, construction, leasehold improvements and equipment, to be approximately $155.0 million. Validation of this facility may take longer than expected, and the planned and actual construction costs of building and qualifying the facility for regulatory compliance may be higher than expected. We currently have excess production services capacity and this condition may persist for an extended period. In addition, if the commercial launch of one or more of our product candidates proves successful, we will likely need to use one or more third-party facilities to produce these products in sufficient quantities.

The process of manufacturing antibody therapeutic products is complex. While the managers of the facility have gained extensive manufacturing experience in prior positions with other companies, we have no experience in the clinical or commercial scale manufacturing of our existing product candidates, or any other antibody therapeutic products. We will need to hire, train and retain additional

qualified manufacturing, quality control and quality assurance personnel. Also, we will need to manufacture such antibody therapeutic products in a facility and by a process that comply with FDA, European and other regulations. Our manufacturing operations will be subject to ongoing, periodic unannounced inspection by the FDA and state agencies to ensure compliance with good manufacturing practices. Our inability to complete the establishment of our manufacturing operations and maintain them in compliance with applicable regulations within our planned time and cost parameters could materially harm our business, financial condition and results of operations.

We also may encounter problems with the following:

- production yields;
- quality control and assurance;
- availability of qualified personnel;
- adequate training of new and existing personnel;
- on-going compliance with our standard operating procedures;
- on-going compliance with FDA regulations;
- production costs; and
- development of advanced manufacturing techniques and process controls.

We continually evaluate our options for commercial production of our antibody therapeutic products, which include use of third-party manufacturers, establishing a commercial scale manufacturing facility or entering into a manufacturing joint venture relationship with a collaborator or other third party. We are aware of only a limited number of companies on a worldwide basis that operate manufacturing facilities in which our product candidates can be manufactured under good manufacturing practice regulations, a requirement for all pharmaceutical products. It may take a substantial period of time for a contract manufacturing facility that has not been producing antibodies to begin producing antibodies under good manufacturing practice regulations. We may not be able to contract with any of these companies on acceptable terms, if at all.

In addition, the FDA and other regulatory authorities will require us to register any manufacturing facilities in which our antibody therapeutic products are manufactured. The FDA and other regulatory authorities will then subject the facilities to inspections to confirm compliance with FDA good manufacturing practice or other regulations. Our failure or the failure of our third-party manufacturers to maintain regulatory compliance would materially harm our business, financial condition and results of operations.

The successful growth of revenues from our manufacturing services depends to a large extent on our ability to find third parties who agree to use our services and our ability to provide those services successfully.

Enhancing our contract revenues depends to a significant extent on entering into agreements to provide antibody production services to third parties. Potential third parties include our existing collaborators, as well as other pharmaceutical and biotechnology companies, technology companies, academic institutions and other entities. We must enter into these agreements to successfully develop this aspect of our business. To date, we have entered into two production services agreements and we cannot assure you that we will be able to enter into additional agreements.

We may not be able to secure manufacturing agreements on favorable terms. If we do obtain such agreements, we may encounter difficulties in performing as agreed. We may encounter difficulties in scaling up production, including problems involving production yields, quality control and assurance, shortage of qualified personnel, training of personnel, compliance with FDA and other applicable

regulations, production costs, and development of advanced manufacturing techniques and process controls. The failure to deliver required quantities of product on a timely basis and at commercially reasonable prices could materially harm our business, financial condition and results of operations.

The successful growth of our business depends to a large extent on our ability to find third-party collaborators to develop and commercialize many of our product candidates.

Our strategy for the development and commercialization of antibody therapeutic products depends, in large part, upon the formation of collaboration agreements with third parties. Potential third parties include pharmaceutical and biotechnology companies, technology companies, academic institutions and other entities. We must enter into these agreements to successfully develop and commercialize product candidates. These agreements are necessary in order for us to:

- access proprietary antigens for which we can generate fully human antibody products;
- fund research, preclinical development, clinical trials and manufacturing;
- seek and obtain regulatory approvals; and
- successfully commercialize existing and future product candidates.

Our ability to continue our current collaborations and to enter into additional third party collaborations is dependent in large part on our ability to successfully demonstrate that our XenoMouse technology is an attractive method of developing antibody therapeutic products. We have generated only a limited number of fully human antibody therapeutic product candidates pursuant to our collaboration agreements and only eight fully human antibody therapeutic product candidates generated with XenoMouse technology have entered clinical testing. We have announced that one of these product candidates has not met our expectations. Our failure to maintain our existing collaboration agreements or to enter into additional agreements could materially harm our business, financial condition and results of operations.

Our dependence on licensing, collaboration, manufacturing and other agreements with third parties subjects us to a number of risks. These agreements may not be on terms that prove favorable to us, and we typically afford our collaborators significant discretion in electing whether to pursue any of the planned activities. Licensing and other contractual arrangements may require us to relinquish our rights to certain of our technologies, products or marketing territories. To the extent we agree to work exclusively with one collaborator in a given therapeutic area, our opportunities to collaborate with other entities could be curtailed. For example, our collaboration with AstraZeneca for the identification and development of therapeutic antibodies in oncology contains exclusivity provisions that significantly restrict our ability to enter into arrangements with third parties in the field of oncology as well as our ability to conduct research and development activities in that field. To the extent that our collaboration with AstraZeneca is not successful, our ability to develop antibodies for use in oncology applications through other collaborations will be severely curtailed. Our collaboration with AstraZeneca also limits our ability to develop such antibodies through our own independent development.

We cannot control the amount or timing of resources our collaborators may devote to the collaboration, and collaborators may not perform their obligations as expected. Additionally, business combinations or significant changes in a collaborator's business strategy may adversely affect a collaborator's willingness or ability to complete its obligations under the arrangement. Even if we fulfill our obligations under an agreement, typically our collaborators can terminate the agreement at any time following proper written notice. The termination or breach of agreements by our collaborators, or the failure of our collaborators to complete their obligations in a timely manner, could materially harm our business, financial condition and results of operations. If we are not able to establish further collaboration agreements or any or all of our existing agreements are terminated, we may be required

to seek new collaborators or to undertake product development and commercialization at our own expense. Such an undertaking may:

- limit the number of product candidates that we will be able to develop and commercialize;
- reduce the likelihood of successful product introduction;
- significantly increase our capital requirements; and
- place additional strain on our management's time.

Existing or potential collaborators may pursue alternative technologies, including those of our competitors, or enter into other transactions that could make a collaboration with us less attractive to them. For example, if an existing collaborator purchases a company that is one of our competitors, that company could be less willing to continue its collaboration with us. In addition, a company that has a strategy of purchasing companies with attractive technologies might have less incentive to enter into a collaboration agreement with us. Moreover, disputes may arise with respect to the ownership of rights to any technology or products developed with any current or future collaborator. Lengthy negotiations with potential new collaborators or disagreements between us and our collaborators may lead to delays in or termination of the research, development or commercialization of product candidates or result in time-consuming and expensive litigation or arbitration. The decision by our collaborators to pursue alternative technologies or the failure of our collaborators to develop or commercialize successfully any product candidate to which they have obtained rights from us could materially harm our business, financial condition and results of operations.

We are subject to extensive government regulation, which will require us to spend significant amounts of money, and we may not be able to obtain regulatory approvals, which are required for us to conduct clinical testing and commercialize our products.

Our product candidates under development are subject to extensive and rigorous domestic government regulation. The FDA regulates, among other things, the development, testing, manufacture, safety, efficacy, record-keeping, labeling, storage, approval, advertising, promotion, sale and distribution of biopharmaceutical products. If we market our products abroad, they will also be subject to extensive regulation by foreign governments. Neither the FDA nor any other regulatory agency has approved any of our product candidates for sale in the United States or any foreign market. The regulatory review and approval process, which includes preclinical studies and clinical trials of each product candidate, is lengthy, expensive and uncertain. Securing FDA approval requires the submission of extensive preclinical and clinical data and supporting information to the FDA for each indication to establish the product candidate's safety and efficacy. The approval process takes many years, requires the expenditure of substantial resources, and may involve post-marketing surveillance and requirements for post-marketing studies. As we conduct clinical trials for a given product candidate, we may decide or the FDA may require us to make changes in our plans and protocols. Such changes may relate to, for example, changes in the standard of care for a particular disease indication, comparability of efficacy and toxicity of materials where a change in materials is proposed, or competitive developments foreclosing the availability of expedited approval procedures. We may be required to support proposed changes with additional preclinical or clinical testing, which could delay the expected time line for concluding clinical trials. Regulatory requirements are subject to frequent change. Delays in obtaining regulatory approvals may:

- adversely affect the successful commercialization of any drugs that we or our customers develop;
- impose costly procedures on us or our customers;
- diminish any competitive advantages that we or our customers may attain; and
- adversely affect our receipt of revenues or royalties.

Our product candidates may not be approved or may be approved with limitations or for indications that differ from those we initially target. If approved, certain material changes affecting a product such as manufacturing changes or additional labeling claims are subject to further FDA review and approval. The FDA may withdraw any required approvals after we obtain them. We may not maintain compliance with other regulatory requirements. Further, if we fail to comply with applicable FDA and other regulatory requirements at any stage during the regulatory process, we or our third-party manufacturers may be subject to sanctions, including:

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

In many instances we expect to rely on our customers and co-developers to file INDs and generally direct the regulatory approval process for products derived from our technologies. These customers and co-developers may not be able to or may choose not to conduct clinical testing or obtain necessary approvals from the FDA or other regulatory authorities for any product candidates. If they fail to obtain required governmental approvals, we will experience delays in or be precluded from marketing or realizing the commercial benefits from the marketing of products derived from our technologies. In addition, our failure to obtain the required approvals would preclude the commercial use of our products. Any such delays and limitations may materially harm our business, financial condition and results of operations.

We and our third-party manufacturers also are required to comply with the applicable FDA current good manufacturing practice regulations and other regulatory requirements. Good manufacturing practice regulations include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Manufacturing facilities are subject to inspection by the FDA and the facilities must pass an inspection by the FDA before we can use them in commercial manufacturing of any product. Manufacturing facilities in California, including our facility, are also subject to the licensing requirements of and inspection by the State of California Department of Health Services. In October 2003, following an inspection, we received a Drug Manufacturing License from the State of California. The license, which must be renewed annually, permits us to manufacture and ship clinical material. We or our third-party manufacturers may not be able to comply with the applicable good manufacturing practice requirements and other regulatory requirements. The failure of us or our third-party manufacturers to comply with these requirements would materially harm our business, financial condition and results of operations.

If our products do not gain market acceptance among the medical community, our revenues would greatly decline and might not be sufficient to support our operations.

Our product candidates may not gain market acceptance among physicians, patients, third-party payors and the medical community. We may not achieve market acceptance even if clinical trials demonstrate safety and efficacy, and the necessary regulatory and reimbursement approvals are obtained. The degree of market acceptance of any product candidates that we develop will depend on a number of factors, including:

- establishment and demonstration of clinical efficacy and safety;
- cost-effectiveness of our product candidates;
- their potential advantage over alternative treatment methods;
- reimbursement policies of government and third-party payors; and
- marketing and distribution support for our product candidates, including the efforts of our collaborators where they have marketing and distribution responsibilities.

Physicians will not recommend therapies using our products until such time as clinical data or other factors demonstrate the safety and efficacy of such procedures as compared to conventional drug and other treatments. Even if we establish the clinical safety and efficacy of therapies using our antibody product candidates, physicians may elect not to recommend the therapies for any number of other reasons, including whether the mode of administration of our antibody products is effective for certain indications. Antibody products, including our product candidates as they would be used for certain disease indications, are typically administered by infusion or injection, which requires substantial cost and inconvenience to patients. Our product candidates, if successfully developed, will compete with a number of drugs and therapies manufactured and marketed by major pharmaceutical and other biotechnology companies. Our products may also compete with new products currently under development by others. Physicians, patients, third-party payors and the medical community may not accept or utilize any product candidates that we or our customers develop. The failure of our products to achieve significant market acceptance would materially harm our business, financial condition and results of operations.

We do not have marketing and sales experience, which may require us to rely on others to market and sell our products and may make it more challenging for us to commercialize our product candidates.

Although we have been marketing our XenoMouse technology to potential customers and collaborators for several years, we do not have marketing, sales or distribution experience or capability with respect to our therapeutic product candidates. We intend to enter into arrangements with third parties to market and sell most of our therapeutic product candidates when we commercialize them, which may be as early as 2005. We may not be able to enter into these marketing and sales arrangements with others on acceptable terms, if at all. To the extent that we enter into marketing and sales arrangements with other companies, our revenues, if any, will depend on the efforts of others. These efforts may not be successful. If we are unable to enter into third-party arrangements, we will need to develop a marketing and sales force, which may need to be substantial in size, in order to achieve commercial success for any product candidate approved by the FDA. We may not successfully develop marketing and sales capabilities or have sufficient resources to do so. If we do develop such capabilities, we will compete with other companies that have experienced and well-funded marketing and sales operations. Our failure to enter into successful marketing arrangements with third parties and our inability to conduct such activities ourselves would materially harm our business, financial condition and results of operations.

Risks Related to Intellectual Property

Our ability to protect our intellectual property rights will be critically important to the success of our business, and we may not be able to protect these rights in the United States or abroad.

Our success depends in part on our ability to:

- obtain patents;
- protect trade secrets;
- operate without infringing the proprietary rights of others; and
- prevent others from infringing our proprietary rights.

We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary rights are covered by valid and enforceable patents or are effectively maintained as trade secrets. We attempt to protect our proprietary position by filing U.S. and foreign patent applications related to our proprietary technology, inventions and improvements that are important to the development of our business. However, the patent position of biopharmaceutical companies involves complex legal and factual questions, and, therefore, we cannot predict with certainty whether our patent applications will be approved or any resulting patents will be enforced. In addition, third parties may challenge, seek to invalidate or circumvent any of our patents, once they are issued. Thus, any patents that we own or license from third parties may not provide any protection against competitors. Our pending patent applications, those we may file in the future, or those we may license from third parties, may not result in patents being issued. Also, patent rights may not provide us with adequate proprietary protection or competitive advantages against competitors with similar technologies. The laws of certain foreign countries do not protect our intellectual property rights to the same extent as do the laws of the United States.

In addition to patents, we rely on trade secrets and proprietary know-how. We seek protection, in part, through confidentiality and proprietary information agreements. These agreements may not provide meaningful protection for our technology or adequate remedies in the event of unauthorized use or disclosure of confidential and proprietary information, and, in addition, the parties may breach such agreements. Also, our trade secrets may otherwise become known to, or be independently developed by, our competitors. Furthermore, others may independently develop similar technologies or duplicate any technology that we have developed.

We may face challenges from third parties regarding the validity of our patents and proprietary rights, or from third parties asserting that we are infringing their patents or proprietary rights, which could result in litigation that would be costly to defend and could deprive us of valuable rights.

Parties have conducted research for many years in the antibody and transgenic animal fields. The term "transgenic", when applied to an animal, such as a mouse, refers to an animal that has chromosomes into which human genes have been incorporated. This research has resulted in a substantial number of issued patents and an even larger number of pending patent applications. The publication of discoveries in the scientific or patent literature frequently occurs substantially later than the date on which the underlying discoveries were made. Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties. Our technologies may unintentionally infringe the patents or violate other proprietary rights of third parties. Such infringement or violation may prevent us and our customers from pursuing product development or commercialization. Such a result could materially harm our business, financial condition and results of operations.

In March 1997, we entered into a cross-license and settlement agreement with GenPharm to avoid protracted litigation. Under the cross-license, we licensed on a non-exclusive basis certain patents, patent applications, third-party licenses and inventions pertaining to the development and use of certain transgenic rodents, including mice, that produce fully human antibodies that are integral to our products and business. Our business, financial condition and results of operations could be materially harmed if any of the parties breaches the cross-license agreement.

GlaxoSmithKline, plc, or Glaxo, has a family of patents relating to certain methods for generating monoclonal antibodies that Glaxo is asserting against Genentech, Inc. in litigation that was commenced in 1999. On May 4, 2001, Genentech announced that a jury had determined that Genentech had not infringed Glaxo's patents and that all of the patent claims asserted against Genentech are invalid. We understand that Glaxo has filed a notice of appeal with the Court of Appeals for the Federal Circuit. If any of the claims of these patents are finally determined in the litigation to be valid, and if we were to use manufacturing processes covered by the patents to make our products, we may then need to obtain a license should one be available. Should a license be denied or unavailable on commercially reasonable terms, we may have difficulty commercializing one or more of our products in any territories in which these claims were in force.

Genentech, Johnson & Johnson, Glaxo, Transkaryotic Therapies, Inc. and the Trustees of Columbia University in the City of New York each owns or controls a U.S. patent that relates to recombinant cell lines or methods of generating recombinant cell lines for the production of antibodies. If we were to use a production system covered by any of these patents, we may then need to obtain a license should one be available. Under these circumstances, our failure to obtain a license at all or on commercially reasonable terms could impede commercialization of one or more of our products in any territories in which these patent claims were in force.

Genentech owns a U.S. patent that issued in June 1998 relating to inhibiting the growth of tumor cells that involves an antibody that binds to an epidermal growth factor receptor, or an anti-EGF receptor antibody, in combination with a cytotoxic factor, which is a substance having a toxic effect on cells. ImClone Systems, Inc. owns or is licensed under a U.S. patent that issued in April 2001, relating to inhibiting the growth of tumor cells that involves an anti-EGF receptor antibody in combination with an anti-neoplastic, or anti-tumor, agent. A corresponding European patent was published for grant in March 2002 and Abgenix and others are opposing that patent in the European Patent Office. A corresponding patent has also issued in Canada. We do not believe based on our review that either the Genentech patent or any of the ImClone patents would be successfully asserted against any of our current or planned activities relating to ABX-EGF or future commercial sales of ABX-EGF. If a court determines that the claims of either the Genentech patent or the ImClone patent cover our activities with ABX-EGF and are valid, such a decision may require us to obtain a license to Genentech's patent or ImClone's patents, as the case may be, to label and sell ABX-EGF for certain combination therapies. Our failure to obtain a license, or to obtain a license on commercially reasonable terms, could impede our commercialization of ABX-EGF.

In 2000, the Japan Patent Office granted a patent to Kirin Beer Kabushiki Kaisha, one of our competitors, relating to non-human transgenic mammals. In October 2003, the United States Patent and Trademark Office issued a corresponding patent to Kirin. Kirin has filed corresponding patent applications in Europe and Australia. Our licensee, Japan Tobacco, has filed opposition proceedings against the Kirin patent. We cannot predict the outcome of those opposition proceedings, which may take years to be resolved.

Extensive litigation regarding patents and other intellectual property rights has been common in the biotechnology and pharmaceutical industries. The defense and prosecution of intellectual property suits, United States Patent and Trademark Office interference proceedings, and related legal and administrative proceedings in the United States and internationally involve complex legal and factual

questions. As a result, such proceedings are costly and time-consuming to pursue and their outcome is uncertain. Litigation may be necessary to:

- enforce patents that we own or license;
- protect trade secrets or know-how that we own or license; or
- determine the enforceability, scope and validity of the proprietary rights of others.

Our involvement in any litigation, interference or other administrative proceedings could cause us to incur substantial expense and could significantly divert the efforts of our technical and management personnel. An adverse determination may subject us to loss of our proprietary position or to significant liabilities, or require us to seek licenses that may not be available from third parties. An adverse determination in a judicial or administrative proceeding, or a failure to obtain necessary licenses, may restrict or prevent us from manufacturing and selling our products, if any. Costs associated with these arrangements may be substantial and may include ongoing royalties. Furthermore, we may not be able to obtain the necessary licenses on satisfactory terms, if at all. These outcomes could materially harm our business, financial condition and results of operations.

Risks Related to Our Industry

We face intense competition and rapid technological change, and if we fail to develop products that keep pace with new technologies and that gain market acceptance, our product candidates or technologies could become obsolete.

The biotechnology and pharmaceutical industries are highly competitive and subject to significant and rapid technological change. We are aware of several pharmaceutical and biotechnology companies that are actively engaged in research and development in areas related to antibody therapy. These companies have commenced clinical trials of antibody therapeutic product candidates or have successfully commercialized antibody therapeutic products. Many of these companies are addressing the same diseases and disease indications as we or our customers are. Also, we compete with companies that offer antibody generation services to companies that have antigens. These competitors have specific expertise or technology related to antibody development and introduce new or modified technologies from time to time. These companies include GenPharm, a wholly owned subsidiary of Medarex, Inc., Medarex's collaborator, Kirin Brewing Co. Ltd.; GenMab A/S; Cambridge Antibody Technology Group plc; Protein Design Labs, Inc.; MorphoSys AG; Xenerex Biosciences Inc., a subsidiary of Avanir Pharmaceuticals; XLT Biopharmaceuticals Ltd.; and Alexion Pharmaceuticals, Inc. Finally, we compete with companies that currently offer antibody production services, and may compete with companies that currently only manufacture their own antibodies but could offer antibody production services to third parties.

Some of our competitors have received regulatory approval of or are developing or testing product candidates that may compete directly with our product candidates. ImClone, in collaborations with Bristol-Meyers Squib Company and Merck KgAa; AstraZeneca, plc; Glaxo; and a collaboration of OSI Pharmaceuticals, Inc., Genentech and Roche have potential antibody and small molecule product candidates in clinical development that may compete with ABX-EGF, which is also in clinical trials.

ImClone and Bristol-Myers Squibb have received approval to market Erbitux, ImClone's antibody product candidate for the treatment of metastatic colorectal cancer, in the United States. ImClone and Bristol-Myers Squibb have also announced the submission of an application for approval to market Erbitux in Canada. Merck KgAa has announced that it has submitted an application for the authorization to market Erbitux for the treatment of metastatic colorectal cancer in the European Union and that it has received approval to market Erbitux in Switzerland for treatment of metastatic colorectal cancer.

Genentech has received approval to market Avastin for use with chemotherapy as a first-line treatment for colorectal cancer.

AstraZeneca has received approval to market Iressa, a small molecule product candidate that may compete with ABX-EGF, in many markets in the world, including the United States, Japan, Australia and Canada, for the treatment of advanced non-small cell lung cancer.

Genentech and OSI have initiated the rolling submission of an NDA for Tarceva in the United States for the treatment of advanced non-small cell lung cancer.

In addition, Amgen has received approval to market Sensipar, or cinacalcet HCI, a small molecule product candidate for the treatment of secondary hyperparathyroidism, which may compete with ABX-PTH.

Many of these companies and institutions, either alone or together with their customers or collaborators, have substantially greater financial resources and larger research and development staffs than we do. In addition, many of these competitors, either alone or together with their customers or collaborators, have significantly greater experience than we do in:

- developing products;
- undertaking preclinical testing and human clinical trials;
- obtaining FDA and other regulatory approvals of products; and
- manufacturing and marketing products.

Accordingly, our competitors may succeed in obtaining patent protection, receiving FDA approval or commercializing products before we do. If we commence commercial product sales, we will be competing against companies with greater marketing and manufacturing capabilities, areas in which we have limited or no experience.

We also face, and will continue to face, competition from academic institutions, government agencies and research institutions. There are numerous competitors working on products to treat each of the diseases for which we are seeking to develop therapeutic products. In addition, any product candidate that we successfully develop may compete with existing therapies that have long histories of safe and effective use. Competition may also arise from:

- other drug development technologies and methods of preventing or reducing the incidence of disease;
- new small molecules; or
- other classes of therapeutic agents.

Developments by competitors may render our product candidates or technologies obsolete or non-competitive. We face and will continue to face intense competition from other companies for agreements with pharmaceutical and biotechnology companies, for establishing relationships with academic and research institutions, and for licenses to proprietary technology. These competitors, either alone or with their customers, may succeed in developing technologies or products that are more effective than ours.

We also face competition from companies that provide production services. These include contract manufacturers, such as Lonza, Avid Bioservices, Inc., Diosynth Biotechnology, DSM N.V. and Goodwin Biotechnology Inc., and other pharmaceutical and biotechnology companies that manufacture their own product candidates but can make extra capacity available to collaborators and customers, such as Boehringer Ingelheim GmbH, Biogen Idec Inc., Cangene Corporation, ICOS Corporation and Novartis AG.

We face uncertainty over reimbursement and healthcare reform, which, if determined adversely to us, could seriously hinder the market acceptance of our products.

In both domestic and foreign markets, sales of our product candidates will depend in part upon the availability of reimbursement from third-party payors, such as government health administration authorities, managed care providers and private health insurers. Third-party payors are increasingly challenging the price and examining the cost effectiveness of medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development. In addition, domestic and foreign governments continue to propose and pass legislation designed to reduce the cost of healthcare, which could further limit reimbursement for pharmaceuticals. The failure of the government and third-party payors to provide adequate coverage and reimbursement rates for our product candidates could adversely affect the market acceptance of our products. The failure of our products to receive market acceptance would materially harm our business, financial condition and results of operations.

Other Risks Related to Our Company

The future growth and success of our business will depend on our ability to continue to attract and retain our employees and consultants.

For us to pursue product development, manufacturing, marketing and commercialization plans, we will need to hire additional qualified scientific, manufacturing, quality control and quality assurance personnel. We may also need to hire personnel with expertise in clinical testing, government regulation, manufacturing, marketing, law and finance. Attracting and retaining qualified personnel will be critical to our success. We may not be able to attract and retain personnel on acceptable terms given the competition for such personnel among biotechnology, pharmaceutical and healthcare companies, universities and non-profit research institutions. In addition, we experienced increased attrition rates in 2003. Further attrition could materially harm our business, financial condition and results of operations.

We grant stock options as a method of attracting and retaining employees, to motivate performance and to align the interests of management with those of our stockholders. Due to the decline in the trading price of our common stock during 2001 and 2002, a substantial portion of the stock options held by our employees have an exercise price that is higher than the current trading price of our common stock. We may elect to reprice or otherwise adjust the terms of these stock options, grant additional stock options at the current lower market price, pay higher cash compensation, or provide some combination of these alternatives to retain and attract qualified employees, but we cannot be sure that any of these actions would be successful. If we issue additional stock options, this would dilute existing stockholders.

As a result of these factors, we may have difficulty attracting and retaining qualified personnel, which could materially harm our business, financial condition and results of operations.

We may experience difficulty in the integration of any future acquisition with the operations of our business.

We may from time to time seek to expand our business through corporate acquisitions. Our acquisition of companies and businesses and expansion of operations, involve risks such as the following:

- the potential inability to identify target companies best suited to our business plan;
- the potential inability to successfully integrate acquired operations and businesses and to realize anticipated synergies, economies of scale or other expected value;

- incurrence of expenses attendant to transactions that may or may not be consummated; and
- difficulties in managing and coordinating operations at multiple venues, which, among other things, could divert our management's attention from other important business matters.

In addition, our past and future acquisitions of companies and businesses and expansion of operations may result in dilutive issuances of equity securities, the incurrence of additional debt, U.S. or foreign tax liabilities, large one-time write-offs and the creation of goodwill or other intangible assets that could result in amortization expense or other charges to expense.

We have implemented a stockholder rights plan and are subject to other anti-takeover provisions, which could deter a party from effecting a takeover of us at a premium to our then-current stock price.

In June 1999, our board of directors adopted a stockholder rights plan, which we amended and restated in November 1999 and May 2002, and amended in October 2003. The stockholder rights plan and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws may have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of us. This could limit the price that certain investors might be willing to pay in the future for our common stock. Certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws allow us to:

- issue preferred stock without any vote or further action by the stockholders;
- eliminate the right of stockholders to act by written consent without a meeting;
- specify procedures for director nominations by stockholders and submission of other proposals for consideration at stockholder meetings; and
- eliminate cumulative voting in the election of directors.

In October 2003, we entered into a collaboration and license agreement with AstraZeneca for the purpose of identifying and developing antibody products for use in oncology therapeutics. The collaboration agreement includes provisions that would allow AstraZeneca to accelerate its selection of target antigens and, in certain situations, terminate the collaboration agreement, or specific programs or activities conducted under it, in the event of a change in control in us, particularly if we were acquired by a competitor of AstraZeneca. In the event of a change in control of us, AstraZeneca could also acquire control over the development programs and various intellectual property rights in respect of antigens that are the subject of the collaboration agreement. This would result in a reduction in the royalties and milestones to be paid by AstraZeneca to us under the collaboration agreement and the release of AstraZeneca from certain exclusivity provisions. In addition, certain exclusivity provisions contained in the collaboration agreement would apply to an acquirer of our company and would restrict the acquirer's ability to operate its business in the oncology field after the acquisition, except with respect to pre-existing development programs. These and other provisions of the collaboration agreement could make our company less attractive to a potential acquirer, particularly an acquirer that conducts or expects to conduct significant operations in the field of oncology therapeutics.

We are also subject to certain provisions of Delaware law which could also delay or make more difficult a merger, tender offer or proxy contest involving us. In particular, Section 203 of the Delaware General Corporation Law prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years unless the transaction meets certain conditions. The stockholder rights plan, the possible issuance of preferred stock, the procedures required for director nominations and stockholder proposals, our collaboration agreement with AstraZeneca and Delaware law could have the effect of delaying, deferring or preventing a change in control of us, including, without limitation, discouraging a proxy contest or making more difficult the

acquisition of a substantial block of our common stock. The provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock.

We face product liability risks and may not be able to obtain adequate insurance, and if we are held liable for an uninsured claim or a claim in excess of our insurance limits, our business, financial condition and results of operations may be harmed.

The use of any of our product candidates, or of any products manufactured in our facility, in clinical trials, and the sale of any approved products, may expose us to liability claims resulting from such use or sale. Consumers, healthcare providers, pharmaceutical companies or others selling such products might make claims of this kind. We may experience financial losses in the future due to product liability claims. We have obtained limited product liability insurance coverage for our clinical trials and production services activities, under which the coverage limits are $15.0 million per occurrence and $15.0 million in the aggregate. We may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. If third parties bring a successful product liability claim or series of claims against us for uninsured liabilities or in excess of insured liabilities, our business, financial condition and results of operations may be materially harmed.

Our operations involve hazardous materials, and we could be held responsible for any damages caused by such materials.

Our research and manufacturing activities involve the controlled use of hazardous materials. In addition, although we maintain insurance for harm to employees and to our facilities caused by hazardous materials, we do not insure against any other harm (including harm to the environment) caused by the use of hazardous materials on our premises. We cannot eliminate the risk of accidental contamination or injury from these materials. In the event of an accident or environmental discharge, we may be held liable for any resulting damages, which may exceed our financial resources and may materially harm our business, financial condition and results of operations.

We do not intend to pay cash dividends on our common stock.

We intend to retain any future earnings to finance the growth and development of our business and we do not plan to pay cash dividends on our common stock in the foreseeable future.

Our stock price is highly volatile, and you may not be able to sell your shares of our common stock at a price greater than or equal to the price you paid for them.

The market price and trading volume of our common stock are volatile, and we expect such volatility to continue for the foreseeable future. For example, during the period between December 31, 2002 and December 31, 2003, our common stock closed as high as $16.58 per share and as low as $4.58 per share. This may impact your decision to buy or sell our common stock. Factors affecting our stock price include:

- our financial results;
- fluctuations in our operating results;
- announcements of technological innovations or new commercial therapeutic products by us or our competitors;
- published reports by securities analysts;
- developments in our clinical trials and in clinical trials for potentially competitive product candidates;
- government regulation;

- changes in reimbursement policies;
- developments in patent or other proprietary rights;
- announcements that we have entered into new collaboration, licensing or similar arrangements with new collaborators, or amendments of the terms of our existing collaborations;
- developments in our relationship with customers;
- public concern as to the safety and efficacy of our products; and
- general market conditions.

If we were deemed to be an investment company, we would become subject to provisions of the Investment Company Act that likely would have a material adverse impact on our business.

A company is required to register as an investment company under the Investment Company Act of 1940, or the 1940 Act, if, among other things, and subject to various exceptions:

- it is or holds itself out to be engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting or trading in securities; or
- it is engaged or proposes to engage in the business of investing, reinvesting, owning, holding or trading in securities, and owns or proposes to acquire investment securities having a value exceeding 40 percent of the value of such company's total assets (exclusive of Government securities and cash items) on an unconsolidated basis.

A major portion of our assets has been invested in investment grade interest-bearing securities. Such investments could in some circumstances require us to register as an investment company under the 1940 Act. Registration under the 1940 Act, or a determination that we failed to register when required to do so, could have a material adverse impact on us. We believe that we are and will remain exempt from the registration requirements, but absent interpretation by the courts or the SEC of the relevant exemption as applied to companies engaged in research and development, this result cannot be assured. In addition, a change in our allocation of assets on account of 1940 Act concerns could reduce the rate of return on our liquid assets.

Available Information

Our Internet address is *http://www.abgenix.com*. We make available free of charge on or through our Internet website our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Other than the information expressly set forth in this annual report, the information contained, or referred to, on our website is not incorporated into this annual report.

Item 2. Properties

We currently lease approximately 516,000 square feet of office, laboratory and manufacturing facilities in Fremont, California and British Columbia, Canada. Our leases expire in the years 2010 through 2015 and each includes an option to extend, other than the leases for our facilities in Canada. We believe that our current facilities are adequate for our needs for the foreseeable future and that, should it be needed, suitable additional space will be available to accommodate expansion of our operations on commercially reasonable terms.

Item 3. Legal Proceedings

The Company is involved from time to time in ordinary and routine litigation in connection with its business. We do not believe that there is any pending litigation in which we are involved or threatened claim against us that will materially harm, our business, financial condition or results of operations.

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

No matters were submitted to a vote of the Company's stockholders, either through the solicitation of proxies or otherwise, during the quarter ended December 31, 2003.

PART II

Item 5. Market for Registrant's Common Equity and Related Stockholder Matters

Price Range of Common Stock

Our common stock trades on the Nasdaq National Market under the symbol "ABGX." The following table lists quarterly information on the price range of our common stock based on the high and low reported closing prices for our common stock as reported on the Nasdaq National Market for the periods indicated below. These prices do not include retail markups, markdowns or commissions. As of February 29, 2004, there were 224 holders of record of our common stock

	High	Low
Fiscal 2002:		
First Quarter	$32.82	$18.05
Second Quarter	18.98	9.32
Third Quarter	10.21	5.79
Fourth Quarter	9.62	5.99
Fiscal 2003:		
First Quarter	$ 8.86	$ 4.58
Second Quarter	12.28	7.80
Third Quarter	16.58	10.36
Fourth Quarter	15.05	10.56

Recent Sales of Unregistered Securities

During the fourth quarter ended December 31, 2003, we issued the following unregistered securities.

On October 29, 2003, we issued in a private placement to AstraZeneca $50.0 million of Series A-1 and $50.0 million of Series A-2 convertible preferred stock, which mature seven and ten years, respectively, from the date of issuance. We received net proceeds of approximately $99.7 million from the sale of securities.

Pursuant to its terms, the Series A-2 preferred stock was redeemed at the option of AstraZeneca on February 19, 2004 and the Company issued AstraZeneca a convertible subordinated note with a principal amount of $50.0 million, which matures ten years from the initial issuance of the Series A-2 convertible preferred stock.

Subject to certain conditions, we can convert the Series A-1 preferred stock and can convert the convertible note into shares of common stock at a conversion price equal to the lower of (a) the average market price for the 10 days prior to the trading day immediately preceding the conversion date (provided that the average market price shall in no event be higher than 101% of the market price

on the trading day immediately preceding the conversion date) or (b) $30.00 per share. AstraZeneca may convert the preferred stock and the convertible note into shares of common stock at a conversion price of $30.00 per share, at any time prior to the earlier of (a) the redemption date or (b) the maturity date, as applicable. See Note 9 to the Consolidated Financial Statements for more information about the conversion and other rights of our Series A-1 preferred stock and the convertible note issued to AstraZeneca.

The offer and sale of securities in the transaction described above was deemed to be exempt from registration under the Securities Act in reliance upon Section 4(2) of the Securities Act and Regulation D promulgated thereunder, as a transaction by an issuer not involving any public offering. In addition, appropriate legends were affixed to the securities issued in the transaction described above.

Item 6. Selected Consolidated Financial Data

	Year Ended December 31,				
	2003	2002	2001	2000	1999
	(in thousands, except per share data)				
Consolidated Statement of Operations Data:					
Revenues:					
Contract revenue	$ 16,852	$ 19,293	$ 34,064	$ 26,601	$ 12,285
Operating expenses:					
Research and development	99,602	128,494	96,234	50,137	21,106
Manufacturing start-up costs	72,473	—	—	—	—
Amortization of intangible assets, related to research and development	7,190	7,251	8,602	3,992	—
General and administrative	30,209	31,625	19,367	8,859	5,164
Restructuring charges	—	1,751	—	—	—
In-process research and development charge	—	—	—	5,215	—
Non-recurring termination fee	—	—	—	—	8,667
Total operating expenses	209,474	169,121	124,203	68,203	34,937
Loss from operations	(192,622)	(149,828)	(90,139)	(41,602)	(22,652)
Other income (expenses):					
Interest and other income	9,953	20,145	29,542	32,848	3,045
Interest expense	(5,784)	(4,830)	(259)	(39)	(438)
Impairment of investments	(7,892)	(74,385)	—	—	—
Equity in income of investment	—	—	—	—	546
Total other income (expenses)	(3,723)	(59,070)	29,283	32,809	3,153
Loss from operations before income tax expense	(196,345)	(208,898)	(60,856)	(8,793)	(19,499)
Foreign income tax expense	84	—	—	—	1,000
Net loss	$(196,429)	$(208,898)	$(60,856)	$ (8,793)	$(20,499)
Basic and diluted net loss per share	$ (2.23)	$ (2.39)	$ (0.71)	$ (0.11)	$ (0.35)
Shares used in computing basic and diluted net loss per share	87,930	87,237	86,111	80,076	58,148

	December 31,				
	2003	2002	2001	2000	1999
	(in thousands)				
Consolidated Balance Sheet Data*:					
Cash, cash equivalents and marketable securities	$ 347,763	$ 396,549	$ 493,733	$692,884	$ 56,908
Working capital	304,292	381,790	470,810	621,481	56,112
Total assets	780,193	841,997	837,876	936,800	148,541
Long-term debt, less current portion	200,000	200,000	—	—	421
Redeemable convertible preferred stock	99,737	—	—	—	—
Accumulated deficit	(564,776)	(368,347)	(159,449)	(98,593)	(89,800)
Total stockholders' equity	413,016	601,639	790,970	839,675	137,060

* Certain prior-year balances have been reclassified to conform to the current-year presentation.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements based upon current expectations that involve risks and uncertainties. When used in this annual report on Form 10-K, the words "intend," "anticipate," "believe," "estimate," "plan" and "expect" and similar expressions as they relate to Abgenix are included to identify forward-looking statements. Our actual results and the timing of certain events could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth below and under "Additional Factors that Might Affect Future Results" set forth in Item 1 of Part I of this annual report on Form 10-K and elsewhere in this annual report on Form 10-K.

Overview

The following Management's Discussion and Analysis of Financial Condition and Results of Operations is intended to help the reader understand our company.

Our Business

We are a biopharmaceutical company that is focused on the discovery, development and manufacture of human therapeutic antibodies for the treatment of a variety of diseases. We intend to use our proprietary technologies to build a large and diversified product portfolio that we expect to develop and commercialize largely through joint development and commercialization arrangements with pharmaceutical companies and others.

We are co-developing our most advanced proprietary product candidate, ABX-EGF, with Immunex. ABX-EGF is in pivotal trials, and we have two product candidates in early stage clinical trials. In addition, we have entered into a variety of contractual arrangements with pharmaceutical, biotechnology and genomics companies involving our technologies. We use our closely integrated process sciences and manufacturing capabilities for the manufacture of our own proprietary product candidates and also offer these services to our collaborators and others.

We intend to enter into co-development agreements, in addition to our agreement for ABX-EGF. We generally expect to self-fund preclinical and clinical activities to determine preliminary safety and efficacy before entering into joint development and commercialization agreements. In some cases we may conduct product development entirely on our own. We have begun to implement our collaboration strategy through co-development arrangements with companies such as Chugai, U3 and Dendreon, and through a broad collaboration in oncology with AstraZeneca. Our strategy is designed to diversify the risks associated with our research and development spending, and to continue to focus our activities on product development and commercialization.

Under our collaboration with AstraZeneca, we are obligated to provide preclinical and clinical research support for the development of up to 36 product candidates by AstraZeneca, and have an opportunity to co-develop products with AstraZeneca.

Our Financial Position and Liquidity

We derive our revenues from our technology out-licensing contracts, our proprietary product development agreements, our target sourcing contracts and our production services contracts. We expect that substantially all of our revenues for the foreseeable future will result from payments under these and similar arrangements and that payments we receive under these arrangements will continue to be subject to significant fluctuation in both timing and amount.

We have incurred and expect to continue to incur substantial expenses in connection with our product development activities, both under contractual arrangements with third parties and related to our independent research and development efforts. Regulatory and business factors will require us to

expend substantial funds in the course of completing required additional development, preclinical testing and clinical trials of, and attaining regulatory approvals for, product candidates. The amounts of the expenditures that will be necessary to execute our business plan are subject to numerous uncertainties that may adversely affect our liquidity and capital resources.

We have incurred net losses since we were organized as an independent company, including a net loss of $196.4 million in 2003. We expect to incur additional losses for the foreseeable future as a result of our research and development costs and manufacturing start-up costs, including costs associated with conducting preclinical development and clinical trials, and charges related to purchases of technology or other assets. We expect that the amount of our operating losses will fluctuate significantly from quarter to quarter.

At December 31, 2003, we had cash, cash equivalents and marketable securities of $347.8 million. The amounts of the expenditures that will be necessary to execute our business plan are subject to numerous uncertainties that may adversely affect our liquidity and capital resources to a significant extent. We plan to continue to make significant expenditures to establish, staff and operate our own manufacturing facility and support our research and development activities, including preclinical product development and clinical trials. We expect that these activities will substantially increase our operating expenses over the next few years in comparison to prior periods.

Results of Operations

Years Ended December 31, 2003, 2002 and 2001

Contract Revenues

Contract revenues totaled $16.8 million, $19.3 million and $34.1 million in 2003, 2002 and 2001, respectively. Because they depend to a large extent on the success or failure of research and development efforts undertaken by our collaborators and licensees, our year-to-year contract revenues can fluctuate significantly and are inherently difficult to predict.

The primary components of contract revenues for all periods were as follows:

- Technology Licensing

  We recognized a total of $11.8 million, $14.1 million and $19.0 million in 2003, 2002 and 2001, respectively, from licensing our proprietary technologies. Revenues consisted primarily of the following:

  - Chugai Pharmaceutical Co. Ltd.—In 2003, we recognized $3.1 million under an agreement with Chugai in which we exclusively licensed to Chugai rights under patent applications and patents held by us related to methods of treatment of certain diseases with an antibody.
  - Celltech R&D Ltd.—In each of 2002 and 2001, we recognized $8.4 million under an agreement with Celltech in which we granted a license of our SLAM technology. We received payments totaling $16.8 million in the fourth quarter of 2001 representing a research license fee and service fees for the transfer of technology, net of $0.2 million in shared closing costs. We recognized these fees over the six-month period ended March 31, 2002, during which we fulfilled our obligations to provide Celltech with the applicable protocols, technical information, and training to enable Celltech to effectively utilize the SLAM technology.
  - Additionally, in 2003, 2002 and 2001 we recognized various fees, such as research license and service fees, product license fees, product development and research milestone payments, and option fees, under agreements related to the licensing of our XenoMouse

technology. These revenues were generated from several collaborators, but were primarily from Pfizer, Amgen and CuraGen.

- Proprietary Product Development

We recognized a total of $3.8 million, $5.2 million and $15.1 million in 2003, 2002 and 2001, respectively, pursuant to our joint development and commercialization agreements for the development of ABX-EGF and ABX-CBL. In 2003, 2002 and 2001, these revenues included reimbursement of development costs. In 2001, these revenues also included milestone and license fees. The license fees were recognized ratably over the contractual performance periods. Under the ABX-EGF agreement, this was the 17-month period ended December 31, 2001. Under the ABX-CBL agreement, this was the 6-month period ended January 31, 2001. Revenue decreased in 2003 as compared to 2002 primarily due to a decrease in reimbursement of development costs as our collaborator's cost exceeded our cost for the development of ABX-EGF. In addition, we and SangStat discontinued the development of the ABX-CBL program, which resulted in the reduction of development costs related to reimbursements. Revenue decreased in 2002 as compared to 2001 because in 2001 the revenue included milestone and license fees.

- Production Services

We recognized a total of $1.2 million in 2003 for production services. In 2002 and 2001 we did not recognize any revenues from our production services. In 2003, these revenues consisted primarily of process sciences services and were generated from our manufacturing contract with CuraGen.

Research and Development Expenses

Research and development expenses decreased to $99.6 million in 2003 from $128.5 million in 2002 and increased from $96.2 million in 2001. The major components of research and development expenses for 2003, 2002 and 2001 were as follows:

Research and Development:

	December 31,		
	2003	2002	2001
		(in thousands)	
Product development	$62,208	$ 85,115	$78,950
Research	32,585	38,546	16,511
In-licensing	4,809	4,833	773
Total research and development costs	$99,602	$128,494	$96,234

Product development costs include costs of preclinical development, cell line development and conducting clinical trials. Additionally, 2003 product development includes costs related to cell line development activities we perform under our production services contracts. The primary components of product development include the costs of Abgenix personnel, drug supply costs, research fees charged by outside contractors, co-development costs, and facility expenses including depreciation. In 2003, our product development costs decreased in comparison to 2002. Costs for ABX-EGF increased significantly in 2003, however, offsetting this increase were decreases that were primarily related to discontinuing the development of ABX-IL8 and ABX-CBL, as well as decreases in costs for ABX-MA1, ABX-PTH and other pipeline product candidates. Product development costs can vary from period to period significantly depending on the progress of the development cycle. Overall, we expect costs associated with product development in 2004 to be higher than 2003 as we and our

co-developer Immunex initiate new trials and add patients to our existing ABX-EGF clinical trials. In 2002, our product development costs increased primarily due to activities related to ABX-EGF, ABX-PTH and other product candidates such as an antibody to the complement protein properdin. These increases were offset partially by decreases in costs of developing ABX-IL8 and ABX-CBL.

Research costs include costs associated with research, and testing of antibodies we generate, whether for ourselves or for our customers, prior to the development stage, which begins with the commencement of preclinical activities. Research costs also include the costs of research relating to proprietary technologies, including enhancements to those technologies. The primary components of research costs include the costs of Abgenix personnel, facilities, including depreciation, and lab supplies. Beginning in October of 2002, we implemented a restructuring of our operations and reduced many of our research and testing activities including those related to new target validation. As a result, our research costs decreased in 2003 as compared to 2002. The increase in research costs in 2002 as compared to 2001 was due to an increase in the level of research activities, including activities related to new target validation and bioinformatics and an increase in the number of targets being tested, including those under our collaborations.

In-licensing costs include costs to acquire licenses to develop and commercialize various technologies and molecules. The largest component of this cost in 2003 and 2002 was related to licenses and research funding for the development of therapeutic antibodies to the complement protein properdin, which we licensed from Gliatech Inc. In 2003, we decided to discontinue the development of properdin and as a result we recorded an impairment charge of $1.4 million for previously capitalized costs and $600,000 of other related costs related to the license to develop and commercialize properdin. Overall, we expect in-licensing costs in 2004 to decrease compared to 2003 due to a reduction in costs associated with the properdin license.

Major components of research and development costs for 2003 and 2002 were as follows:

- Costs of Abgenix Personnel—Costs of Abgenix personnel to support research and development activities decreased 21% in 2003 from 2002 and increased 59% in 2002 from 2001. The decrease in 2003 was a result of our restructuring plan implemented in October 2002, which resulted in an approximately 15% reduction in total employees overall. We were able to support a reduced workforce in 2003 due to discontinuing the development of ABX-IL8 and ABX-CBL and because our co-developer has taken over responsibility for many new development activities for the development of ABX-EGF. Personnel costs primarily include salary, fringe benefits, recruiting and relocation costs. The increase in 2002 compared to 2001 was due to increased personnel costs for process sciences and preclinical research.
- Consulting and Outside Contractors—Costs of consulting and outside contractors to support research and development activities decreased 68% in 2003 as compared to 2002 and increased 18% in 2002 as compared to 2001. The decrease in 2003 was primarily due to a reduction of activities performed by outside contractors related to the development of cell lines for our product candidates. In 2002, the increase was primarily associated with the activities related to the development of ABX-PTH and the development of an antibody to the complement protein properdin.
- Clinical Research Fees—Clinical research fees including clinical investigator site fees, monitoring costs, and data management costs decreased 10% in 2003 as compared to 2002 and 72% in 2002 as compared to 2001. The decrease in both years was primarily due to the decrease in clinical trials being conducted for ABX-IL8 and ABX-CBL. In 2003, the decrease was partially offset by the increased clinical trial activities for ABX-EGF.
- Drug Supply Costs—Drug supply costs decreased 38% in 2003 compared to 2002 and increased by 70% in 2002 as compared to 2001. The decrease in 2003 was primarily due to discontinuing

the clinical trials related to ABX-IL8 and ABX-CBL. In 2002, as a result of our decision to wind down our clinical trials of ABX-IL8, we recorded a charge of $6.7 million relating to clinical trial supplies that we had previously capitalized. Also 2002, included drug supply costs for ABX-MA1 and ABX-PTH.

- Co-development costs—Co-development costs, which primarily consist of reimbursement to Immunex for our share of ABX-EGF development costs, increased 226% in 2003 compared to 2002 and 593% in 2002 as compared to 2001. The increases in both years were primarily related to co-development cost sharing associated with the development of ABX-EGF performed by Immunex. In 2003, the increase was also due to the increased activities for clinical trials and the further development of ABX-EGF.

The clinical trial status of product candidates included in product development costs is as follows as of December 31 for each of the years indicated:

Proprietary Product Candidate	Indication	Clinical Trial Status as of 12/31: 2003	2002	2001
ABX-EGF (panitumumab)	Various cancers	Phase 1	Phase 1	Phase 1
	Renal cell cancer	Phase 2	Phase 2	Phase 2
	Non-small cell lung cancer	Phase 2[1]	Phase 2[1]	Phase 2[1]
	Colorectal cancer	Phase 2[1]	Phase 2[1]	Phase 2[1]
	Colorectal cancer (with chemotherapy)	Phase 2[1]	Phase 2[1]	Phase 2[1]
	Prostate cancer	Phase 2	Phase 2	Phase 2
	Colorectal cancer (outside the US)	Pivotal[1]		
	Colorectal cancer	Pivotal[1]		
ABX-MA1	Metastatic melanoma	Phase 1	Phase 1	Phase 1
ABX-PTH	Secondary hyperparathyroidism	Phase 1		
ABX-IL8[2]	Chronic obstructive pulmonary disease		Phase 2	Phase 2
	Psoriasis			Phase 2
	Metastatic melanoma			Phase 1
ABX-CBL[2]	Graft versus host disease		Phase 2/3	Phase 2/3

(1) Clinical trial managed by Immunex.

(2) We have discontinued development of this product candidate.

Manufacturing Start-up Costs

Manufacturing start-costs were $72.5 million in 2003. We began manufacturing antibody therapeutic candidates in portions of our manufacturing facility in the second quarter of 2003, at which time we began to depreciate the portions of the facility that were placed into service. Manufacturing start-up costs include certain costs associated with our new manufacturing facility, including depreciation, outside contractor costs and personnel costs for activities such as quality assurance and quality control. The primary component of this cost in 2003 was a cancellation fee of approximately $28.0 million expensed in June 2003 for the negotiated cancellation of an agreement with an outside contractor, Lonza. Effective June 30, 2003, we canceled our November 2000 agreement with Lonza for the exclusive use of a cell culture production suite because we determined that with the opening of our own manufacturing facility we no longer needed access to the Lonza facility. We expect the facility to be under-utilized in 2004 and therefore manufacturing start-up costs will continue in 2004. However, we expect manufacturing start-up costs to decrease in 2004 compared to 2003 as a result of expensing the Lonza cancellation fee in 2003 and the utilization of the facility in 2004 for the manufacture of ABX-EGF and potentially other product candidates under production services agreements.

Goodwill and Amortization of Identified Intangible Assets

Our identified intangible assets consist primarily of existing technology (including patents and certain royalty rights) we acquired through the acquisitions of Hesed Biomed in 2001, Abgenix Biopharma and IntraImmune in 2000, and JT America's interest in Xenotech in 1999. Amortization of intangible assets totaled $7.2 million, $7.3 million and $8.6 million in 2003, 2002 and 2001, respectively. Beginning January 1, 2002, upon our adoption of Statement of Financial Accounting Standards (SFAS) No. 141, "Business Combinations" and No. 142, "Goodwill and Other Intangible Assets," we no longer amortize goodwill. Instead, we will perform impairment tests annually, or earlier if indications of impairment exist. We conducted an initial test for impairment of our goodwill in 2002 and an annual impairment test in 2003 and 2002, and concluded that no impairment charge was required. The amortization of goodwill was $2.5 million in 2001. All other intangible assets will continue to be amortized over their estimated useful lives. The decrease in amortization in 2002 from 2001 was a result of ceasing to amortize goodwill, partially offset by the full year's amortization of the new technology acquired in the Hesed Biomed acquisition.

General and Administrative Expenses

General and administrative expenses include compensation, professional services, consulting and other expenses related to information systems, legal, finance, and an allocation of facility costs. General and administrative expenses totaled $30.2 million in 2003, $31.6 million in 2002 and $19.4 million in 2001. The decrease in 2003 as compared to 2002 was primarily due to a decrease in consulting services related to the implementation of our new information systems in 2002 and in legal costs due to the timing of activities related to securities filings, financing activities, licensing and other contractual matters, partially offset by a charge of $2.1 million in 2003 due to the sublease of one of our facilities for less than our obligation under the lease. The primary reason for the increase in 2002 as compared to 2001, was the increase in consulting and personnel expenses related to our information systems, including the implementation of a new enterprise resource planning system. Another significant reason for the increase was the depreciation expense related to the enterprise resource planning system, which was placed into service at the beginning of the third quarter of 2002.

Restructuring Charges

In October 2002, we announced a restructuring plan, which consisted primarily of a 15% reduction in employees. A restructuring charge of $1.8 million was recorded in 2002 to account for severance, medical and other benefits associated with this restructuring. Of the $1.8 million, $0.7 million was paid in 2002 and the remainder in 2003.

Interest and Other Income

Interest and other income consist primarily of interest from cash, cash equivalents and marketable securities. Interest and other income totaled $10.0 million in 2003, $20.1 million in 2002 and $29.5 million in 2001. The decreases were due to lower interest rates and lower average investment balances.

Interest Expense

Interest expense was related to interest and amortization of issuance costs on our convertible subordinated notes due 2007, and interest on our equipment leaseline financing and loan facility. Interest expense increased to $5.8 million in 2003 from $4.8 million in 2002 and $259,000 in 2001. The interest expense increase in 2003 and 2002 was primarily due to the $200.0 million of convertible notes we issued in March 2002, which accrues interest at an annual rate of 3.5%, payable semi-annually. Interest expense in the amount of $2.5 million and $1.9 million related to the convertible debt was

capitalized in 2003 and 2002, respectively. Capitalized interest decreased in the third and fourth quarters of 2003 because we placed into service a portion of our manufacturing facility in 2003. For each future annual period, we expect to pay and record expense of approximately $7.0 million of interest related to our convertible debt until the debt matures, until we redeem or repurchase the debt or until all or part of the debt is converted into shares of our common stock.

Impairment of Investments

In 2001, we invested $15.0 million in equity securities of MDS Proteomics, a privately held company, in connection with our collaboration with that company. As of December 31, 2003 and June 30, 2002, we determined that an impairment of our investment had occurred and estimated that the value of our investment had declined to zero and $7.9 million, respectively. Accordingly, we recorded impairment charges of $7.9 and $7.1 million, respectively, in the fourth quarter of 2003 and second quarter of 2002. The amount of the charge was based on the difference between the estimated value as determined by our management and our revised or original cost basis. At December 31, 2002, the investment was recorded in long term investments on the balance sheet.

We purchased an aggregate amount of $80.0 million of common stock of CuraGen and ImmunoGen as strategic investments at various times in 1999 and 2000. In 2002, declines in the fair value of the CuraGen and ImmunoGen common stock were deemed to be other than temporary. Accordingly, we recorded a total impairment charge of $67.3 million for the year ended December 31, 2002. As of December 31, 2003, these investments were recorded at fair value in long-term investments on the balance sheet, and the net unrealized holding gain of $8.0 million is included as a component of stockholders' equity. If we deem these investments further impaired at the end of any future period, we may incur an additional impairment charge on these investments.

Foreign Income Tax Expense

Foreign income tax expense was recorded reflecting an income tax provision on foreign contract research projects of approximately $84,000 in the year ended December 31, 2003.

Liquidity and Capital Resources

At December 31, 2003, we had cash, cash equivalents and marketable securities of $347.8 million. We invest our cash equivalents and marketable securities primarily in highly liquid, interest bearing, investment grade and government securities in order to preserve principal. We have also invested in certain marketable equity securities of ImmunoGen and CuraGen for strategic reasons. These securities had a fair value of $20.7 million at December 31, 2003.

Cash Used in Operating Activities. Net cash used in operating activities was $118.2 million, $118.7 million and $26.0 million in 2003, 2002 and 2001, respectively. This reflects a decrease of $0.5 million in 2003 and an increase of $92.7 million in 2002. The major components of the changes in cash used in operating activities were primarily the following:

- A decrease of $37.1 million and an increase of $29.1 million in 2003 and 2002, respectively, in funding of research and development costs, net of depreciation and an impairment charge related to an identified intangible asset.
- An increase of $34.2 million in 2003 in manufacturing costs, net of the Lonza contract cancellation fee of $28.0 million and depreciation.
- A payment of approximately $7.0 million on the Lonza cancellation obligation in September 2003.

- A decrease of $1.7 million in 2003 and an increase of $8.8 million in 2002 in general and administrative expenses. The decrease in 2003 as compared to 2002 was primarily due to a decrease in consulting services related to the implementation of our new information systems in 2002 and in legal costs due to the timing of activities related to securities filings, financing activities, licensing and other contractual matters, partially offset by a charge of $2.1 million due to the sublease of one of our facilities for less than our obligation under the lease. The increase in 2002 as compared to 2001 was primarily related to the increase in consulting and personnel expenses related to our information systems, including the implementation of a new enterprise resource planning system.
- An increase of $13.0 million and a decrease of $27.0 million in 2003 and 2002, respectively, in customer payments. Both the increase in 2003 and the decrease in 2002 were affected by the timing of payments received under our contracts.
- A decrease of $12.9 million and $13.6 million in 2003 and 2002, respectively, in cash from interest income, primarily due to lower interest rates and lower average cash balances.
- An increase of $4.3 million and $17.0 million in 2003 and 2002, respectively, in vendor and other payments, which reduced the combined total of accounts payable and accrued liabilities.
- A decrease of $6.0 million and $0.4 million in 2003 and 2002, respectively, in the changes in prepaid expenses and other current assets primarily related to the decrease in the carrying value of clinical trial suppliers.

Cash Provided by (Used in) Investing Activities. Net cash used in investing activities was $173.5 million and $45.8 million in 2003 and 2001, respectively. Net cash provided by investing activities was $30.5 million in 2002. Cash was provided by and used in investing activities primarily as follows:

- Capital expenditures of $30.5 million, $170.9 million and $73.2 million in 2003, 2002 and 2001, respectively. The investments in 2003 and 2002 reflect primarily investment in construction in progress and equipment for our new manufacturing facility. The investments in 2002 as well as primarily in 2001 reflect investment in leasehold improvements in our new office facility and process science laboratory and investments in computer hardware and software, including the acquisition of a new enterprise resource planning system. Over the next year, we estimate that we will spend approximately $20.0 - $25.0 million on leasehold improvements, equipment, computer hardware and software for our new manufacturing facility and our research and development facilities.
- Purchases, net of maturities and sales, of marketable securities of $143.0 million in 2003 and maturities and sales, net of purchases, of marketable securities of $204.5 million and $136.3 million in 2002 and 2001, respectively.
- Payments of $0.3 million and $72.8 million in 2002 and 2001, respectively, on account of liabilities related to acquisitions. In 2002, the amount was primarily related to payments to the holders of Abgenix Biopharma special shares. In 2001, the amount included $68.1 million to the holders of Abgenix Biopharma special shares and $4.7 million for the buy-out of certain stock options issued in connection with our acquisition of Abgenix Biopharma in November 2000.
- Investments of $2.8 million and $14.0 million in 2002 and 2001, respectively, as the initial and final disbursements under a loan agreement entered into in August 2001.
- Investment of $15.0 million in equity securities of MDS Proteomics Inc. in 2001.

Cash Provided by Financing Activities. Net cash provided by financing activities was $102.8 million, $196.5 million and $4.3 million in 2003, 2002 and 2001, respectively. In 2003, cash provided by financing activities included $99.7 million net proceeds from our issuance of series A-1 and A-2

redeemable convertible preferred stock, as described below. In 2002, cash provided by financing activities included of $194.0 million net proceeds from our issuance of convertible subordinated notes, as described below. In 2003, 2002 and 2001 we received proceeds of $3.1 million, $2.5 million and $4.6 million, respectively from the exercise of stock options and the issuance of stock under our employee stock purchase plan.

In October 2003, in connection with a collaboration agreement, we entered into a securities purchase agreement with AstraZeneca. Pursuant to the agreement, we issued to AstraZeneca $50.0 million of Series A-1 and $50.0 million of Series A-2 convertible preferred stock which mature 7 and 10-years, respectively, from the date of issuance. The net proceeds from the securities were $99.7 million. Due to the redemption feature, we do not record the redeemable convertible preferred stock in stockholders' equity on our consolidated balance sheet. Pursuant to its terms, the Series A-2 preferred stock was redeemed at the option of AstraZeneca in February 2004 and we issued AstraZeneca a convertible subordinated note with a principal amount of $50.0 million, which matures on October 29, 2013. No interest is payable on the note except in the event of a payment default by us. Subject to various terms and conditions, if a certain milestone event is reached, we will have the option to issue to AstraZeneca up to $30.0 million of Series A-3 preferred stock and if a further milestone event is reached, we will have the option to issue to AstraZeneca up to $30.0 million of Series A-4 preferred stock. Each of the Series A-3 preferred stock and the Series A-4 preferred stock will have a maturity date that is five years from issuance.

Subject to certain conditions, we can convert each series of preferred stock and can convert the convertible subordinated note into shares of our common stock at a conversion price equal to the lower of (a) the average market price for the 10 days prior to the trading day immediately preceding the conversion date (provided that the average market price shall in no event be higher than 101% of the market price on the trading day immediately preceding the conversion date) or (b) $30.00 per share. AstraZeneca may convert each series of preferred stock and the convertible subordinated note into shares of common stock at a conversion price of $30.00 per share, at any time prior to the earlier of (a) the redemption date or (b) the maturity date, as applicable. We must redeem all outstanding shares of the Series A-1 preferred stock, if any, at a cash redemption price per share equal to the liquidation preference by October 29, 2010, the mandatory redemption date. The note matures on October 29, 2013, if still outstanding. In addition, we can, upon at least 15 days' notice to the holder, redeem the shares of Series A-1 preferred stock and the convertible subordinated note for cash in an amount equal to its liquidation preference or face amount, as the case may be, at any time prior to maturity of the instrument. In addition to the mandatory redemption and maturity dates of these securities, certain events can give rise to an earlier redemption. In certain circumstances, we have certain rights to convert the securities into common stock instead of redeeming the securities for cash. See Note 9 to the financial statements for a full description of the conversion, redemption, and liquidation rights.

In March 2002, we issued $200.0 million principal amount of convertible subordinated notes in a private placement. The notes are convertible into shares of our common stock at a conversion price of $27.58 per share subject to certain adjustments. The notes accrue interest at an annual rate of 3.5% and we are obligated to pay interest on March 15 and September 15 of each year. The notes will mature on March 15, 2007 and are redeemable at our option on or after March 20, 2005, or earlier if the price of our common stock exceeds specified levels. In addition, the holders of the notes may require us to repurchase the notes if we undergo a change in control. Proceeds from the sale of the notes, net of commissions payable to the initial purchasers of the notes but before subtracting other offering expenses payable by us, were $194.0 million.

In March 2000 and February 2001, we obtained stand-by letters of credit for $2.0 million and $3.0 million, respectively, from a commercial bank as security for our obligations under two facility leases. These were increased in January 2002 to $2.5 and $3.2 million, respectively, in connection with amendments to our facility leases. In December 2003, the $3.2 million stand-by letter of credit

increased to $3.5 million. The outstanding stand-by letters of credit are secured by an investment account, in which we must maintain a balance of approximately $7.0 million.

Financing Uncertainties Related to Our Business Plan. We plan to continue to make significant expenditures to establish, staff and operate our own manufacturing facility and support our research and development activities, including preclinical product development and clinical trials. We also intend to look for opportunities to acquire new technology through in-licensing, collaborations or acquisitions. Over the next year, we estimate that we will spend approximately $20.0 - $25.0 million on leasehold improvements, equipment, computer hardware and software for our new manufacturing and our research and development facilities. Additionally, we may spend additional amounts to support new production services contracts.

We currently intend to use our available cash on hand to finance these projects and business developments, but we might also pursue other financing alternatives, such as equity or equity-related financing, a bank line of credit, sale-lease back financing, funding by one or more collaborators or a mortgage financing, that may become available to us. Whether we use cash on hand or choose to obtain financing will depend on, among other things, the future success of our business, the prevailing interest rate environment and the condition of financial markets generally.

The amounts of the expenditures that will be necessary to execute our business plan are subject to numerous uncertainties that may adversely affect our liquidity and capital resources to a significant extent. As of December 31, 2003, three of our proprietary product candidates, ABX-EGF, ABX-MA1 and ABX-PTH were in various stages of clinical trials. The clinical trials of ABX-EGF, ABX-MA1 and ABX-PTH are expected to require significant expenditures in the foreseeable future. In October 2003, we entered into an amendment of our joint development and commercialization agreement with Immunex for the co-development of ABX-EGF. Under the agreement, Immunex is obligated to make available up to $60.0 million in advances that we may use to fund a portion of our share of development and commercialization costs after we have contributed $20.0 million toward development costs in 2004. Completion of clinical trials may take several years or more, but the length of time generally varies substantially according to the type, complexity, novelty and intended use of a product candidate. We estimate that clinical trials of the type we generally conduct are typically completed over the following timelines:

Clinical Phase	Estimated Completion Period
Phase 1	1-2 Years
Phase 2	1-2 Years
Phase 3	2-4 Years

However, the duration and the cost of clinical trials may vary significantly over the life of a project as a result of differences arising during the clinical trials, including, among others, the following:

- the number of patients that ultimately participate in the trial;
- the duration of patient follow-up that seems appropriate in view of the results;
- the number of clinical sites included in the trials; and
- the length of time required to enroll suitable patient subjects.

We test our potential product candidates in numerous preclinical studies to identify disease indications for which they may be product candidates. We may conduct multiple clinical trials on our own or with our collaborators to cover a variety of indications for each product candidate. As we obtain results from trials, we may elect to discontinue clinical trials for certain product candidates or for one or more indications for a given product candidate in order to focus our resources on more

promising product candidates or indications. For example, in January 2002 and May 2002, we announced that clinical trials of our proprietary product candidate ABX-IL8 as a treatment for rheumatoid arthritis and psoriasis, respectively, did not support further clinical studies of that product candidate. Additionally in February 2003, we announced that the clinical trial of our proprietary product candidate ABX-CBL as a treatment for graft versus host disease, did not support further clinical studies of that product candidate.

An important element of our business strategy is to pursue the research and development of a diverse range of product candidates for a variety of disease indications. We may enter co-development agreements, similar to our agreement with Immunex for ABX-EGF, and may enter into additional joint development agreements earlier in the development life cycle of product candidates than we did in our existing co-development agreements. We have begun to implement our collaboration strategy through co-development arrangements with companies such as Chugai, U3 and Dendreon. Our strategy is designed to diversify the risks associated with our research and development spending. The decisions to terminate or wind down our clinical programs for developing ABX-IL8 and ABX-CBL have reduced the diversity of our product portfolio. We believe that this effect is temporary in view of the number and diversity of potential product candidates we have in preclinical development. For example, we recently advanced ABX-PTH from the preclinical stage into a clinical study in patients with secondary hyperparathyrodism. To the extent, however, that we are unable to maintain a diverse and broad range of product candidates; our success would depend to a greater extent on the success of one or a few product candidates.

Our proprietary product candidates also have not yet achieved FDA regulatory approval, which is required before we can market them as therapeutic products. In order to proceed to subsequent clinical trial stages and to ultimately achieve regulatory approval, the FDA must conclude that our clinical data establish safety and efficacy. The number, size and type of clinical trials we conduct for a particular product candidate are also affected by the policies of the FDA and European regulatory agencies regarding the availability of possible expedited approval procedures, which we may seek to utilize. These policies may change from time to time. As we conduct clinical trials for a given product candidate, we may decide or the FDA may require us to make changes in our plans and protocols. Such changes may relate to, for example, changes in the standard of care for a particular disease indication, comparability of efficacy and toxicity of materials where a change in materials is proposed, or competitive developments foreclosing the availability of expedited approval procedures. We may be required to support proposed changes with additional preclinical or clinical testing, which could delay the expected time line for concluding clinical trials. In addition, the results from preclinical testing and early clinical trials have often not been predictive of results obtained in later clinical trials. A number of new drugs and biologics have shown promising results in clinical trials, but subsequently failed to establish sufficient safety and efficacy data to obtain necessary regulatory approvals.

Furthermore, our business strategy includes the option of entering into arrangements with third parties to collaborate in the development and commercialization of our products. In the event that third parties take over the clinical trial process for one of our product candidates, the estimated completion date would largely be under the control of that third party rather than us. We cannot forecast with any degree of certainty which proprietary products or indications, if any, will be subject to future collaborative arrangements, in whole or in part, or the extent to which third parties may control clinical trials pursuant to such arrangements, and how such arrangements would affect our capital requirements.

As a result of the uncertainties discussed above, among others, the duration and completion costs of our research and development projects are difficult to estimate and are subject to considerable variation. Our inability to complete our research and development projects in a timely manner or our failure to enter into collaborative agreements, when appropriate could significantly increase our capital requirements and could adversely impact our liquidity. These uncertainties could force us to seek

additional, external sources of financing from time to time in order to continue with our business strategy. Our inability to raise additional capital, or to do so on terms reasonably acceptable to us, would jeopardize the future success of our business.

We also may be required to make further substantial expenditures if unforeseen difficulties arise in other parts of our business. In particular, our future liquidity and capital requirements also will depend on many factors other than our research and development activities, including:

- the scope and results of preclinical development and clinical trials;
- the retention of existing and establishment of further co-development, licensing, manufacturing and other agreements, if any;
- continued scientific progress in our research and development programs;
- the size and complexity of these programs;
- the cost of establishing our manufacturing capabilities and complying with good manufacturing practice regulations;
- the cost of conducting commercialization activities and arrangements;
- the time and expense involved in seeking regulatory approvals;
- competing technological and market developments;
- the time and expense of filing and prosecuting patent applications, and enforcing and defending against patent claims;
- our investment in, or acquisition of, other companies;
- the amount of product or technology in-licensing in which we engage; and
- other factors not within our control.

We believe that our current cash balances, cash equivalents, marketable securities, and the cash generated from our licensing and other agreements will be sufficient to meet our operating and capital requirements for at least one year. However, because of the uncertainties in our business discussed above, among others, we cannot assure you that this will be the case. In addition, we may choose to, or prevailing business conditions may require us to, obtain additional financing from time to time. We may choose to raise additional funds through public or private financing, licensing and other agreements or other arrangements. We cannot be sure that any additional funding, if needed, will be available on terms favorable to us or at all. Furthermore, any additional equity or equity-related financing may be dilutive to our stockholders, and debt financing, if available, may subject us to restrictive covenants. We may also choose to obtain funding through collaborations, licensing and other contractual arrangements. Such agreements may require us to relinquish our rights to certain of our technologies, products or marketing territories. Our failure to raise capital when needed would harm our business, financial condition and results of operations.

History of Net Losses. We have incurred net losses since our organization as an independent company, including in the last five years net losses of $20.5 million in 1999, $8.8 million in 2000, $60.9 million in 2001, $208.9 million in 2002 and $196.4 million in 2003. As of December 31, 2003, our accumulated deficit was $564.8 million. Our losses to date have resulted principally from:

- research and development costs relating to the development of our XenoMouse and XenoMax technologies and antibody therapeutic product candidates;
- general and administrative costs relating to our operations;

- impairment charges relating to our strategic investments in CuraGen, ImmunoGen and MDS Proteomics; and
- manufacturing start-up costs relating to our new manufacturing facility including depreciation, outside contractor costs and personnel costs for activities such as quality assurance and quality control.

We expect to incur additional losses for the foreseeable future as a result of our research and development costs, including costs associated with conducting preclinical development and clinical trials, which will continue to be substantial, charges related to purchases of technology or other assets, and costs associated with establishing and operating our manufacturing facilities. We intend to invest significantly in our products prior to entering into licensing agreements. This will increase our need for capital and will result in losses for at least the next several years. We expect that the amount of operating losses will fluctuate significantly from quarter to quarter as a result of increases or decreases in our research and development efforts, the execution or termination of licensing and other agreements, and the initiation, and success or failure, of clinical trials.

Net Operating Loss Carryforwards. As of December 31, 2003, we had net operating loss carryforwards for federal and state income tax purposes of approximately $469.0 million and $102.0 million, respectively. Our net operating loss carryforwards exclude losses incurred prior to our formation in July 1996. Further, we have capitalized the amounts associated with the 1997 settlement and cross-license we have expensed for financial statement accounting purposes and we are amortizing those amounts over a period of approximately 15 years for tax purposes. The net operating loss and credit carryforwards will expire in the years 2006 through 2023, if not utilized. Utilization of the net operating losses and credits may be subject to a substantial annual limitation due to the "change in ownership" provisions of the Internal Revenue Code of 1986 and similar state provisions. The annual limitation may result in the expiration of net operating losses and credits before utilization.

Critical Accounting Estimates

The application of several accounting estimates that require us to make subjective and complex judgments impacts the financial results that we report. We are required to estimate the effect of matters that are inherently uncertain. Changes in our estimates or judgments could materially impact our results of operations, financial condition and cash flows in future years. We believe our most critical accounting estimates include revenue recognition, accounting for our equity investments, accounting for goodwill and intangible assets and income taxes.

Revenue Recognition

We derive our contract revenue from license, option, service and milestone fees received from customers. Services include those performed under our technology out-licensing, co-development and production services agreements. As described below, within the framework of generally accepted accounting principles, significant management judgments and estimates must be made and applied in connection with the revenue recognized in any accounting period. If our management made different judgments or utilized different estimates, material differences could result in the amount and timing of our revenue in any period.

Abgenix enters into revenue arrangements with multiple deliverables in order to meet its customer's needs. For example, the arrangements may include a combination of up-front fees, license payments, research and development services, milestone payments, future royalties, and manufacturing arrangements. Multiple element revenue agreements entered into on or after July 1, 2003 are evaluated under Emerging Issues Task Force No. 00-21, "Revenue Arrangements with Multiple Deliverables," or EITF 00-21, to determine whether the delivered item has value to the customer on a stand-alone basis and whether objective and reliable evidence of the fair value of the undelivered item exists.

Deliverables in an arrangement that do not meet the separation criteria in EITF 00-21 must be treated as one unit of accounting for purposes of revenue recognition. Generally, the revenue recognition guidance applicable to the final deliverable is followed for the combined unit of accounting. For certain arrangements, the period of time over which certain deliverables will be provided is not contractually defined. Accordingly, management is required to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes.

Accounting for Equity Investments

We record gains and losses on marketable equity investments in accordance with SFAS No. 115. Gains and losses that are deemed other than temporary are charged to earnings, and any net unrealized holding gains and losses, to the extent not recognized as an impairment charge, are reported as a component of stockholders' equity.

In 2002, declines in the fair value of our investment in CuraGen and ImmunoGen common stock were deemed to be other than temporary, primarily because the stock of each company traded below our respective cost basis for more than six months. Accordingly, we recorded a total impairment charge for the year ended December 31, 2002 of $67.3 million. As of December 31, 2003, these securities had a fair value of $20.7 million.

Accounting for Goodwill and Intangible Assets

As a result of the adoption of SFAS No. 142, "Goodwill and Other Intangible Assets," in 2002, we no longer amortize goodwill but instead review goodwill for impairment on an annual basis, or sooner if indications of impairment exist. Under our accounting policy, we have adopted the beginning of the fourth quarter as an annual goodwill impairment test date. Following this approach, we compare the carrying values available as of September 30 with the estimated fair value of the reporting unit to assess if there has been a potential impairment, and, if impairment is indicated, complete the measurement of impairment under the procedures established by SFAS 142. Because we have determined that we have one reporting unit under SFAS No. 142, our market capitalization is considered to be a reasonable proxy for the fair value of the reporting unit. We also consider whether current business and general market conditions suggest that the fair value of the reporting unit has likely declined below its carrying value.

For a brief period during the first quarter of 2003, our common stock had traded at a price that represented a market capitalization less than our book value. However this condition did not persist for long and since March 31, 2003, our common stock has traded at a price that represents a market capitalization higher than our book value. Our market capitalization at December 31, 2003 was $1.09 billion based on the December 31, 2003 stock price of $12.35 per share. Accordingly, no impairment has occurred.

If we were to determine in a future period that an impairment of goodwill existed, the impairment measurement procedures could result in a charge for the impairment of goodwill. Furthermore, a change in our determination of reporting units could result in a charge for the impairment of goodwill in future periods. A change in the determination of reporting units could occur should we reorganize into reporting units such that each unit constitutes a business for which discrete financial information is available that is regularly reviewed by management to evaluate the performance of that unit. As of December 31, 2003, the carrying value of our goodwill was $34.8 million.

As a result of the adoption of SFAS No. 144 "Accounting for the Impairment or Disposal of Long-Lived Assets" intangible assets held and used, must be tested for impairment when events or changes in circumstances indicate that its carrying amount may not be recoverable. Factors that are considered important in determining whether impairment might exist include a significant change in the manner in which an asset is being used, a significant adverse change in legal factors or the business

climate that could affect the value of an asset, including and adverse action or assessment by a regulator, a current expectation that, more likely that not, an asset will be sold or otherwise disposed of before the end of its previously estimated useful life.

During 2003, the Company decided to discontinue the development of therapeutic antibodies to the complement protein properdin. Accordingly, the Company recorded an impairment charge of approximately $1.4 million related to the license to develop and commercialize antibodies to properdin. The impairment charge was included in research and development expenses on the Company's statement of operations.

As of December 31, 2003, we have determined that no changes in circumstances have occurred that would indicate that an additional impairment of an intangible asset had occurred. If we were to determine in a future period that an impairment of intangible assets have occurred, the impairment measurement procedures could result in a charge for the impairment of long-lived assets. As of December 31, 2003 the carrying value of our intangible assets was $83.7 million.

Income Taxes

Significant management judgment is required in developing our provision for income taxes, including the calculation of tax liabilities, the determination of deferred tax assets and liabilities and any valuation allowances that might be required against the deferred tax assets. Results of operations in each jurisdiction involve intercompany agreements between our Canadian subsidiary and U.S. parent. Such agreements could be unfavorably interpreted by the applicable taxing authorities, causing an increase in the income tax provision and an increase in our net loss. The assessment of the income tax implications of this intercompany relationship requires significant management judgment.

Contractual Obligations and Commercial Commitments

As of December 31, 2003, future minimum payments for certain contractual obligations for years subsequent to December 31, 2003 were as follows:

	Total	Less than 1 year	1 - 3 years	4 - 5 years	After 5 years*
			(in thousands)		
Contractual Obligations					
Operating leases	$142,506	$13,214	$27,782	$ 29,793	$ 71,717
Convertible debt & interest	222,458	7,000	14,000	201,458	—
Redeemable convertible preferred stock**	100,000	—	—	—	100,000
Lonza	22,700	22,700	—	—	—
Purchase orders	2,400	2,400	—	—	—
Total	$490,064	$45,314	$41,782	$231,251	$171,717

* Amounts represent total of minimum payments for the entire period.

** $50 million of our redeemable convertible preferred stock was redeemed in February 2004 in exchange for our issuance of a convertible subordinated note.

In March 2002, we issued $200.0 million principal amount of convertible subordinated notes in a private placement. The notes are convertible into shares of our common stock at a conversion price of $27.58 per share subject to certain adjustments. The notes accrue interest at an annual rate of 3.5%. We are obligated to pay interest on March 15 and September 15 of each year, beginning on September 15, 2002. We expect to make interest payments on the notes of $7.0 million per year, for years 2003 through 2006, and $1.5 million in 2007, assuming all the notes remain outstanding until their maturity date. The notes will mature on March 15, 2007 and are redeemable at our option on or after

March 20, 2005, or earlier if the price of our common stock exceeds specified levels. In addition, the holders of the notes may require us to repurchase the notes if we undergo a change in control. Therefore, in March 2007, or earlier if we undergo a change in control, we may use a significant portion of our cash, cash equivalents and marketable securities to repay the $200.0 million principal amount of our convertible debt. If our balance of cash, cash equivalents and marketable securities at any time is insufficient to meet our obligations under the notes, we would have to seek additional financing, if available, to support our obligations under the notes.

We have issued to AstraZeneca as of February 19, 2004, in connection with a collaboration agreement, $50.0 million of Series A-1 convertible preferred stock and a convertible subordinated note with a principal amount of $50.0 million. The total net proceeds were $99.7 million. The Company, subject to certain conditions, can convert the Series A-1 convertible preferred stock and can convert the convertible note into shares of common stock at a conversion price equal to the lower of (a) the average market price for the 10 days prior to the trading day immediately preceding the conversion date (provided that the average market price shall in no event be higher than 101% of the market price on the trading day immediately preceding the conversion date) or (b) $30.00 per share. AstraZeneca may convert the Series A-1 convertible preferred stock and the convertible note into shares of common stock at a conversion price of $30.00 per share, at any time prior to the earlier of (a) the redemption date or (b) the maturity date, as applicable. The Company must redeem all outstanding shares, if any, at a cash redemption price per share equal to the liquidation preference by October 29, 2010, the mandatory redemption date. The note matures on October 29, 2013, if still outstanding. In addition, we can, upon at least 15 days' notice to the holder, redeem the Series A-1 convertible preferred stock for cash in an amount equal to its liquidation preference and pre-pay the convertible note for its face amount, at any time prior to maturity. In addition to the mandatory redemption and maturity dates of these securities, certain events can give rise to an earlier redemption. In such circumstances, we have certain rights to convert the securities into common stock instead of redeeming the securities for cash. See Note 9 to the financial statements for a full description of the conversion, redemption, and liquidation rights.

Effective June 30, 2003, we canceled our agreement with Lonza for the exclusive use of a cell culture production suite. Upon canceling the agreement, we became obligated to pay Lonza four equal installments of 4,250,000 British pounds on October 1, 2003, February 1, 2004, May 1, 2004 and August 1, 2004, which eliminated our commitment to pay approximately $46.0 million in total monthly fees through August 2006. The value of this obligation on the effective date of June 30, 2003 was approximately $28.0 million. In September 2003 and January 2004, we made the first and second of four installment payments to Lonza. The balance of the obligation as of December 31, 2003 was approximately $22.7 million.

We have outstanding purchase orders totaling $2.4 million to contractors related to the purchase of equipment and design and construction of our new manufacturing facility.

Other significant commercial commitments include the following:

- A commitment to share equally all development and commercialization costs for ABX-EGF pursuant to our development and commercialization agreement with Immunex. As amended in October 2003, that agreement provides that Immunex will have decision-making authority for development and commercialization activities and will make available to us $60.0 million in advances that we may use to fund our share of development and commercialization costs for ABX-EGF after we have contributed $20.0 million toward development costs in 2004. The amount of any such advances, plus interest, may be repaid out of profits resulting from future product sales and we are not obligated to repay any portion of the loan if ABX-EGF does not reach commercialization.

Recent Accounting Pronouncements

In January 2003, the FASB issued Interpretation No. 46 (the "Interpretation"), Consolidation of Variable Interest Entities. The Interpretation requires the consolidation of entities in which an enterprise absorbs a majority of the entity's expected losses, receives a majority of the entity's expected residual returns, or both, as a result of ownership, contractual or other financial interests in the entity. Currently, entities are generally consolidated by an enterprise when it has controlling financial interest through ownership of a majority voting interest in the entity. We will implement the Interpretation in the quarter ending March 31, 2004. We have performed a preliminary analysis of the Interpretation and do not believe that the adoption will result in a material impact on our results of operations or financial position. During the quarter ending March 31, 2004, we will complete the evaluation of the implications of the Interpretation with respect to all variable interest entities with which we have involvement.

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

Interest Rate Risk. We are exposed to interest rate sensitivity on our investments in debt securities and our outstanding fixed rate debt. The objective of our investment activities is to preserve principal, while at the same time maximizing yields without significantly increasing risk. To achieve this objective, we invest in highly liquid, investment grade and government debt securities. Our investments in debt securities are subject to interest rate risk. To minimize the exposure due to an adverse shift in interest rates, we invest in short-term securities and our goal is to maintain an average maturity of approximately one year. In addition, as of December 31, 2003, we had $200.0 million of outstanding 3.5% convertible subordinated notes due in 2007. The fair value of these convertible subordinated notes may fluctuate with changes in market interest rates, as well as changes in the market price of our common stock. A hypothetical 1.0% per annum decrease in interest rates would result in an adverse net change in the fair value of our interest rate sensitive assets and liabilities of approximately $3.2 million and $6.3 million at December 31, 2003 and 2002, respectively.

Equity Price Risk. We are exposed to equity price risk on strategic investments, such as those we have made in CuraGen and ImmunoGen. We typically do not attempt to reduce or eliminate our market exposure on these securities. With respect to CuraGen and ImmunoGen, each of whose common stock is publicly traded, the aggregate market value of our investments in these securities was approximately $20.7 million and $13.0 million as of December 31, 2003 and 2002, respectively. Due to decreases in the market prices of the shares of CuraGen and ImmunoGen, we recorded impairment charges of $67.3 million in 2002 related to these investments. The trading prices of shares of CuraGen and ImmunoGen have fluctuated significantly since we purchased these securities. Each additional 10% decrease in market value of these securities would result in a decrease in value of approximately $2.1 million and $1.3 million from the fair value of those investments at December 31, 2003 and 2002, respectively. Additional price declines could cause us to record additional impairment charges in future periods.

Foreign Currency Risk. A substantial majority of our revenue, expense, and capital purchasing activities are transacted in U.S. dollars. However, we do enter into transactions in other currencies, primarily the British pound. As of December 31, 2003, we had a contract cancellation obligation to Lonza of approximately $22.7 million, which is payable in British pounds. A hypothetical 10% adverse change in exchange rates would result in an increase in the U.S. dollar value of this obligation of approximately $2.3 million at December 31, 2003.

ITEM 8. Financial Statements and Supplementary Data

INDEX TO FINANCIAL STATEMENTS

REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

The Board of Directors and Stockholders
Abgenix, Inc.

We have audited the accompanying consolidated balance sheets of Abgenix, Inc. as of December 31, 2003 and 2002, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2003. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Abgenix, Inc. at December 31, 2003 and 2002, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2003, in conformity with accounting principles generally accepted in the United States.

As discussed in Note 1 to the consolidated financial statements, effective January 1, 2002, the Company changed its method of accounting for goodwill and other intangible assets.

/s/ ERNST & YOUNG LLP

Palo Alto, California
February 3, 2004, except the fourth sentence
of the first paragraph of Note 9, as to which
the date is February 19, 2004.

ABGENIX, INC.

CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)

	December 31, 2003	December 31, 2002
ASSETS		
Current assets:		
Cash and cash equivalents	$ 19,141	$ 207,974
Marketable securities	328,622	188,575
Interest receivable	3,096	2,004
Accounts receivable, net	2,174	2,640
Prepaid expenses and other current assets	12,546	16,538
Total current assets	365,579	417,731
Property and equipment, net	246,277	244,419
Long-term investments	20,695	20,939
Goodwill	34,780	34,780
Identifiable intangible assets, net	83,716	92,349
Deposits and other assets	29,146	31,779
	$ 780,193	$ 841,997
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 11,584	$ 21,557
Deferred revenue	10,919	3,416
Accrued liabilities	13,974	8,907
Contract cancellation obligation	22,749	—
Accrued interest payable	2,061	2,061
Total current liabilities	61,287	35,941
Deferred rent	6,153	4,417
Convertible subordinated notes	200,000	200,000
Redeemable convertible preferred stock, $0.0001 par value; 5,000,000 shares authorized		
Series A-1 50,000 shares issued and outstanding (none in 2002); liquidation preference $50,000,000 (none in 2002)	49,869	—
Series A-2 50,000 shares issued and outstanding (none in 2002); liquidation preference $50,000,000 (none in 2002)	49,868	—
Commitments		
Stockholders' equity:		
Common stock, $0.0001 par value; 220,000,000 shares authorized; 88,262,457 and 87,655,342 shares issued and outstanding at December 31, 2003 and 2002, respectively	9	9
Additional paid-in capital	968,922	965,821
Accumulated other comprehensive income	8,861	4,156
Accumulated deficit	(564,776)	(368,347)
Total stockholders' equity	413,016	601,639
	$ 780,193	$ 841,997

See accompanying notes

ABGENIX, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

	Year ended December 31,		
	2003	2002	2001
Revenues:			
Contract revenue	$ 16,852	$ 19,293	$ 34,064
Operating expenses:			
Research and development	99,602	128,494	96,234
Manufacturing start-up costs	72,473	—	—
Amortization of intangible assets, related to research and development	7,190	7,251	8,602
General and administrative	30,209	31,625	19,367
Restructuring charge	—	1,751	—
Total operating expenses	209,474	169,121	124,203
Loss from operations	(192,622)	(149,828)	(90,139)
Other income (expenses):			
Interest and other income	9,953	20,145	29,542
Interest expense	(5,784)	(4,830)	(259)
Impairment of investments	(7,892)	(74,385)	—
Total other income (expenses)	(3,723)	(59,070)	29,283
Loss before income tax expense	(196,345)	(208,898)	(60,856)
Foreign income tax expense	84	—	—
Net loss	$(196,429)	$(208,898)	$(60,856)
Basic and diluted net loss per share	$ (2.23)	$ (2.39)	$ (0.71)
Shares used in computing basic and diluted net loss per share	87,930	87,237	86,111

See accompanying notes

ABGENIX, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands, except share and per share data)

	Common Stock		Additional Paid-in Capital	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Number of Shares	Amount					
Balance at December 31, 2000	85,401,548	$9	$939,198	$(234)	$ (705)	$ (98,593)	$ 839,675
Change in unrealized losses on available-for-sale securities	—	—	—	—	(10,341)	—	(10,341)
Net loss	—	—	—	—	—	(60,856)	(60,856)
Comprehensive loss							(71,197)
Issuance of common stock pursuant to the replacement stock options related to the acquisition of Abgenix Biopharma	87,742	—	3,502	—	—	—	3,502
Issuance of common stock at $29.79 per share in connection with the acquisition of Hesed Biomed	475,930	—	14,178	—	—	—	14,178
Assumption of warrants for common stock in connection with the acquisition of Hesed Biomed	—	—	354	—	—	—	354
Issuance of common stock upon exercise of stock options	800,546	—	2,828	—	—	—	2,828
Issuance of common stock pursuant to the employee stock purchase plan	69,399	—	1,396	—	—	—	1,396
Amortization of deferred compensation	—	—	—	234	—	—	234
Balance at December 31, 2001	86,835,165	9	961,456	—	(11,046)	(159,449)	790,970
Change in unrealized gains on available-for-sale securities	—	—	—	—	15,202	—	15,202
Net loss	—	—	—	—	—	(208,898)	(208,898)
Comprehensive loss							(193,696)
Issuance of common stock at $29.79 per share in connection with the acquisition of Hesed Biomed	61,506	—	1,832	—	—	—	1,832
Assumption of warrants for common stock in connection with the acquisition of Hesed Biomed	2,680	—	49	—	—	—	49
Issuance of common stock upon exercise of stock options	548,367	—	725	—	—	—	725
Issuance of common stock pursuant to the employee stock purchase plan	207,624	—	1,759	—	—	—	1,759
Balance at December 31, 2002	87,655,342	9	965,821	—	4,156	(368,347)	601,639
Change in unrealized gains on available-for-sale securities	—	—	—	—	4,705	—	4,705
Net loss	—	—	—	—	—	(196,429)	(196,429)
Comprehensive loss							(191,724)
Issuance of common stock upon exercise of stock options	280,844	—	1,052	—	—	—	1,052
Issuance of common stock pursuant to the employee stock purchase plan	326,271	—	2,049	—	—	—	2,049
Balance at December 31, 2003	88,262,457	$9	$968,922	$ —	$ 8,861	$(564,776)	$ 413,016

See accompanying notes

ABGENIX, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Year ended December 31,		
	2003	2002	2001
Operating activities			
Net loss	$(196,429)	$(208,898)	$ (60,856)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	28,492	12,978	5,176
Amortization of goodwill	—	—	2,548
Amortization of identified intangible assets	7,190	7,251	6,054
Impairment of identified intangible asset	1,443	—	—
Impairment of investments	7,892	74,385	—
Amortization of debt issuance costs	1,202	954	—
Loss on sale of equipment	29	—	—
Changes for certain assets and liabilities:			
Interest receivable	(1,092)	1,973	5,816
Accounts receivable	466	814	(57)
Prepaid expenses and other current assets	3,992	(2,064)	(2,509)
Deposits and other assets	1,435	(1,676)	(5,080)
Accounts payable	(9,973)	4,111	11,107
Deferred revenue	7,503	(8,335)	4,773
Accrued liabilities	5,144	(4,626)	5,477
Accrued interest payable	—	2,061	—
Contract cancellation obligation	22,749	—	—
Deferred rent	1,736	2,339	1,511
Net cash used in operating activities	(118,221)	(118,733)	(26,040)
Investing activities			
Purchases of marketable securities	(467,794)	(141,771)	(1,032,726)
Maturities of marketable securities	43,525	173,382	1,167,564
Sales of marketable securities	281,275	172,846	1,488
Purchases of property and equipment	(30,456)	(170,930)	(73,156)
Investment in note receivable	—	(2,750)	(14,000)
Purchases of technology licenses	—	—	(2,942)
Purchases of long-term investments	—	—	(15,101)
Payments for acquisition liabilities	—	(266)	(72,822)
Acquisition of Hesed Biomed, net of cash acquired	—	—	(4,124)
Net cash provided by (used in) investing activities	(173,450)	30,511	(45,819)
Financing activities			
Net proceeds from issuance of convertible subordinated notes	—	194,000	—
Net proceeds from issuance of series A-1 redeemable convertible preferred stock	49,869	—	—
Net proceeds from issuance of series A-2 redeemable convertible preferred stock	49,868	—	—
Net proceeds from issuance of common stock	3,101	2,533	4,596
Payments on long-term debt	—	—	(316)
Net cash provided by financing activities	102,838	196,533	4,280
Net increase (decrease) in cash and cash equivalents	(188,833)	108,311	(67,579)
Cash and cash equivalents at the beginning of the year	207,974	99,663	167,242
Cash and cash equivalents at the end of the year	$ 19,141	$ 207,974	$ 99,663
Supplemental disclosures of cash flow information			
Cash paid during the year for interest, net of capitalized interest	$ 4,583	$ 2,794	$ 259

See accompanying notes

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Business and Organization

Abgenix, Inc. (Abgenix or the Company), is a biopharmaceutical company that focuses on discovery, development and manufacturing of human therapeutic antibody products for the treatment of a variety of disease conditions. The Company has proprietary technologies that facilitate rapid generation of highly specific, fully human antibody therapeutic product candidates that bind to disease targets appropriate for antibody therapy.

In November 2001, the Company acquired Hesed Biomed Inc. (Hesed Biomed). In November 2000, in two separate transactions, the Company acquired Abgenix Biopharma Inc. (Abgenix Biopharma, formerly known as ImmGenics Pharmaceuticals, Inc.) and IntraImmune Therapies, Inc. (IntraImmune).

Accounts denominated in foreign-currency have been remeasured using the U.S. dollar as the functional currency. The aggregate exchange loss included in determining net loss was $1.7 million, $0.5 million and $0.08 million in 2003, 2002 and 2001, respectively. Significant intercompany accounts and transactions have been eliminated.

Recent Accounting Pronouncements

In January 2003, the FASB issued Interpretation No. 46 (the "Interpretation"), Consolidation of Variable Interest Entities. The Interpretation requires the consolidation of entities in which an enterprise absorbs a majority of the entity's expected losses, receives a majority of the entity's expected residual returns, or both, as a result of ownership, contractual or other financial interests in the entity. Currently, entities are generally consolidated by an enterprise when it has controlling financial interest through ownership of a majority voting interest in the entity. The Company will implement the Interpretation in the quarter ending March 31, 2004. The Company has performed a preliminary analysis of the Interpretation and does not believe that the adoption will result in a material impact on its results of operations or financial position. During the quarter ending March 31, 2004, the Company will complete the evaluation of the implications of the Interpretation with respect to all variable interest entities with which the Company has involvement.

Cash Equivalents, Marketable Securities and Long-Term Investments

The Company considers all highly liquid investments with a maturity date of three months or less when purchased to be cash equivalents.

Marketable securities consist of highly liquid debt securities with a maturity of greater than three months when purchased and marketable equity securities. The Company's marketable securities have been classified as "available-for-sale," and are carried at fair value based on quoted market prices. Unrealized gains and losses are reported as accumulated other comprehensive income (loss), which is a separate component of stockholders' equity. Unrealized losses on available-for-sale securities that are deemed to be other than temporary are included in earnings. Securities with unrealized losses for more than six months are presumed to be impaired, absent compelling evidence to the contrary. In addition, securities with unrealized losses for less than six months may be deemed impaired in certain circumstances.

Property and Equipment

The Company records property and equipment at cost and provides depreciation using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are depreciated over the remaining life of the facility lease, manufacturing equipment is depreciated over 15 years, and all other assets are generally depreciated over two to five years. Furniture and equipment leased under capital leases is amortized over the shorter of the useful lives or the lease term. Depreciation of leased assets is included in depreciation expense and accumulated depreciation of the Company's owned assets.

Goodwill and Intangible Assets

As a result of its adoption of SFAS No. 142, "Goodwill and Other Intangible Assets," in 2002, the Company no longer amortizes goodwill but instead reviews goodwill for impairment on annual basis, or sooner if indications of impairment exist. Under the Company accounting policy, the Company has adopted the beginning of the fourth quarter as an annual goodwill impairment test date. Following this approach, the Company compares the carrying values available as of September 30 with the estimated fair value of the reporting unit to assess if there has been a potential impairment, and, if impairment is indicated, complete the measurement of impairment under the procedures established by SFAS 142. Because the Company has determined that it has one reporting unit under SFAS No. 142, our market capitalization is considered to be a reasonable proxy for the fair value of the reporting unit. The Company also considers whether current business and general market conditions suggest that the fair value of the reporting unit has likely declined below its carrying value.

Intangible assets held and used, must be tested for impairment when events or changes in circumstances indicate that its carrying amount may not be recoverable. Factors that are considered important in determining whether impairment might exist include a significant change in the manner in which an asset is being used, a significant adverse change in legal factors or the business climate that could affect the value of an asset, including and adverse action or assessment by a regulator, a current expectation that, more likely that not, an asset will be sold or otherwise disposed of before the end of its previously estimated useful life.

In 2003, the Company decided to discontinue the development of therapeutic antibodies to the complement protein properdin. Accordingly, the Company recorded an impairment charge of approximately $1.4 million related to the license to develop and commercialize antibodies to properdin. The impairment charge was included in research and development expenses on the Company's statement of operations.

As of December 31, 2003, the Company has determined that no changes in circumstances have occurred that would indicate that an additional impairment of an intangible asset had occurred. If the Company was to determine in a future period that an impairment of intangible assets had occurred, the impairment measurement procedures could result in a charge for the impairment of long-lived assets. As of December 31, 2003 the carrying value of the Company's intangible assets was $83.7 million.

A reconciliation of previously reported net loss and net loss per share to the amounts adjusted for the exclusion of goodwill amortization is as follows (in thousands, except per share amounts):

	Year Ended December 31,		
	2003	2002	2001
Reported net loss	$(196,429)	$(208,898)	$(60,856)
Goodwill and workforce amortization	—	—	2,548
Adjusted net loss	$(196,429)	$(208,898)	$(58,308)
Reported basic and diluted loss per share	$ (2.23)	$ (2.39)	$ (0.71)
Goodwill and workforce amortization	—	—	0.03
Adjusted basic and diluted loss per share	$ (2.23)	$ (2.39)	$ (0.68)

Long-Lived Assets

The carrying value of the Company's long-lived assets is reviewed for impairment whenever events or changes in circumstances indicate that the asset may not be recoverable. An impairment loss would be recognized when estimated future cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying amount. Long-lived assets include property and equipment, long-term investments, goodwill and other intangible assets and long-term notes.

Revenue Recognition

The Company receives payments from customers for license, option, service and milestone fees. These payments are generally non-refundable but are reported as deferred revenue until they are recognizable as revenue. The Company has followed the following principles in recognizing revenue:

- Abgenix enters into revenue arrangements with multiple deliverables in order to meet its customer's needs. For example, the arrangements may include a combination of up-front fees, license payments, R&D services, milestone payments, future royalties, and manufacturing arrangements. Multiple element revenue agreements entered into on or after July 1, 2003 are evaluated under Emerging Issues Task Force No. 00-21, "Revenue Arrangements with Multiple Deliverables," to determine whether the delivered item has value to the customer on a stand-alone basis and whether objective and reliable evidence of the fair value of the undelivered item exists. Deliverables in an arrangement that do not meet the separation criteria in Issue 00-21 must be treated as one unit of accounting for purposes of revenue recognition. Generally, the revenue recognition guidance applicable to the last deliverable is followed for the combined unit of accounting. For certain arrangements, the period of time over which certain deliverables will be provided is not contractually defined. Accordingly, management is required to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes.
- Abgenix has joint development arrangements under which the collaborative partners share the costs of developing and commercializing antibody therapeutic product candidates equally. In periods where Abgenix incurs more costs under the arrangement than the collaborative partner, Abgenix records contract revenue for the services rendered. In periods where the collaborative partner incurs more costs under the arrangement than Abgenix, Abgenix records expense for the services received.

- Research and product license fees are generally recognized only after both the license period has commenced and the technology has been delivered.
- Option fees for granting options to obtain product licenses to develop a product are recognized when the option is exercised or when the option period expires, whichever occurs first.
- Fees the Company receives for research services the Company performs under its technology out-licensing agreements are generally recognized ratably over the entire period the Company performs these services. Research services include process sciences services the Company performs under its production services agreements, such as cell line development.
- Incentive milestone payments are recognized as revenue when the specified milestone is achieved. Incentive milestone payments are triggered either by the results of our research efforts or by events external to Abgenix, such as regulatory approval to market a product. Incentive milestone payments are substantially at risk at the inception of the contract, and the values assigned thereto are commensurate with the type of milestone achieved. The Company has no future performance obligations related to an incentive milestone that has been achieved.

Research and Development

Research and development expenses consist primarily of compensation and other expenses related to research and development personnel; costs associated with preclinical testing and clinical trials of the Company's product candidates, including the costs of manufacturing the product candidates; expenses for research and services rendered under co-development agreements; and facilities expenses. Expenses for research services rendered under co-development arrangements exceed fees received from such co-developers as reimbursements. All research and development costs are charged to expense when incurred.

Manufacturing Start-up Costs

Manufacturing start-up costs include certain costs associated with the Company's new manufacturing facility, including depreciation, outside contractor costs and personnel costs for activities such as quality assurance and quality control. In 2003, the manufacturing start-up costs included a cancellation fee for the negotiated cancellation of an agreement with an outside contractor, Lonza Biologics plc (Lonza). Effective June 30, 2003, the Company canceled the November 2000 agreement with Lonza for the exclusive use of a cell culture production suite because the Company determined that with the opening of its manufacturing facility, the Company no longer needed access to the Lonza facility.

Stock-Based Compensation

The Company accounts for stock-based awards to employees and directors using the intrinsic value method in accordance with Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees." Accordingly, the Company does not recognize compensation expense for employee stock options granted at fair market value. For purposes of disclosures pursuant to SFAS 123 as amended by SFAS 148, the estimated fair value of options is amortized to expense straight-line over the options' vesting period. The following table illustrates what net loss would have been had the Company

accounted for its stock-based awards under the provisions of SFAS 123. Pro forma amounts may not be representative of future years.

	December 31,		
	2003	2002	2001
	(in thousands, except per share amounts)		
Net loss	$(196,429)	$(208,898)	$ (60,856)
Stock-based employee compensation cost included in the determination of net loss	—	—	234
Stock-based employee compensation cost that would have been included in the determination of net loss if the fair value based method had been applied to all awards	(61,022)	(80,733)	(76,888)
Pro forma net loss as if the fair value based method had been applied to all awards	$(257,451)	$(289,631)	$(137,510)
Basic and diluted net loss per share	$ (2.23)	$ (2.39)	$ (0.71)
Pro forma basic and diluted loss per share as if the fair value based method had been applied to all awards	$ (2.93)	$ (3.32)	$ (1.60)

Net Loss Per Share

Basic net loss per share is calculated based on the weighted average number of shares outstanding during the period. The impact of common stock options, warrants and shares issuable upon the conversion of the convertible subordinated notes due 2007 and the redeemable convertible preferred stock was excluded from the computation of diluted net loss per share, as their effect is antidilutive for the periods presented.

The following table sets forth potential shares of common stock that are not included in the computation of diluted net loss per share because to do so would be antidilutive for the year ended December 31, 2003 (in thousands):

Outstanding options	12,365
Warrants	16
Convertible subordinated notes due 2007	7,252
Redeemable convertible preferred stock	8,409
	28,042

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Reclassifications

Certain prior-year balances have been reclassified to conform to the current-year presentation.

2. ACQUISITIONS

Hesed Biomed

In November 2001, the Company acquired Hesed Biomed, a privately held biotechnology company with intellectual property and technology in the field of catalytic antibodies. Abgenix acquired all of the common stock of Hesed Biomed for 537,436 shares of Abgenix common stock and warrants for the purchase of 18,731 shares of Abgenix common stock and cash. The total purchase price was valued at $21.6 million, including transaction costs. As a contingency for pre-acquisition liabilities of the former Hesed Biomed discovered after the acquisition date, 61,506 shares of the Company's common stock were not issued until November 2002. The value of these contingency shares at the time of acquisition was $1.9 million and was included in acquisition liabilities on the balance sheet at December 31, 2001. There were no acquisition liabilities remaining as of December 31, 2002. This acquisition was accounted for as the purchase of technology.

Abgenix Biopharma

In November 2000, the Company acquired all of the voting stock of Abgenix Biopharma, a privately held Canadian biotechnology company with proprietary technology for accelerating antibody product discovery. Under the terms of the acquisition agreement, former Abgenix Biopharma shareholders received special shares of Abgenix Biopharma that were exchangeable at the holder's option for cash payable by the Company. The exchange of Abgenix Biopharma special shares for cash occurred through 2002. As of December 31, 2002, all of the Abgenix Biopharma special shares had been exchanged for $68.1 million.

In connection with the acquisition, the Company agreed to exchange Abgenix Biopharma stock options held by employees and directors of Abgenix Biopharma for stock options of the Company, based on a certain exchange ratio. This exchange ratio entitled the holder of each Abgenix Biopharma option to receive a replacement option for Company shares having a total value (less the total exercise price) not exceeding the total value of Abgenix Biopharma shares underlying the Abgenix Biopharma option (less the total exercise price), as fixed in November 2000 when the Abgenix Biopharma options were terminated. Replacement options covering a total of 247,155 shares of common stock of the Company were issued in exchange for the Abgenix Biopharma options. The replacement options were fully vested at the time of the exchange. Pursuant to the Company's stock option plan, the Company also offered the employees and certain former directors of Abgenix Biopharma a cash buy-out election. As of December 31, 2001, 87,742 stock options had been exercised and the remainder had been cashed out and cancelled.

IntraImmune

In November of 2000, the Company acquired IntraImmune, a privately held research company with technologies to give antibodies access to intracellular targets. The total cash purchase price was $9.3 million, including transaction costs. This acquisition was accounted for using the purchase method of accounting.

Purchase Price Allocation

The Company performed an allocation of the total purchase price of Hesed Biomed, Abgenix Biopharma and IntraImmune among the acquired assets. The income approach was used to develop the value for the existing technology and the in-process research and development, as applicable. The income approach incorporates the calculation of the present value of future economic benefits such as

cash earnings, cost savings, and tax deductions. The cost approach was utilized to value the assembled workforce. The cost approach measures the benefits related to an asset by the cost to reconstruct or replace it with another of like utility.

Hesed Biomed had no in-process development activities at the time of acquisition. The purchase of Hesed Biomed was deemed to be the purchase of technology and not a business, therefore no allocation of the purchase price was made to goodwill.

The purchase price allocations for Hesed Biomed, Abgenix, Biopharma and IntraImmune were as follows:

	Hesed Biomed		Abgenix Biopharma		IntraImmune	
	Amount	Useful Lives	Amount	Useful Lives	Amount	Useful Lives
			(dollars in thousands)			
Purchase price allocation:						
Tangible net assets (liabilities)	$ 556	n/a	$ 5,508	n/a	$ (704)	n/a
Intangible assets acquired:						
Existing technology	21,040	15 years	35,851	15 years	2,700	15 years
Assembled workforce	—	n/a	195	3 years	—	n/a
Goodwill	—	n/a	30,323	15 years	7,257	15 years
In-process research and development	—	n/a	5,215	n/a	—	n/a
Total purchase price allocation	$21,596		$77,092		$9,253	

3. INVESTMENTS

Marketable Securities

The following is a summary of marketable securities at December 31, 2003 and 2002:

	2003			2002		
	Amortized Cost	Unrealized Gain/(Loss)	Estimated Fair Value	Amortized Cost	Unrealized Gain/(Loss)	Estimated Fair Value
		(in thousands)			(in thousands)	
U.S. corporate obligations	$115,636	$ 198	$115,834	$ 53,749	$1,069	$ 54,818
Non-U.S. corporate obligations	6,240	59	6,299	6,152	120	6,272
Asset-backed securities	78,272	240	78,512	48,420	1,105	49,525
Commercial paper	—	—	—	1,544	1	1,545
Obligations of the U.S. government and its agencies	134,329	392	134,721	72,795	1,538	74,333
Non-U.S. government obligations	—	—	—	7,026	(1)	7,025
Municipal obligations	3,400	—	3,400	1,500	—	1,500
Money market funds	11,427	—	11,427	204,641	—	204,641
Marketable equity securities	12,723	7,972	20,695	12,723	324	13,047
Total	$362,027	$8,861	$370,888	$408,550	$4,156	$412,706
Classified as:						
Cash equivalents			$ 14,824			$203,615
Marketable securities			328,622			188,575
Deposits and other assets			6,747			7,469
Long-term investments			20,695			13,047
			$370,888			$412,706

The Company's available for sale debt securities have the following maturities at December 31, 2003:

Due in one year or less	$116,635
Due after one year but less than five years	207,491
Due over five years	14,640
	$338,766

The unrealized gains and losses as of December 31, 2003 and 2002 were reported as accumulated other comprehensive income/(loss), which is a separate component of stockholders' equity. The cost of securities sold is based on the specific identification basis. There was no material gross realized gain or loss in 2003, 2002 and 2001.

Other Investments

In August 2001, the Company entered a $16.8 million loan agreement. The first disbursement of $14.0 million was made in October 2001 and the final disbursement of $2.8 million was made in July 2002. The amount is included in deposits and other assets on the balance sheet. The loan bears interest at a rate of 8.5% per year and is payable monthly. The loan matures in August 2011 and the entire principal balance and accrued interest are due on the maturity date.

In 2001, the Company invested $15.0 million in equity securities of MDS Proteomics, a privately held company, in connection with the collaboration with that company. As of December 31, 2003 and June 30, 2002, the Company determined that an impairment of the investment had occurred and estimated that the value of the investment had declined to zero and $7.9 million, respectively. Accordingly, the Company recorded an impairment charge of $7.9 and $7.1 million, respectively, in 2003 and 2002. The amount of the charge was based on the difference between the estimated value as determined by management and the revised or original cost basis. At December 2002, the investment was recorded in long-term investments on the balance sheet.

4. COMPREHENSIVE INCOME/(LOSS)

Other comprehensive gains/(losses) consist of unrealized gains or losses on available-for-sale securities. The components of comprehensive loss, net of tax, were as follows:

	December 31,		
	2003	2002	2001
		(in thousands)	
Net loss	$(196,429)	$(208,898)	$(60,856)
Other comprehensive income (loss):			
Unrealized holding gains (losses) arising during the period	4,705	(52,075)	(10,341)
Less: reclassification adjustment for losses recognized in net loss	—	67,277	—
Increase in unrealized gains (losses) on securities	4,705	15,202	(10,341)
Comprehensive loss	$(191,724)	$(193,696)	$(71,197)

5. IDENTIFIED INTANGIBLE ASSETS

Identified intangible assets as of December 31, 2003 and 2002 consisted of the following (in thousands):

	Gross Assets	Accumulated Amortization	Net
As of December 31, 2003:			
Acquisition-related developed technology	$106,183	$23,689	$82,494
Other intangible assets	1,442	220	1,222
Identified intangible assets	$107,625	$23,909	$83,716
As of December 31, 2002:			
Acquisition-related developed technology	$106,183	$16,612	$89,571
Other intangible assets	3,016	238	2,778
Identified intangible assets	$109,199	$16,850	$92,349

Amortization of acquisition-related intangibles was $7.1 million, $7.1 million and $6.0 million for 2003, 2002 and 2001, respectively. Amortization of other intangible assets was $113,000, $185,000 and $53,000 for 2003, 2002 and 2001, respectively. All of the Company's acquired identified intangibles other than goodwill are subject to amortization.

Expected amortization expense related to identified intangible assets for each of the fiscal years after December 31, 2003 is as follows (in thousands):

	Year Ending December 31,						
	2004	2005	2006	2007	2008	Thereafter	Total
Acquisition-related intangibles	$7,077	$7,077	$7,077	$7,077	$7,077	$47,109	$82,494
Other intangible assets	$ 90	$ 90	$ 90	$ 90	$ 90	$ 772	$ 1,222

6. CONVERTIBLE SUBORDINATED NOTES

In March 2002, the Company issued $200.0 million principal amount of convertible subordinated notes in a private placement. The notes are convertible into shares of Abgenix common stock at a conversion price of $27.58 per share subject to certain adjustments. The notes accrue interest at an annual rate of 3.5% and the Company is obligated to pay interest by March 15 and September 15 of each year. The notes will mature on March 15, 2007, and are redeemable at the Company's option on or after March 20, 2005, or earlier if the price of the Company's common stock exceeds specified levels. In addition, the holders of the notes may require the Company to repurchase the notes if the Company undergoes a change in control. As of December 31, 2003 and 2002, the fair value of the notes was $186.2 million and $137.0 million, respectively. The fair value was based on the quoted market price at December 31, 2003 and 2002.

7. BALANCE SHEET COMPONENTS

	December 31,	
	2003	2002
	(in thousands)	
Accounts receivable:		
Accounts receivable	$ 2,726	$ 3,457
Less: allowances	(552)	(817)
Accounts receivable, net	$ 2,174	$ 2,640
Property and equipment:		
Furniture, machinery and equipment	$ 88,430	$ 59,499
Leasehold improvements	155,208	72,418
	243,638	131,917
Less: Accumulated depreciation	(51,476)	(22,968)
Construction-in-progress	54,115	135,470
Property and equipment, net	$246,277	$244,419
Accrued liabilities:		
Accrued product development costs	$ 643	$ 2,856
Accrued employee benefits	4,737	1,447
Accrued clinical costs	2,846	1,388
Other accrued liabilities	5,748	3,216
Accrued liabilities	$ 13,974	$ 8,907

8. RELATED PARTY TRANSACTIONS

At December 31, 2003 and 2002, the Company had notes receivable from certain officers and employees totaling $550,000 and $1.3 million, respectively, which are included in deposits and other assets on the balance sheet. The notes were issued in connection with employee relocation agreements. The notes begin to accrue interest beginning with May 2005 through June 2008 and bear interest at rates ranging from 2.34% to 6.70%. The notes are secured by personal assets, and have due dates ranging from July 2010 through June 2013, or 30 days from the date of termination of employment, if earlier.

9. REDEEMABLE CONVERTIBLE PREFERRED STOCK AND CONVERTIBLE SUBORDINATED NOTE

In October 2003, in connection with a collaboration agreement, the Company entered into a securities purchase agreement with AstraZeneca. Pursuant to the agreement, the Company issued to AstraZeneca $50.0 million of Series A-1 and $50.0 million of Series A-2 convertible preferred stock which mature seven and 10-years, respectively, from the date of issuance. Net proceeds from these issuances were $99.7 million. Pursuant to its terms, the Series A-2 preferred stock was redeemed at the option of AstraZeneca on February 19, 2004 and the Company issued AstraZeneca a convertible subordinated note with a principal amount of $50.0 million, which matures 10 years from the initial issuance of the Series A-2 convertible preferred stock. Subject to various terms and conditions, if a certain milestone event is reached, the Company will have the option to issue to AstraZeneca up to $30.0 million of Series A-3 preferred stock and if a further milestone event is reached, the Company will have the option to issue to AstraZeneca up to $30.0 million of Series A-4 preferred stock. Each of the Series A-3 preferred stock and the Series A-4 preferred stock will have a maturity date that is five years from issuance. Due to the mandatory redemption feature, the Company does not record the redeemable convertible preferred stock in stockholders' equity on its consolidated balance sheet. The carrying value of the redeemable convertible preferred stock approximates its fair value.

Conversion rights

The Company, subject to certain conditions, can convert each series of preferred stock and can convert the convertible subordinated note into shares of common stock at a conversion price equal to the lower of (a) the average market price for the 10 days prior to the trading day immediately preceding the conversion date (provided that the average market price shall in no event be higher than 101% of the market price on the trading day immediately preceding the conversion date) or (b) $30.00 per share.

AstraZeneca may convert each series of preferred stock and the convertible subordinated note into shares of common stock at a conversion price of $30.00 per share, at any time prior to the earlier of (a) the redemption date or (b) the maturity date, as applicable.

Redemption rights and maturity

The Company must redeem all outstanding shares of its Series A-1 preferred stock, if any, at a cash redemption price per share equal to the liquidation preference by October 29, 2010, the mandatory redemption date. The convertible subordinated note matures on October 29, 2013, if still outstanding.

The Company can, upon at least 15 days' notice to the holder, redeem the preferred stock and convertible subordinated note for cash in an amount equal to its liquidation preference, at any time prior to maturity.

AstraZeneca has the right to require Abgenix to redeem all outstanding shares of the preferred stock at their liquidation preference and convertible subordinated note, upon the occurrence of a change in control of Abgenix after the completion of a defined research period. At its option, and subject to certain conditions, Abgenix may deliver shares of its common stock in lieu of cash upon such an event.

AstraZeneca has the right to require Abgenix to redeem a specified portion of the outstanding shares of preferred stock and convertible subordinated note upon the occurrence of (a) a material breach by Abgenix of a material obligation under the Collaboration Agreement between the Company and AstraZeneca or (b) a change in control of Abgenix or an acquisition by Abgenix in which the other party to the change in control or acquisition, as the case may be, is a competitor of AstraZeneca, in each case that occurs during a defined research period and results in AstraZeneca's termination of all research programs and future programs under the collaboration agreement. The amount that AstraZeneca may require Abgenix to redeem will be based upon the extent of completion of the research programs that are the subject of the collaboration between the Company and AstraZeneca. At its option, and subject to certain conditions, Abgenix may deliver shares of its common stock in lieu of cash upon such events.

Upon the occurrence of certain events of default, (1) the holders of the Series A-1 preferred stock shall have the right to make the entire liquidation value of the Series A-1 preferred stock due and payable and (2) if the event of default is a payment default, quarterly cash dividends shall begin to accrue on the Series A-1 preferred stock, at a default rate equal to the 10-year U.S. treasury rate plus three percent (3%) compounded annually. Events of default for purposes of this provision include, but are not limited to, the following (i) a failure to make a required payment, or a breach by the Company of any of the Company's other obligations under, the Series A-1 preferred stock, the convertible subordinated note or any subordinated promissory note that may be issued by the Company in the circumstances described below under "Aggregate ownership limitation"; (ii) a breach of the Company of specified obligations under the securities purchase agreement with AstraZeneca; (iii) the securities purchase agreement, or any other agreement or instrument contemplated by the securities purchase agreement, is asserted by the Company not to be a legal, valid and binding instrument; and (iv) certain bankruptcy and insolvency events involving the Company. The convertible subordinated note contains the events of default listed in (i) through (iv) above and contains an additional event of default in the case of a cross-acceleration of $25 million or more of other indebtedness of the Company.

Liquidation, Dividend and Voting rights

The Series A-1 preferred stock has a liquidation preference of $50 million and the convertible subordinated note has a face amount of $50 million. The Series A-1 preferred stock will receive dividends or distributions if and when declared on the common stock on an as-converted basis, but shall have no other rights to dividends, except upon an event of default that is a payment default.

Holders of preferred stock have the right to vote with the common stock on an as-converted basis. In addition, the preferred stock has a class vote on certain matters. The convertible note does not have any voting rights unless it is converted into common stock and will not bear any interest unless there is an occurrence of a default that is a payment default. Upon an event of default that is a payment

default, the convertible note will bear interest at, and the preferred stock will accrue quarterly a cumulative dividend, at a rate equal to the 10-year U.S. treasury rate plus 3% compounded annually.

The preferred stock is subordinate and junior to all indebtedness and senior to the Company's common stock. The convertible subordinated note is senior to the preferred stock and the common stock and is junior to all senior indebtedness and to the Company's 3.5% convertible subordinated notes due in 2007.

Aggregate ownership limitation

At no time may any holder of Series A-1 preferred stock or the convertible subordinated note beneficially own, following the conversion of the preferred stock or the convertible subordinated note, more than 19.9% of the Company's common stock then outstanding. If any shares of common stock are issuable to a holder upon conversion of the preferred stock or the convertible subordinated note that would result in any holder (together with its affiliates) owning common stock in excess of the ownership threshold described above, then the Company will be required to redeem the shares in excess of the ownership threshold for a price equal to (1) the number of such excess shares times (2) the average market price of the common stock for the 30 consecutive days ending on the 15th trading day prior to the conversion date (such price, the "Excess Shares Redemption Price"). Upon such a redemption of the Series A-1 preferred stock or the convertible subordinated note, the Company will have the right, upon delivery of notice to the holder, to receive a loan from the holder in the form of a 5-year (in the case of a conversion of Series A-1 preferred stock) or a 2-year (in the case of a conversion of the convertible subordinated note), interest-free subordinated promissory note. The face amount of the promissory note shall be the Excess Shares Redemption Price.

10. SEGMENT INFORMATION

The operations of the Company and its wholly owned subsidiaries constitute one business segment.

Information about customers who provided 10% or more of contract revenues for the period is as follows:

Year Ended	Number of Customers and Percentage of Contract Revenues for each of the Customers
December 31, 2003	4 customers, 29%, 21%, 18% and 12%, respectively
December 31, 2002	4 customers, 44%, 17%, 12% and 10%, respectively
December 31, 2001	4 customers, 31%, 25%, 14% and 12%, respectively

11. COMMITMENTS

Facility Leases

The Company has several operating leases for its office, research and development and manufacturing facilities in California and British Columbia, Canada. The leases expire between 2010 and 2015, most of them with options to extend for nine to ten years. Future minimum payments under noncancelable operating leases at December 31, 2003 are as follows (in thousands):

Year ending December 31,	
2004	$ 13,214
2005	13,661
2006	14,121
2007	14,644
2008	15,149
Thereafter	71,717
Total lease payments	142,506
Less aggregate future minimum rentals to be received under sublease	2,744
	$139,762

Rent expense was $14.4 million, $13.6 million and $8.8 million for the years ended December 31, 2003, 2002 and 2001, respectively.

Property and Equipment

The Company contracted with developers and designers for the construction of its new manufacturing facility. As of December 31, 2003, the Company had committed to approximately $2.4 million related to completing construction and the purchase of equipment for the new facility.

Letters of Credit and Capital Lease

In March 2000 and February 2001, the Company obtained stand-by letters of credit for $2.0 million and $3.0 million, respectively, from a commercial bank as security for its obligations under two facility leases. These were increased in January 2002 to $2.5 and $3.2 million, respectively, in connection with amendments to the Company's facility leases. In December 2003, the $3.2 million stand-by letter of credit increased to $3.5 million. The outstanding stand-by letters of credit are secured by an investment account, in which the Company maintains a balance of approximately $7.0 million.

License and Collaboration Agreements

In July 2000, the Company entered into a joint development and commercialization agreements with Immunex to develop and commercialize one of the Company's product candidates, ABX-EGF. Under the terms of the agreement, the Company agreed to share responsibility for product development and to share equally in the costs of developing and commercializing the product candidates. Development costs were determined by the development plans agreed upon by the joint steering committees. In October 2003, the Company amended this agreement. Under the amended agreement, Immunex has decision-making authority for development and commercialization activities. As under the original agreement, the Company and Immunex continue to share equally in the development and commercialization costs and any profits from sales of ABX-EGF. In addition under

the new agreement, Immunex is obligated to make available up to $60 million in advances that the Company may use to fund its share of development and commercialization costs after it has contributed $20.0 million toward development costs in 2004. The amount of any such advances, plus interest, may be repaid out of profits resulting from future product sales. However, the Company is not obligated to repay any portion of the loan if ABX-EGF is not commercialized. Under a separate agreement with Immunex, the Company has responsibility for manufacturing clinical supplies for the collaboration and, for the first five years after commercial launch, for manufacturing commercial supplies with Immunex's support and assistance. The costs of manufacturing commercial supplies will also be shared equally by the Company and Immunex.

In October 2003, the Company entered into a collaboration and license agreement with AstraZeneca UK Limited ("AstraZeneca") to provide for the joint discovery and development of therapeutic antibodies against up to 36 oncology targets to be commercialized exclusively worldwide by AstraZeneca. The agreement provides that the Company will conduct early stage preclinical research on behalf of AstraZeneca with respect to these targets. Under the agreement, the Company also may conduct clinical, process development and manufacturing activities for which AstraZeneca is to compensate the Company at competitive market rates. The collaboration agreement also includes a co-development component under which Abgenix will be able to generate additional antibody product candidates against up to 18 targets that AstraZeneca will have the option to co-develop with Abgenix. The companies will share development costs and responsibilities for any co-development candidates selected by AstraZeneca. During the three-year period of selection of targets for development the Company will work exclusively with AstraZeneca to generate and develop antibodies for therapeutic use in oncology subject to various exceptions, including among others for generation and development of antigens in accordance with existing collaborations, for antigens that the Company and AstraZeneca decide not to pursue in the collaboration, and for certain process development and manufacturing services.

In 1997, the Company entered into a license agreement for exclusive worldwide rights to commercialize one of the Company's product candidates, ABX-CBL. The Company paid an initial license fee and is further obligated to pay an annual maintenance fee of $50,000, to commit at least $1.0 million annually to the development of the product candidate, until it receives regulatory approval in any country and to pay royalties on potential product sales. The Company is also obligated to issue 100,000 shares of its common stock upon the submission of a Product License Application for the first indication of the product.

In August 2000, the Company entered into a collaboration agreement with SangStat to develop and commercialize one of the Company's product candidates, ABX-CBL. Under the terms of the agreement, the Company agreed to share responsibility for product development and to share equally in the costs of developing and commercializing the product candidates. Development costs were determined by the development plans agreed upon by the joint steering committees. In February 2003, the Company and SangStat announced that because the Phase 2/3 clinical trial for the product candidate did not meet its primary endpoint, the Company and SangStat would discontinue further development of the product candidate.

In November 2001, the Company entered into an agreement with Gliatech under which Gliatech granted the Company an exclusive world-wide license to develop and commercialize certain fully human antibody therapeutic candidates. In March of 2003, the parties canceled the agreement and the Company acquired certain intellectual property rights from Gliatech. In the first quarter of 2003, the Company decided to discontinue the development of the therapeutic antibodies that had been subject to this agreement.

Product Manufacturing

In June 2003, the Company canceled its November 2000 agreement with Lonza Biologics plc ("Lonza") for the exclusive use of a cell culture production suite, because the Company determined that with the opening of its own manufacturing plant and due to changes in its portfolio of product candidates, it no longer needed access to the Lonza facility. Upon canceling the agreement, the Company became obligated to pay Lonza four equal installments of 4,250,000 British pounds on October 1, 2003, February 1, 2004, May 1, 2004 and August 1, 2004. The value of this obligation on the effective date of June 30, 2003 was approximately $28.0 million and was recorded as a component of manufacturing start-up costs in the Company's statements of operations in the second quarter of 2003. In December 2003, the Company made the first of four installment payments to Lonza. The balance of the obligation as of December 31, 2003 was approximately $22.7 million.

12. RESTRUCTURING CHARGES

In October 2002, the Company announced a restructuring plan, which consisted primarily of a 15% reduction in employees. A restructuring charge of $1.8 million was recorded in 2002 to account for severance pay, medical benefits and other costs associated with this restructuring. Of the $1.8 million, $0.7 million was paid in 2002 and the remainder was paid in 2003.

13. IMPAIRMENT OF INVESTMENTS

In 2001, the Company invested $15.0 million in equity securities of MDS Proteomics, a privately held company, in connection with our collaboration with that company. As of December 31, 2003 and June 30, 2002, the Company determined that an impairment of the investment had occurred and estimated that the value of the investment had declined to zero and $7.9 million, respectively. Accordingly, the Company recorded an impairment charges of $7.9 and $7.1 million, respectively, in the fourth quarter of 2003 and second quarter of 2002. The amount of the charge was based on the difference between the estimated value as determined by the management and the revised or original cost basis. At December 31, 2002, the investment was recorded in long-term investments on the balance sheet.

The Company purchased an aggregate amount of $80.0 million of common stock of CuraGen and ImmunoGen as strategic investments at various times in 1999 and 2000. In 2002, declines in the fair value of the CuraGen and ImmunoGen common stock were deemed by the Company management to be other than temporary. Accordingly, the Company recorded a total impairment charge for the year ended December 31, 2002 of $67.3 million. As of December 31, 2003, these investments were recorded at fair value in long-term investments on the balance sheet, and the net unrealized holding gains of $8.0 million are reported as a component of stockholders' equity. If the Company deems these investments further impaired at the end of any future period, the Company may incur an additional impairment charge on these investments.

14. INCOME TAXES

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax

purposes. Significant components of the Company's deferred tax assets as of December 31, 2003 and 2002 are as follows:

	December 31,	
	2003	2002
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 165,500	$ 110,400
Investment reserve	32,900	29,800
Capitalized research and development	17,000	12,500
Research credit carryforwards	24,100	22,000
Other	20,500	16,200
Total deferred tax assets	260,000	190,900
Valuation allowance	(237,500)	(169,000)
Net deferred tax assets	22,500	21,900
Deferred tax liabilities:		
Purchased intangibles	(19,300)	(20,900)
Other	(3,200)	(1,000)
Net deferred taxes	$ —	$ —

Realization of deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Accordingly, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by $68.5 million and $79.3 million during the years ended December 31, 2003 and 2002, respectively. Approximately $43.3 million of the valuation allowance for deferred tax assets relates to benefits of stock option deductions, the benefit of which will be credited to equity when realized. As of December 31, 2003, the Company had net operating loss carryforwards for federal and state income tax purposes of approximately $469.0 million and $102.0 million, respectively, which expire in the years 2006 through 2023. As of December 31, 2003, the Company had federal and state research and development tax credit carryforwards of approximately $14.0 million and $15.0 million, respectively. The federal credits expire in the years 2006 through 2023. The state credits do not expire. Utilization of the Company's net operating loss and tax credit carryforwards may be subject to substantial annual limitation due to the ownership change limitations provided by Internal Revenue Code and similar state provisions. Such an annual limitation could result in the expiration of these carryforwards before utilization.

15. STOCKHOLDERS' EQUITY

Common Stock

Initial Public Offering—In July 1998, the Company completed an initial public offering of 10,000,000 shares of its common stock to the public, at a price of $2.00 per share. On July 27, 1998, the Company's underwriters exercised an option to purchase 1,500,000 additional shares of common stock at a price of $2.00 per share to cover over-allotments. The Company received net proceeds from the offerings of approximately $20.1 million. Upon the closing of the initial public offering, each of the outstanding 31,377,408 shares of redeemable convertible preferred stock was automatically converted into one share of common stock.

Collaborator or Private Placement—In January 1999, a collaborator acquired 1,981,424 shares of the Company's common stock for an aggregate purchase price of $8.0 million.

Follow-on Public Offering—In March 1999, the Company completed a follow-on public offering of 12,000,000 shares of its common stock to the public, at a price of $3.75 per share. On April 7, 1999 the Company's underwriters exercised an option to purchase 832,000 additional shares of common stock at a price of $3.75 per share to cover over-allotments. The Company received net proceeds from the offerings of approximately $44.5 million.

Private Placement—In November 1999, the Company completed a private placement of 7,112,000 shares of its common stock to qualified institutional and other accredited investors at a net price of $10.50 per share The Company received net proceeds of $71.1 million.

Follow-on Public Offering—In February 2000, the Company completed a follow-on public offering in which the Company sold 8,640,000 shares and a stockholder sold 3,360,000 shares of the Company's common stock to the public at a price of $52.50 per share. On February 29, 2000, the Company's underwriters exercised an option to purchase 1,800,000 additional shares, of which 1,296,000 shares were sold by the Company and 504,000 shares were sold by a stockholder at a price of $52.50 per share. The Company received net proceeds from the offerings of $496.5 million after the underwriters' discount and estimated costs of offering.

Private Placement—In November 2000, the Company completed a private placement of 3,300,000 shares of its common stock to qualified institutional and other accredited investors at a net price of $70.00 per share. The Company received net proceeds of $221.0 million.

Acquisition for Common Stock—In November 2001, the Company acquired Hesed Biomed in exchange for 475,930 shares of common stock, valued at $29.79 per share. (See Note 2 above and **Warrants** below.)

Abgenix is authorized to issue up to 220,000,000 shares of common stock. At December 31, 2003, common stock issuable upon conversion or exercise is as follows (in thousands):

Stock option plans	18,242
Warrants	16
Employee stock purchase plans	1,232
Convertible subordinated notes due 2007	7,252
Redeemable convertible preferred stock	3,333
	30,075

Stockholder Rights Plan

On June 2, 1999, the Company's Board of Directors declared a dividend of one right, or Right, to purchase one one-thousandth share of our Series A Participating Preferred Stock, or Series A Preferred, for each of our outstanding shares of common stock, the Common Shares. On June 14, 1999, the Company entered into a Preferred Shares Rights Agreement, or Rights Agreement, with ChaseMellon Shareholder Services, L.L.C., the predecessor to Mellon Investor Services LLC, as Rights Agent, which was amended and restated on November 19, 1999, and on May 9, 2002 and amended on October 29, 2003. The dividend was payable to stockholders of record as of the close of business on the record date, June 14, 1999. As amended, each Right entitles the registered holder to purchase from us one one-thousandth of a share of Series A Preferred at an exercise price of $175.00, the Purchase

Price. Each one one-thousandth of a share of Series A Preferred has rights and preferences substantially equivalent to those of one Common Share.

The Rights will separate from the Common Shares and become exercisable upon the earlier of: (i) 10 days following a public announcement that a person or group has acquired 15% or more of the outstanding Common Shares, or (ii) 10 business days (or such later date as may be determined by our Board of Directors) following the announcement of a tender offer or exchange offer for 15% or more of the Common Shares. Unless the Rights are earlier redeemed by our Board of Directors at a price of $0.01 per Right, if a person or group acquires 15% or more of the Common Shares, each Right will entitle its holder to receive, upon exercise, Common Shares having a value equal to two times the Purchase Price. Similarly, unless the Rights are earlier redeemed, in the event that, after a person or group becomes the beneficial owner of 15% or more of the Common Shares, (i) the Company is acquired in a merger, or (ii) 50% or more of the Company's assets or earning power are sold, proper provision must be made so that each holder of a Right which has not been exercised will have the right to receive, upon exercise, shares of common stock of the acquiring company having a value equal to two times the Purchase Price. After the acquisition of 15% or more of the Common Shares but prior to such a merger or sale, the Board of Directors may exchange each Right for one Common Share.

In October 2003, pursuant to the securities purchase agreement between the Company and AstraZeneca, the Company amended its stockholder rights plan to prevent AstraZeneca from becoming an "Acquiring Person" for purposes of the rights plan as a result of (1) its acquisition of securities of Abgenix pursuant to the securities purchase agreement; (2) the beneficial ownership by AstraZeneca and its affiliates of the common stock of Abgenix issuable upon conversion of the securities issued pursuant to the securities purchase agreement; or (3) the mandatory conversion at the Company's option of the securities issued pursuant to the securities purchase agreement into shares of common stock. The Company agreed to keep this amendment in place for a "standstill period" designated in the securities purchase agreement, provided that the Company's obligation to keep the rights plan amendment in place shall lapse if AstraZeneca breaches its standstill obligations in the securities purchase agreement. The Company has agreed to continue to keep the amendment in place after the termination of the standstill period for so long as AstraZeneca does not acquire voting securities of Abgenix that would cause AstraZeneca's level of ownership to exceed that in effect on the date of the termination of the standstill period.

Warrants

In connection with loan guarantees it received in 1997, the Company issued warrants to purchase a total of 486,668 shares of Abgenix common stock, at an exercise price of $1.50 per share. The original terms were such that the warrants were exercisable immediately and expired in three years. The fair value of the above warrants was determined at the time to be insignificant for accounting purposes. These warrants were exercised in January 2000.

In connection with the acquisition of Hesed Biomed in November 2001, the Company assumed obligations under outstanding warrants for the purchase of 18,731 shares of common stock. At December 31, 2003, 16,051 shares of these warrants were outstanding and expire on various dates from October 2005 through February 2010. (See Note 2.)

16. STOCK OPTION AND BENEFIT PLANS

Incentive Stock Plans

The Company has three stock option plans, which allow for the granting of incentive and non-qualified stock options to employees, outside directors and consultants of the Company. There are 26,365,000 shares of common stock authorized for issuance under the plans. The Company grants shares of common stock for issuance under the plans at no less than the fair value of the stock. Options granted under the plans generally have a term of seven or ten years and vest over four years.

Information with respect to activity under the plans is as follows:

	Option Shares Available for Grant	Option Shares Outstanding	Weighted Average Exercise Price
Balances at December 31, 2000	2,448,685	10,511,363	$27.40
Authorized	3,000,000	—	—
Options granted	(3,616,917)	3,616,917	$33.33
Options exercised	—	(888,288)	$ 3.60
Options canceled	416,907	(416,907)	$35.55
Balances at December 31, 2001	2,248,675	12,823,085	$30.46
Authorized	4,000,000	—	—
Options granted	(1,669,541)	1,669,541	$19.15
Options exercised	—	(548,367)	$ 1.32
Options canceled	1,185,278	(1,185,278)	$39.66
Balances at December 31, 2002	5,764,412	12,758,981	$29.38
Options granted	(2,365,473)	2,365,473	$ 9.32
Options exercised	—	(280,844)	$ 3.75
Options canceled	2,478,793	(2,478,793)	$34.03
Balances at December 31, 2003	5,877,732	12,364,817	$25.24
Options exercisable at:			
December 31, 2001		5,718,693	$22.25
December 31, 2002		8,259,644	$26.87
December 31, 2003		8,953,781	$26.78

In addition to the amounts disclosed in the table above, in June 2001, the Company granted and immediately canceled 159,413 options under the 1999 stock option plan in relation to the cash buy-out of outstanding options held by Abgenix Biopharma employees.

The following table summarizes information about options outstanding at December 31, 2003:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number of Options	Weighted Average Exercise Price	Remaining Contractual Life, in Years	Number of Options	Weighted Average Exercise Price
$ 0.15 - $ 2.13 . . .	831,487	$ 0.96	3.60	831,487	$ 0.96
$ 3.59 - $10.99 . . .	4,071,582	$ 7.13	5.94	2,536,293	$ 6.14
$11.00 - $31.81 . . .	3,439,067	$25.75	7.02	2,370,139	$28.44
$32.28 - $42.00 . . .	2,428,955	$35.87	6.88	1,928,152	$35.90
$45.00 - $59.93 . . .	643,526	$48.79	6.93	501,594	$49.07
$75.17 - $80.81 . . .	950,200	$79.13	6.68	786,116	$79.12
	12,364,817	$25.24	6.38	8,953,781	$26.78

Prior to the Company's initial public offering, options to purchase shares of common stock were granted at prices based on the deemed fair value of common stock of which deferred compensation was recorded. The Company amortized $234,000 of the deferred compensation balance during the year ended December 31, 2001. The deferred compensation was fully amortized in 2001 and therefore there was no amortization of deferred compensation in 2002 and 2003.

Pro Forma Information

Pro forma information regarding net loss and net loss per share is required by SFAS No. 123, and has been provided in Note 1. The information has been determined as if the Company had accounted for its employee stock options under the fair value method of that Statement. The fair value for these options was estimated at the date of grant using a Black-Scholes option pricing model with the following assumptions for 2003, 2002 and 2001, respectively: risk-free interest rate of 2.81%, 3.07% and 4.61%; no dividend yield in 2003, 2002 or 2001; volatility factor of 1.00, 1.05 and 1.00; and an expected life of the option of 5.51 years in 2003, 5.54 years in 2002 and 5.73 years in 2001. These same assumptions were applied in the determination of the option values related to stock options granted to non-employees, except for the option life for which the term of the consulting contracts, 1 to 5 years, were used. The value has been recorded in the financial statements.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options, which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.

The weighted-average fair values of options granted during the years ended December 31, 2003, 2002 and 2001 were $7.25, $15.34 and $27.15 per share.

Employee Stock Purchase Plans

The Company's employee stock purchase plan enables eligible employees to purchase common stock at 85% of the closing sale price on the first or the last day of each 6 month purchase period, whichever is lower. Employees may authorize periodic payroll deductions of up to 15% of eligible compensation for common stock purchases, with certain limitations. The number of shares which may

be issued under the plan is 1,000,000, plus an annual increase equal to the lesser of 1,000,000, 1% of the Company's outstanding capitalization or a lesser amount determined by the Board. The maximum number of shares that can be issued over the 10-year term of the plan is 10,000,000. As of December 31, 2003, 2,096,092 shares had been authorized under the plan and 1,043,418 shares had been issued.

The Company's Canadian employee stock purchase plan enables certain eligible employees to purchase common stock at the average market price on the first or the last day of each 6 month purchase period, whichever is lower. Eligible employees may authorize periodic payroll deductions of up to 15% of eligible compensation for common stock purchases, with certain limitations. The number of shares that may be issued under this plan is 200,000. As of December 31, 2003, 200,000 shares had been authorized under this plan and 20,964 shares had been issued.

Benefit Plan

The Company has available a 401(k) retirement plan in the United States. Eligible employees may contribute up to 100% of their compensation up to a maximum allowable under the Internal Revenue Code. The Company does not match contributions and therefore no expense has been recorded. The Company also has available a retirement plan in Canada. Eligible employees may contribute a percentage of their gross salary, up to the maximum dollar amount legislated by Canada Customs and Revenue Agency. After one year of employment, the Company will match employee contributions up to a maximum of 5% of the employee's gross salary.

17. CUSTOMER INDEMNIFICATION

The Company has certain agreements with customers and collaborators that contain indemnification provisions. In such provisions, the Company typically agrees to indemnify the customer or collaborator against certain types of third-party claims. The Company would accrue for known indemnification issues if a loss were probable and could be reasonable estimated. The Company would also accrue for estimated incurred but unidentified issues based on historical activity. There was no accrual for or expense related to indemnification issues as of December 31, 2003 and 2002.

18. QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

Unaudited quarterly financial information is as follows:

	Quarter Ended			
	Mar 31,	June 30,	Sep 30,	Dec 31,
	(in thousands, except per share data)			
2002				
Contract revenues	$ 10,998	$ 2,501	$ 2,635	$ 3,158
Loss from operations	(26,495)	(45,474)	(37,695)	(40,165)
Impairment of investments	(34,653)	(37,498)	—	(2,234)
Net loss	(56,451)	(79,709)	(33,855)	(38,883)
Basic and diluted net loss per share	$ (0.65)	$ (0.92)	$ (0.39)	$ (0.44)
2003				
Contract revenues	$ 6,156	$ 2,350	$ 1,957	$ 6,389
Loss from operations	(35,279)	(67,955)	(43,953)	(45,435)
Impairment of investments	—	—	—	(7,892)
Net loss	(33,164)	(66,661)	(43,569)	(53,035)
Basic and diluted net loss per share	$ (0.38)	$ (0.76)	$ (0.50)	$ (0.60)

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

Not applicable.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Based on their evaluation of our disclosure controls and procedures, as that term is defined by Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as of the end of the period covered by this report, our chief executive officer and our Senior Director, Finance, have concluded that our disclosure controls and procedures are effective in ensuring that all material information required to be included in this annual report on Form 10-K has been made known to them in a timely fashion.

Changes in Internal Controls

There has been no change in our internal control over financial reporting during our last fiscal year that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART III

Item 10. Directors and Executive Officers of the Registrant

The information required by this item concerning the Company's directors, compliance with Section 16 (a) of the Securities Exchange Act of 1934 and the Company's code of ethics is incorporated by reference to the Company's Proxy Statement related to the 2004 Annual Meeting of Stockholders (the 2004 Proxy Statement.)

The information required by this item concerning the Company's executive officers is set forth in Part I of this Form 10-K.

Item 11. Executive Compensation

The information required by this item is incorporated by reference to the Company's 2004 Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management

The information required by this item is incorporated by reference to the Company's 2004 Proxy Statement.

Item 13. Certain Relationships and Related Transactions

The information required by this item is incorporated by reference to the Company's 2004 Proxy Statement.

Item 14. Principal Accountant Fees and Services

The information required by this item is incorporated by reference to the Company's 2004 Proxy Statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules, and Reports of Form 8-K.

4. The following documents are filed as part of this Report:

4. Financial Statements

ABGENIX, INC., FINANCIAL STATEMENTS

Report of Ernst & Young LLP, Independent Auditors

Consolidated Balance Sheets

Consolidated Statements of Operations

Consolidated Statements of Stockholders' Equity

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

2. Financial Statement Schedules

All schedules for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission are not required under the related instructions or are inapplicable or the information has been disclosed in the financial statements, and therefore have been omitted.

3. Exhibits

Number	Description
3.1(39)	Amended and Restated Certificate of Incorporation of Abgenix, as currently in effect.
3.2(30)	Amended and Restated Bylaws of Abgenix, as currently in effect.
4.1(1)	Specimen Common Stock Certificate.
4.2(33)	Indenture dated March 4, 2002, between State Street Bank and Trust Company of California, N.A. and Abgenix, Inc.
4.3(33)	Registration Rights Agreement dated March 4, 2002 between Credit Suisse First Boston Corporation, Banc of America Securities LLC and Robertson Stephens, Inc. and Abgenix, Inc.
4.4(31)	Amended and Restated Preferred Shares Rights Agreement, dated as of May 9, 2002, between Abgenix, Inc. and Mellon Investor Services, LLC, including the Certificate of Determination, the form of Rights Certificate and the Summary of Rights attached thereto as Exhibits A, B and C, respectively.
4.5(1)	Amended and Restated Stockholder Rights Agreement dated January 12, 1998 among Abgenix and certain holders of Abgenix's capital stock.
4.6(25)	Form of Stock Purchase Agreement between Abgenix, Inc. and the purchasers in the private placement in November 2000.
4.7(37)	Certificate of Designations, Preferences and Rights of Series A-1 Convertible Preferred Stock of Abgenix, Inc.
4.8(37)	Certificate of Designations, Preferences and Rights of Series A-2 Convertible Preferred Stock of Abgenix, Inc.

Number	Description
4.9(36)	Securities Purchase Agreement, dated as of October 15, 2003, by and between Abgenix, Inc. and AstraZeneca UK Limited.
4.10(38)	Amendment No. 1 to Amended and Restated Preferred Shares Rights Agreements, between Abgenix, Inc. and Mellon Investor Services LLC, dated October 29, 2003.
4.11	Convertible Subordinated Note issued to AstraZeneca UK Limited.
10.1(1)	Form of Indemnification Agreement between Abgenix and each of its directors and officers.
10.2(39)	Amended and Restated 1996 Incentive Stock Plan.
10.3(1)	1998 Employee Stock Purchase Plan and form of agreement thereunder.
10.4(39)	Amended and Restated 1998 Director Option Plan.
10.5(32)	Amended and Restated 1999 Nonstatutory Stock Option Plan.
10.6(32)	Canadian Employee Stock Purchase Plan.
10.7(3)	Joint Venture Agreement dated June 12, 1991 between Cell Genesys and JT Immunotech USA Inc.
10.8(6)	Amendment No. 1 dated January 1, 1994 to Joint Venture Agreement.
10.9(9)	Amendment No. 2 dated June 28, 1996 to Joint Venture Agreement.
10.10(3)	Collaboration Agreement dated June 12, 1991 among Cell Genesys, Xenotech, Inc. and JT Immunotech USA Inc.
10.11(5)	Amendment No. 1 dated June 30, 1993 to Collaboration Agreement.
10.12(13)	Amendment No. 2 dated January 1, 1994 to Collaboration Agreement.
10.13(7)	Amendment No. 3 dated July 1, 1995 to Collaboration Agreement.
10.14(9)	Amendment No. 4 dated June 28, 1996 to Collaboration Agreement.
10.15(2)	Amendment No. 5 dated November 1997 to Collaboration Agreement.
10.16(3)	Limited Partnership Agreement dated June 12, 1991 among Cell Genesys, Xenotech, Inc. and JT Immunotech USA Inc.
10.17(6)	Amendment No. 2 dated January 1, 1994 to Limited Partnership Agreement.
10.18(8)	Amendment No. 3 dated July 1, 1995 to Limited Partnership Agreement.
10.19(10)	Amendment No. 4 dated June 28, 1996 to Limited Partnership Agreement.
10.20(4)	Field License dated June 12, 1991 among Cell Genesys, JT Immunotech USA Inc. and Xenotech, L.P.
10.21(10)	Amendment No. 1 dated March 22, 1996 to Field License.
10.22(10)	Amendment No. 2 dated June 28, 1996 to Field License.
10.23(3)	Expanded Field License dated June 12, 1991 among Cell Genesys, JT Immunotech USA Inc. and Xenotech, L.P.
10.24(10)	Amendment No. 1 dated June 28, 1996 to Expanded Field License.

Number	Description
10.25(2)	Amended and Restated Anti-IL-8 License Agreement dated March 19, 1996 among Xenotech, L.P., Cell Genesys and Japan Tobacco Inc.
10.26(9)	Master Research License and Option Agreement dated June 28, 1996 among Cell Genesys, Japan Tobacco Inc. and Xenotech, L.P.
10.27(2)	Amendment No. 1 dated November 1997 to the Master Research License and Option Agreement.
10.28(2)	Stock Purchase and Transfer Agreement dated July 15, 1996 by and between Cell Genesys and Abgenix.
10.29(1)	Governance Agreement dated July 15, 1996 between Cell Genesys and Abgenix.
10.30(1)	Amendment No. 1 dated October 13, 1997 to the Governance Agreement.
10.31(1)	Amendment No. 2 dated December 22, 1997 to the Governance Agreement.
10.32(2)	Gene Therapy Rights Agreement effective as of November 1, 1997 between Abgenix and Cell Genesys.
10.33(2)	Patent Assignment Agreement dated July 15, 1996 by Cell Genesys in favor of Abgenix.
10.34(11)	Lease Agreement dated July 31, 1996 between John Arrillaga, Trustee, or his Successor Trustee, UTA dated 7/20/77 (Arrillaga Family Trust) as amended, and Richard T. Peery, Trustee, or his Successor Trustee, UTA dated 7/20/77 (Richard T. Peery Separate Property Trust) as amended, and Abgenix.
10.35(2)	License Agreement dated February 1, 1997 between Ronald J. Billing, Ph.D. and Abgenix.
10.36(12)	Release and Settlement Agreement dated March 26, 1997 among Cell Genesys, Abgenix, Xenotech, L.P., Japan Tobacco Inc. and GenPharm International, Inc.
10.37(12)	Cross License Agreement effective as of March 26, 1997, among Cell Genesys, Abgenix, Xenotech, L.P., Japan Tobacco Inc. and GenPharm International, Inc.
10.38(12)	Interference Settlement Procedure Agreement, effective as of March 26, 1997, among Cell Genesys, Abgenix, Xenotech, L.P., Japan Tobacco Inc. and GenPharm International, Inc.
10.39(2)	Agreement dated March 26, 1997 among Xenotech, L.P., Xenotech, Inc., Cell Genesys, Abgenix, Japan Tobacco Inc. and JT Immunotech USA Inc.
10.40(2)	Contractual Research Agreement dated December 22, 1997 between Pfizer, Inc. and Abgenix.
+10.41(22)	Amendment No. 1 dated May 26, 1998 to Contractual Research Agreement between Abgenix and Pfizer, Inc.
+10.42(22)	Amendment No. 2 dated October 22, 1998 to Contractual Research Agreement between Abgenix and Pfizer, Inc.
10.43(2)	Contractual Research Agreement effective as of January 28, 1998 between Schering-Plough Research Institute and Abgenix.
10.44(16)	Amendment No. 2 effective January 28, 1999 to Contractual Research Agreement between Schering-Plough Research Institute and Abgenix.

Number	Description
10.45(16)	Amendment No. 3 effective February 12, 1999 to the Contractual Research Agreement between Schering-Plough Research Institute and Abgenix.
10.46(1)	Excerpts from the Minutes of a Meeting of the Board of Directors of Abgenix, dated October 23, 1996.
10.47(1)	Excerpts from the Minutes of a Meeting of the Board of Directors of Abgenix, dated October 22, 1997.
10.48(2)	Exclusive Worldwide Product License dated November 1997 between Xenotech, L.P. and Abgenix.
10.49(2)	Research License and Option Agreement effective as of April 6, 1998 between Abgenix and Genentech, Inc.
10.50(2)	Amendment No. 1 effective as of June 18, 1998 to Research License and Option Agreement between Abgenix and Genentech, Inc.
10.51(14)	Research Collaboration Agreement dated July 15, 1998 between Millennium BioTherapeutics, Inc. and Abgenix.
+10.52(22)	Research Collaboration Agreement dated September 29, 1998 between Millennium BioTherapeutics, Inc. and Abgenix.
10.53(22)	Amendment No. 1 effective as of November 29, 1998 to the Research Collaboration Agreement between Millennium BioTherapeutics, Inc. and Abgenix.
+10.54(22)	Research License and Option Agreement dated October 30, 1998 between Millennium BioTherapeutics, Inc. and Abgenix.
10.55(16)	Research Collaboration Agreement dated December 22, 1998 between Centocor, Inc. and Abgenix.
+10.56(22)	Memorandum of Understanding between Research Corporation Technologies, Inc. and Abgenix.
+10.57(22)	Research License and Option Agreement dated January 4, 1999 between AVI BioPharma, Inc. and Abgenix.
10.58(16)	Multi-Antigen Research License and Option Agreement dated January 27, 1999 between Genentech and Abgenix.
+10.59(21)	Multi-Antigen Research License and Option Agreement by and between Abgenix, Inc. and Japan Tobacco Inc. effective December 31, 1999.
+10.60(21)	Amended and Restated Field License by and among Abgenix, Inc., JT America Inc. and Xenotech L.P. effective December 31, 1999.
10.61(21)	Agreement to Terminate the Collaboration Agreement by and among Abgenix, Inc., JT America Inc., and Xenotech L.P. effective December 31, 1999.
+10.62(21)	Agreement to Terminate the Interest of Japan Tobacco Inc. in the Master Research License and Option Agreement by and among Abgenix, Inc., Japan Tobacco Inc. and Xenotech L.P. effective December 31, 1999.
+10.63(21)	Amendment of the Expanded Field License by and among Abgenix, Inc., JT America Inc. and Xenotech L.P. effective December 31, 1999.

Number	Description
10.64(21)	Limited Partnership Interest and Stock Purchase Agreement between Abgenix, Inc. and JT America Inc. made December 20, 1999.
+10.65(21)	License Agreement by and between Abgenix, Inc. and Japan Tobacco Inc. effective December 31, 1999.
10.66(23)	Lease Agreement dated February 24, 2000 between Ardenwood Corporate Park Associates, a California Limited Partnership and Abgenix, Inc.
10.67(23)	Lease Agreement dated May 19, 2000 between Ardenwood Corporate Park Associates, a California Limited Partnership and Abgenix, Inc.
10.68(25)	Acquisition Agreement dated as of September 25, 2000 among Abgenix, Inc., Abgenix Canada Corporation and ImmGenics Pharmaceuticals Inc.
+10.69(26)	License Agreement among BR Centre Limited, Ingenix Biomedical Inc. and Dr. John W. Schrader, dated May 9, 1994.
+10.70(26)	License Agreement Amendment among BR Centre Limited, Ingenix Biomedical Inc. and Dr. John W. Schrader, dated May 9, 1994.
10.71(26)	Assignment Agreement among BR Centre Limited and The University of British Columbia Foundation, dated March 10, 1998.
10.72(27)	Lease Agreement dated February 8, 2001 between AMB Property, L.P., a Delaware limited partnership, and Abgenix, Inc.
++10.73(27)	Product Supply Agreement by and between Lonza Biologics PLC and Abgenix, Inc. dated November 30, 2000.
10.74(29)	Lease dated September 1, 2001 among Townline Ventures 17 Ltd., Abgenix Biopharma Inc. and Abgenix, Inc.
+10.75(29)	License Agreement among Medical Research Council, Agricultural and Food Research Council Institute of Animal Physiology and Genetics Research of Babraham Hall, Marianne Bruggemann and Cell Genesys, Inc., dated March 29, 1994.
10.76(29)	First Amendment, dated as of November 30, 2001, to the Lease Agreement, dated as of February 8, 2001, between AMB Property, L.P. and Abgenix, Inc.
10.77(33)	First Amendment, dated August 31, 2001, to the Lease Agreement, dated February 24, 2000, between Ardenwood Corporate Park Associates, a California Limited Partnership, and Abgenix, Inc.
10.78(33)	First Amendment, dated August 31, 2001, to the Lease Agreement, dated May 19, 2000, between Ardenwood Corporate Park Associates, a California Limited Partnership, and Abgenix, Inc.
10.79(33)	Second Amendment, dated November 7, 2001, to the Lease Agreement, dated May 19, 2000, between Ardenwood Corporate Park Associates, a California Limited Partnership, and Abgenix, Inc.
10.80(33)	Amendment No. 1, dated January 22, 2002, to the Lease Agreement, dated July 31, 1996, between John Arrillaga, Trustee, or his Successor Trustee UTA dated 7/20/77 (John Arrillaga Survivors Trust) as amended, and Richard T. Peery, Trustee, or his Successor Trustee UTA dated 7/20/77 (Richard T. Peery Separate Property Trust) as amended, and Abgenix, Inc.

Number	Description
10.81(33)	Lease Agreement dated January 22, 2002 between John Arrillaga, Trustee, or his Successor Trustee UTA dated 7/20/77 (John Arrillaga Survivors Trust) as amended, and Richard T. Peery, Trustee, or his Successor Trustee UTA dated 7/20/77 (Richard T. Peery Separate Property Trust) as amended, and Abgenix, Inc.
10.82(34)	Letter Agreement dated June 27, 2003, between Lonza Biologics plc and Abgenix, Inc.
10.83(34)	Form of Change of Control Severance Agreement between Abgenix, Inc. and its officers.
10.84(34)	Amended and Restated Change of Control Severance Agreement dated as of April 24, 2003, between Abgenix, Inc. and Raymond M. Withy, Ph.D.
10.85(35)	Sublease, dated as of July 31, 2003, by and between Protein Design Labs, Inc. and Abgenix, Inc.
10.86(36)++	Collaboration and License Agreement, dated as of October 15, 2003, by and between Abgenix, Inc. and AstraZeneca UK Limited.
21.1(30)	List of subsidiaries.
23.1	Consent of Ernst & Young LLP, Independent Auditors.
24.1	Power of Attorney. (See page 111)
31.1	Certification of Raymond M. Withy, Ph.D. Pursuant to Rule 13a-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Barbara Riching Pursuant to Rule 13a-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Raymond M. Withy, Ph.D. Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Barbara Riching Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

+ Confidential treatment granted for portions of these exhibits. Omitted portions have been filed separately with the Commission.

++ Confidential treatment has been requested for portions of the exhibit. Omitted portions have been filed separately with the Commission.

(1) Incorporated by reference to the same exhibit filed with Abgenix's Registration Statement on Form S-1 (File No. 333-49415).

(2) Incorporated by reference to the same exhibit filed with Abgenix's Registration Statement on Form S-1 (File No. 333-49415), portions of which have been granted confidential treatment.

(3) Incorporated by reference to the same exhibit filed with Cell Genesys' Registration Statement on Form S-1 (File No. 33-46452), portions of which have been granted confidential treatment.

(4) Incorporated by reference to the same exhibit filed with Cell Genesys' Registration Statement on Form S-1 (File No. 33-46452).

(5) Incorporated by reference to the same exhibit filed with Cell Genesys' Quarterly Report on Form 10-Q for the quarter ended June 30, 1993, portions of which have been granted confidential treatment.

(6) Incorporated by reference to the same exhibit filed with Cell Genesys' Annual Report on Form 10-K for the year ended December 31, 1993, portions of which have been granted confidential treatment.

(7) Incorporated by reference to the same exhibit filed with Cell Genesys' Quarterly Report on Form 10-Q for the quarter ended June 30, 1995, portions of which have been granted confidential treatment.

(8) Incorporated by reference to the same exhibit filed with Cell Genesys' Quarterly Report on Form 10-Q for the quarter ended June 30, 1995.

(9) Incorporated by reference to the same exhibit filed with Cell Genesys' Quarterly Report on Form 10-Q for the quarter ended June 30, 1996, portions of which have been granted confidential treatment.

(10) Incorporated by reference to the same exhibit filed with Cell Genesys' Quarterly Report on Form 10-Q for the quarter ended June 30, 1996.

(11) Incorporated by reference to the same exhibit filed with Cell Genesys' Quarterly Report on Form 10-Q for the quarter ended September 30, 1996.

(12) Incorporated by reference to the same exhibit filed with Cell Genesys' Annual Report on Form 10-K for the year ended December 31, 1996, as amended, portions of which have been granted confidential treatment.

(13) Incorporated by reference to the same exhibit filed with Cell Genesys' Annual Report on Form 10-K for the year ended December 31, 1993.

(14) Incorporated by reference to the same exhibit filed with Abgenix's Current Report on Form 8-K filed with the Commission on July 17, 1998, portions of which have been granted confidential treatment.

(15) Incorporated by reference to the same exhibit filed with Abgenix's Current Report on Form 8-K filed with the Commission on November 24, 1998.

(16) Incorporated by reference to the same exhibit filed with Abgenix's Registration Statement on Form S-1 (File No. 333-71289), portions for which Abgenix has requested confidential treatment.

(17) Incorporated by reference to the same exhibit filed with Abgenix's Registration Statement on Form S-1 (File No. 333-71289).

(18) Incorporated by reference to the same exhibit filed with Abgenix's Registration Statement on Form 8-A (File No. 000-24207).

(19) Incorporated by reference to the same exhibit filed with Abgenix's Registration Statement on Form S-8 (File No. 333-90707).

(20) Incorporated by reference to the same exhibit filed with Abgenix's Registration Statement on Form S-3 (File No. 333-91699).

(21) Incorporated by reference to the same exhibits filed with Abgenix's Current Report on Form 8-K filed with the Commission on January 27, 2000.

(22) Incorporated by reference to the same exhibits filed with Abgenix's Registration Statement on Form S-1 (File No. 333-70631).

(23) Incorporated by reference to the same exhibits filed with Abgenix's Quarterly Report on Form 10-Q for the quarter ended June 30, 2000.

(24) Incorporated by reference to the same exhibit filed with Abgenix's Registration Statement on Form S-8 (File No. 333-45426).

(25) Incorporated by reference to the same exhibits filed with Abgenix's Quarterly Report on Form 10-Q for the quarter ended September 30, 2000.

(26) Incorporated by reference to the same exhibits filed with Abgenix's Annual Report on Form 10-K for the year ended December 31, 2000.

(27) Incorporated by reference to the same exhibits filed with Abgenix's Quarterly Report on Form 10-Q for the quarter ended March 31, 2001.

(28) Incorporated by reference to the same exhibits filed with Abgenix's Quarterly Report on Form 10-Q for the quarter ended June 30, 2001.

(29) Incorporated by reference to the same exhibits filed with Abgenix's Registration Statement on Form S-1 (File Number 333-49858).

(30) Incorporated by reference to the same exhibits filed with Abgenix's Annual Report on Form 10-K for the year ended December 31, 2001.

(31) Incorporated by reference to the same exhibits filed with Abgenix's Amendment No. 2 to its Registration Statement on Form 8-A (File Number 000-24207).

(32) Incorporated by reference to the same exhibits filed with Abgenix's Registration Statement on Form S-8 (File Number 333-88232).

(33) Incorporated by reference to the same exhibits filed with Abgenix's Quarterly Report on Form 10-Q for the quarter ended March 31, 2002.

(34) Incorporated by reference to the same exhibits filed with Abgenix's Quarterly Report on Form 10-Q for the quarter ended June 30, 2003.

(35) Incorporated by reference to the same exhibit filed with Abgenix's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003.

(36) Incorporated by reference to exhibit 10.1 filed with Abgenix's Registration Statement on Form S-3 (File No. 333-112285).

(37) Incorporated by reference to the same exhibit filed with Abgenix's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003.

(38) Incorporated by reference to the same exhibit filed with Abgenix's Amendment No. 3 to its Registration Statement on Form 8-A (File No. 000-24207).

(39) Incorporated by reference to the same exhibit filed with Abgenix's Annual Report on Form 10-K for the year ended December 31, 2002.

(b) Reports on Form 8-K.

We filed a Form 8-K on October 16, 2003, furnishing under "Item 5. Other Events" a press release we issued on that date to announce that we had entered into a Collaboration and License Agreement and a Securities Purchase Agreement with AstraZeneca UK Limited.

We filed a Form 8-K on October 21, 2003, furnishing under "Item 12. Disclosure of Results of Operations and Financial Condition" a press release we issued on that date to report our financial results for the quarter ended September 30, 2003.

We filed a Form 8-K on October 29, 2003, furnishing under "Item 5. Other Events" a press release we issued on that date to announce the consummation of the Collaboration and

License Agreement with AstraZeneca and the issuance of convertible preferred stock pursuant to the Securities Purchase Agreement.

We filed a Form 8-K on February 24, 2004, furnishing under "Item 12. Disclosure of Results of Operations and Financial Condition" a press release we issued on that date to report our financial results for the quarter and the year ended December 31, 2003.

(c) Exhibits.

See Item 15(a)3 above.

(d) Financial Statement Schedule.

See Item 15(a)2 above.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, Abgenix has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Fremont, State of California, on the 11th day of March, 2004.

ABGENIX, INC.

By: /s/ RAYMOND M. WITHY

Raymond M. Withy, Ph.D.
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Raymond M. Withy and R. Scott Greer, and each one of them, acting individually and without the other, as his attorney-in-fact, each with full power of substitution, for him in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes may do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ R. SCOTT GREER R. Scott Greer	Chairman of the Board	March 11, 2004
/s/ RAYMOND M. WITHY, PH.D. Raymond M. Withy, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	March 11, 2004
/s/ BARBARA RICHING Barbara Riching	Senior Director, Finance (Principal Financial and Accounting Officer)	March 11, 2004
/s/ M. KATHLEEN BEHRENS, PH.D. M. Kathleen Behrens, Ph.D.	Director	March 11, 2004
/s/ RAJU S. KUCHERLAPATI, PH.D. Raju S. Kucherlapati, Ph.D.	Director	March 11, 2004
/s/ KENNETH B. LEE, JR. Kenneth B. Lee, Jr.	Director	March 11, 2004
/s/ MARK B. LOGAN Mark B. Logan	Director	March 11, 2004
/s/ THOMAS G. WIGGANS Thomas G. Wiggans	Director	March 11, 2004

Exhibit 31.1

CERTIFICATIONS

I, Raymond M. Withy, Ph.D., certify that:

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

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

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

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

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

b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

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

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

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

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

Dated: March 11, 2004

/s/ RAYMOND M. WITHY

Raymond M. Withy, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Barbara Riching, certify that:

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

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and we have:

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

b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

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

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

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

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

Dated: March 11, 2004

/s/ BARBARA RICHING

Barbara Riching
Senior Director, Finance
(Principal Financial and Accounting Officer)

Exhibit 32.1

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

In connection with the Annual Report of Abgenix, Inc. (the "Company") on Form 10-K for the fiscal year ending December 31, 2003, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) of the Securities Exchange Act of 1934; and

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

March 11, 2004

/s/ RAYMOND M. WITHY

Raymond M. Withy, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

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

EXHIBIT 32.2

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

In connection with the Annual Report of Abgenix, Inc. (the "Company") on Form 10-K for the fiscal year ending December 31, 2003, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) of the Securities Exchange Act of 1934; and

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

March 11, 2004

/s/ BARBARA RICHING

Barbara Riching
Senior Director, Finance
(Principal Financial and Accounting Officer)

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

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CORPORATE DIRECTORY

BOARD OF DIRECTORS

R. Scott Greer
Chairman of the Board

Raymond M. Withy, Ph.D.
Chief Executive Office, President

M. Kathleen Behrens, Ph.D.

Raju S. Kucherlapati, Ph.D.

Kenneth B. Lee, Jr.

Mark B. Logan

Thomas G. Wiggans

CORPORATE MANAGEMENT TEAM

Raymond M. Withy, Ph.D.,
Chief Executive Officer and President

C. Geoffrey Davis, Ph.D.,
Chief Scientific Officer

H. David Miller,
Vice President, Information Technology

Gayle M. Mills,
Vice President, Business Development

Patrick M. Murphy,
Senior Vice President, Production Services

Gisela Schwab, M.D.,
Chief Medical Officer

Susan L. Thorner,
Vice President, General Counsel and Corporate Secretary

CONTROLLER

Barbara Riching,
Senior Director, Finance

CORPORATE HEADQUARTERS

6701 Kaiser Drive
Fremont, CA 94555
510.608.6500
www.abgenix.com

STOCK LISTING

The Company's common stock is traded over the counter on the Nasdaq stock market under the symbol ABGX.

INDEPENDENT AUDITORS

Ernst & Young LLP
Palo Alto, CA

ANNUAL MEETING

The Annual Meeting of Stockholders will be held Monday, June 7, 2004 at 10:00 a.m., local time, at the Company's headquarters.

REGISTRAR AND TRANSFER AGENT

Mellon Investor Services LLC
85 Challenger Road
Ridgefield Park, NJ 07660
800.356.2017
www.chasemellon.com

INVESTOR INFORMATION

Copies of the Company's Annual Report on Form 10-K can be obtained free of charge on or through our Internet website at www.abgenix.com or by calling or writing Investor Relations at the Company's headquarters.

Certain statements in these materials contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements include information presented in the letter to stockholders, among others. These forward-looking statements are based on current expectations and entail various risks and uncertainties that could cause actual results to differ materially from those projected in the forward-looking statements, including risks associated with the success of clinical trials, the progress of research and product development programs, product manufacturing activities, regulatory approval process, competitive products, future capital requirements and the extent and breadth of Abgenix's patent portfolio. Please see Abgenix's public filings with the Securities and Exchange Commission for information about risks that may affect Abgenix.

Abgenix

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PROMISE OF ANTIBODIES

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