TARGETED GENETICS

2002 ANNUAL REPORT

Targeted Genetics Corporation

preclinical development of our two other core product efforts, our AIDS vaccine and our arthritis program. In collaboration with the International AIDS Vaccine Initiative and researchers at Children's Research Institute in Columbus, Ohio, we are on track to initiate a Phase I clinical study for our AAV-based AIDS vaccine in 2003. Preclinical studies to date indicate that AAV-based vaccines can induce robust immune responses and prevent disease progression in animal models of HIV infection. We believe that a prophylactic vaccine is the best hope for limiting the growth of the AIDS epidemic and look forward to beginning human trials in the coming year.

Our arthritis program uses our AAV vector system to deliver the DNA encoding a soluble TNF-α inhibitor. Protein therapies that inhibit TNF-α are approved for use in treating a variety of inflammatory diseases, including rheumatoid arthritis, Crohn's disease and psoriatic arthritis. We believe that local delivery of the DNA encoding such a protein directly to affected joints may provide a novel approach to treating arthritis and may enable more patients to benefit from TNF-α inhibition therapy. By delivering the DNA encoding the protein directly to the joint, we hope to improve joints that might not respond to systemic protein therapy. In animal models of arthritis we have seen promising reductions in swelling, bone and cartilage loss and levels of inflammatory proteins. We believe that this product candidate has significant market potential and intend to file an Investigational New Drug (IND) application in 2003.

In 2002 we also presented exciting preclinical data from our hemophilia gene therapy program and from studies using our non-viral gene delivery systems in animal models of metastatic cancer. While we have generated exciting data, given our current financial constraints, we are not actively pursuing development of these programs at this time. However, we believe that both programs have enormous potential and are actively seeking [illegible] support further advancement of these novel approaches to treating disease.

One of Targeted Genetics' distinctive competencies is in the area of manufacturing biologic products. We have developed a state-of-the-art facility that can now be used to produce [illegible] AAV-based products, including the [illegible] trials. This facility also can be used to produce other biologics, including therapeutic proteins, [illegible] antibodies and vaccines. In 2003 we intend to leverage this capability into additional revenue generating opportunities.

Our portfolio of intellectual property and our multiple gene delivery platforms serve as a foundation on which to build and create new product and partnership opportunities [illegible] additional value for our shareholders. [illegible] identification of new genes [illegible] diseases, we believe that we are able to provide a portfolio of technologies that will help both [illegible] products as well as support traditional drug [illegible].

All of us at Targeted Genetics believe in the enormous potential of this technology and remain committed to turning [illegible] hope for thousands of [illegible] new options to treat their disease. We have taken [illegible] the appropriate steps to put us [illegible] on the path to success and I look forward to reporting on our accomplishments throughout the coming year.

Sincerely,

H. Stewart Parker

President and Chief Executive Officer

DEAR FELLOW SHAREHOLDER:

Since 1994 I have always looked forward to the opportunity to share with you our accomplishments and achievements from the year just passed and to highlight our expectations for the year to come. While 2002 was a challenging year for our company and our sector, we are proud of the significant scientific progress that we made and I am pleased to report to you again on that progress.

First let me say that in spite of the challenges we faced in 2002, we made progress in advancing our cystic fibrosis clinical program and in executing the preclinical development programs for several of our other product candidates. We presented promising clinical and preclinical data at several scientific and medical conferences and we believe that these data provide a compelling rationale for continuing the development of novel therapies based on our gene delivery technologies.

Despite our scientific progress the difficult market environment in which we operated added several hurdles that seemed to overshadow our achievements on the scientific and product development fronts. Several of our corporate partners, facing their own economic pressures, opted to discontinue their collaborations with us, even as we presented data demonstrating our progress toward the collaborations' goals. The downturn in the equity markets, which has been especially pronounced in the biotech industry, has made fundraising difficult. Additionally, with companies in just about every sector tightening their belts, pharmaceutical and large biotechnology companies are cutting back on the number and size of the research and development collaborations they are funding. This convergence of factors has limited our ability to bring in new revenue to fund our operations and has necessitated that we carefully control our costs. We have met these challenges by focusing our resources on what we feel are our most strategic assets and programs, slowing or deferring work on several unpartnered programs, significantly cutting expenditures not directly related to our core programs and reducing our head count. These have been some of the most difficult steps that we have had to take in our history as a company, but ultimately we believe that they put us on a path toward success. We recognize that this has been a difficult year for our shareholders and our staff, and I would like to thank you for your continued support. In spite of everything that has transpired over the past 12 months, I remain as optimistic as ever about the potential of our technology and believe that we have the right strategy in place to create value for our shareholders and for those patients who stand to benefit from our success.

Our optimism derives from what we believe are several valuable assets. These include multiple product opportunities, our underlying core gene delivery technologies, significant manufacturing expertise and facilities and a broad portfolio of intellectual property. Our top priority in the months to come is to leverage the value of these assets to provide us with the operating capital we need to advance our product development efforts and to create value for our shareholders. I am especially pleased with the progress made in the clinical development of tgAAVCF for the treatment of cystic fibrosis. In this program, an adeno-associated virus (AAV) vector is used to deliver the CFTR gene into the lungs of cystic fibrosis patients. In 2002 we completed a double-blind, placebo-controlled Phase II study of repeat dosing of tgAAVCF in patients with mild to moderate cystic fibrosis. This was the first study ever to evaluate repeat dosing with an AAV-based product. Preliminary analysis of the data indicates that tgAAVCF has a very good safety profile, the primary endpoint of the study. We also were excited to see that there was a statistically significant improvement in lung function at the 30-day time point in patients receiving tgAAVCF compared to those patients receiving placebo. While we are completing the analysis of the data, we also are moving forward with designing another Phase II study focusing primarily on the measurement of lung function. We intend to initiate this trial in 2003. We also made significant progress in the

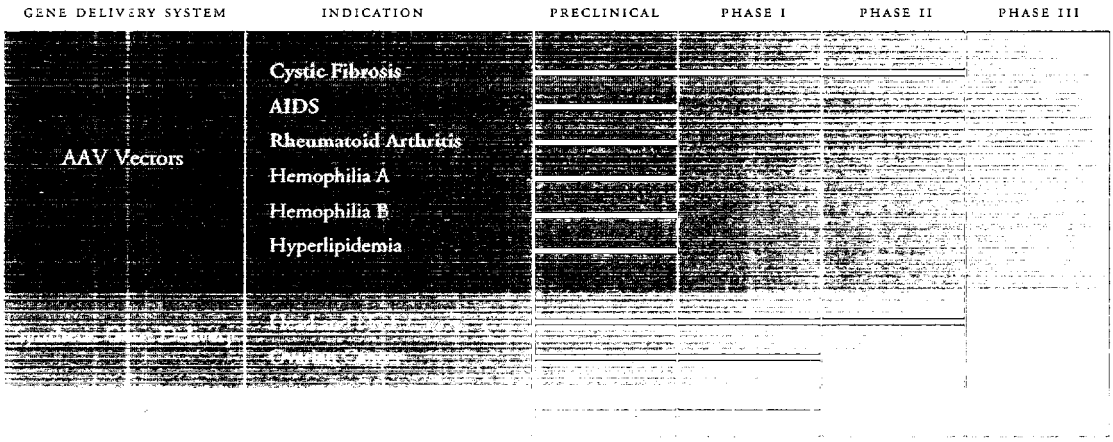
Our vision:

we DISCOVER,

DEVELOP *and* DELIVER

MOLECULAR MEDICINES

to CURE DISEASE.



Targeted Genetics is focused on the clinical development of its cystic fibrosis, AIDS vaccine and rheumatoid arthritis programs, while seeking partnerships for its hemophilia and oncology programs.

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

FORM 10-K

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

For the fiscal year ended December 31, 2002

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 No. 0-23930

TARGETED GENETICS CORPORATION

(Exact name of Registrant as specified in its charter)

Washington	91-1549568
(State of Incorporation)	(IRS Employer Identification No.)

1100 Olive Way, Suite 100
Seattle, WA 98101
(Address of principal executive offices, including, zip code)

(206) 623-7612
(Registrant's telephone number, including area code)

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

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

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

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

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

State the aggregate market value of common stock held by non-affiliates of the Registrant as of June 28, 2002: $34,973,000

Indicate the number of shares outstanding of each of the Registrant's classes of common stock as of March 1, 2003:

Title of Class	Number of shares
Common Stock, $0.01 par value	50,566,348

DOCUMENTS INCORPORATED BY REFERENCE

(1) The information required by Part III of this report, to the extent not set forth in this report, is incorporated by reference from the Proxy Statement for the Annual Meeting of Shareholders to be held on May 8, 2003. The definitive proxy statement will be filed with the Securities and Exchange Commission within 120 days after December 31, 2002, the end of the fiscal year to which this report relates.

TARGETED GENETICS CORPORATION
ANNUAL REPORT ON FORM 10-K

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PART I

Item 1. Business

This annual report on Form 10-K contains forward-looking statements that involve risks and uncertainties. Forward-looking statements include statements about our product development and commercialization goals and expectations, potential market opportunities, our plans for and anticipated results of our clinical development activities and the potential advantage of our product candidates, and other statements that are not historical facts. Words such as "believes," "expects," "anticipates," "plans," "intends," and other words of similar meaning may identify forward-looking statements, but the absence of these words does not mean that the statement is not forward-looking. In making these statements, we rely on a number of assumptions and make predictions about the future. Our actual results could differ materially from those stated in or implied by forward-looking statements for a number of reasons, including the risks described in the section entitled "Factors Affecting Our Operating Results, Our Business and Our Stock Price" in Part II, Item 7 of this annual report.

You should not unduly rely on these forward-looking statements, which speak only as of the date of this annual report. We undertake no obligation to publicly revise any forward-looking statement after the date of this annual report to reflect circumstances or events occurring after the date of this annual report or to conform the statement to actual results or changes in our expectations. You should, however, review the factors, risks and other information we provide in the reports we file from time to time with the Securities and Exchange Commission, or SEC.

Business Overview

Targeted Genetics Corporation develops gene therapy products and technologies for treating both acquired and inherited diseases. Our gene therapy product candidates are designed to treat disease by correcting cellular function at a genetic level. This involves inserting genes into target cells and activating the inserted gene in a manner that provides the desired effect. We have assembled a broad base of proprietary intellectual property that we believe gives us the potential to develop therapies or vaccines for the significant diseases that are the primary focus of our business. Our proprietary intellectual property includes genes, methods of transferring genes into cells, processes to manufacture gene delivery product candidates and other proprietary technologies and processes. In addition, we have established expertise and development capabilities focused in the areas of preclinical research and biology, manufacturing and manufacturing process scale-up, quality control, quality assurance, regulatory affairs and clinical trial design and implementation. We believe that our focus and expertise will enable us to develop products based on our proprietary intellectual property.

Gene therapy products involve the use of delivery vehicles, called vectors, to insert genetic material into target cells. Our proprietary vector technologies include both viral vector technologies and synthetic vector technologies. Our viral vector development activities, which use modified viruses to deliver a DNA sequence, or gene, into cells, focus primarily on adeno-associated virus, or AAV, a common virus that has not been associated with any human disease or illness. We believe that AAV provides a number of safety and gene delivery advantages over other viruses for several of our potential gene therapy products. Our synthetic vectors deliver genes using lipids, which are fatty, water-insoluble organic substances that can be absorbed through cell membranes. We believe that synthetic vectors may provide a number of gene delivery advantages for repeated, efficient delivery of therapeutic genes into rapidly dividing cells, such as certain types of tumor cells. We believe that using both viral and synthetic approaches provides advantages in our product development efforts and increases the probability of our potential products reaching the market.

We have a lead AAV product candidate under development for treating cystic fibrosis that has been evaluated in a Phase II clinical trial. In October 2002, we announced preliminary results of this Phase II study. Our analysis of the preliminary data indicates that the primary endpoint of safety and tolerability of the drug was

achieved. In addition, positive trends in improvement of lung function, levels of inflammatory cytokines and transfer of the correct gene into the cells of the lung were observed. We also have a pipeline of product candidates focused on treating arthritis, hemophilia, and cancer and we are developing a vaccine candidate for the prevention of acquired immune deficiency syndrome, or AIDS, which is partnered with a public health organization. Our synthetic vector product candidates for treating cancer have been evaluated in Phase I and Phase II clinical trials, which showed a good safety profile of the drug, efficient transfer of the gene of interest into the targeted cells, a decrease in the level of proteins produced at abnormally high levels by tumor cells and a reduction in tumor burden. Through partnership activities and other internally funded efforts, we have successfully advanced our product candidates into clinical development, including Phase II clinical trials for our lead cystic fibrosis product candidate and Phase I and Phase II clinical trials of our cancer product candidates.

During 2002, we implemented plans to restructure operations to concentrate resources on key product development programs and business development activities. In connection with these operational changes, we suspended further clinical development of our cancer and hemophilia programs until we can find development partners to help fund development costs, or find other sources of funding for the program. We have focused our efforts on advancing the clinical development of our product candidate to treat cystic fibrosis and on initiating clinical trials for our product development candidate to treat arthritis and our AIDS vaccine.

We have developed processes to manufacture our AAV-based potential products at a scale amenable to clinical development and expandable to large-scale production for commercialization, pending successful completion of clinical trials and regulatory approval. We believe that our successes in assembling a broad platform of proprietary intellectual property for developing and manufacturing potential products, in establishing collaborative relationships and advancing our potential products to clinical evaluation serve to demonstrate the value of our intellectual property and our potential to develop gene therapy product candidates to treat a range of diseases.

A wide range of diseases may potentially be treated with gene-based products, including cancer, genetic diseases and infectious diseases. We believe that there is also a significant opportunity to treat diseases currently treated with proteins using recombinant DNA technology, monoclonal antibodies or small molecules that may be more effectively treated by gene-based therapies due to their ability to provide a long term or a localized treatment modality. Our business strategy is to develop multiple gene delivery systems, which we believe will maximize our product opportunities. Using these gene delivery systems, we are developing product candidates across multiple diseases with the belief that gene-based therapies may provide a means to treat disease in ways not currently achievable with traditional pharmaceuticals. We believe that, if successful, we can establish significant market potential for our product candidates. Because there are currently no commercially available gene therapy products, we intend to pursue product development programs to enable us to demonstrate proof of concept and eventually commercialize gene-based therapeutics to address currently unmet medical needs in treating disease. If this is achieved, we believe that the value of our assets can be leveraged into multiple opportunities.

Our business strategy includes:

Multiple gene delivery systems to maximize product opportunities. Our experience indicates that different disease targets will require different methods of gene delivery. The best gene delivery method for a particular disease will depend on the gene to be delivered, the type of cell to be modified, the duration of gene expression desired and the need for *in vivo* (inside the body) or *ex vivo* (outside the body) delivery. Accordingly, we are developing both viral and synthetic vector technologies. Our primary viral vector development activities focus on AAV vectors, which we and others have shown to be efficient in transferring genes to a wide variety of target cells. Because AAV vectors can deliver genes in a way that allows for expression of genetic information for long periods of time, we believe that these vectors may have particular utility in treating chronic diseases, such as cystic fibrosis, hemophilia and arthritis, which require long-term expression of the gene that is delivered to the cell. Additionally, the long-term expression profile of AAV vectors may support the development of vaccines

capable of conferring long-term protection against a number of infectious diseases. Our synthetic vectors deliver genes using lipids. Lipid-based vectors may have advantages in certain applications, such as some types of cancer, in which insertion of genetic material into rapidly dividing cells and shorter-term gene expression may be desired. We believe that using both types of vectors gives us one of the broadest gene delivery technology platforms in the field, and ultimately will give us the flexibility to develop products addressing a much broader range of diseases than we could develop using any single gene delivery system. We also have rights to certain intellectual property relating to adenoviruses, which can also be used to deliver genes into cells. In addition, we are working to create enhanced lipid-based delivery systems that would further extend the applicability of our technology base.

Significant manufacturing facilities and expertise. We have an established, state-of-the-art manufacturing facility that complies with current Good Manufacturing Practices. Our proprietary manufacturing process for our AAV-based products utilizes processes, operations and equipment common to the biopharmaceutical industry. These processes, operations and equipment are broadly applicable to the production of viral vectors for gene therapy as well as recombinant proteins and monoclonal antibodies. We are exploring potential ways in which we could utilize our excess manufacturing capacity to create additional revenue by providing contract manufacturing services to other companies.

Broad intellectual property portfolio. To date, we have filed or exclusively licensed over 400 patent or patent applications with the United States Patent and Trademark Office, or USPTO, including foreign counterparts of some of these applications in Europe, Japan and other countries. Of these patent applications, over 100 patents have been issued or allowed. This proprietary intellectual property includes genes, formulations, methods of transferring genes into cells, processes to manufacture and purify gene delivery product candidates and other proprietary technologies and processes.

Diverse product development pipeline. We have multiple product development programs in various stages of preclinical or clinical development. Each of these product candidates addresses a market where we believe that there is significant medical need for new or improved therapies. We are currently focusing our resources on three of these programs: a treatment for cystic fibrosis, a treatment for rheumatoid arthritis, and a prophylactic AIDS vaccine. We have significant regulatory expertise in both viral and non-viral gene therapy products with the U.S. Food and Drug Administration, or FDA, and other regulatory bodies. We have generated proof of concept data for the use of gene therapy in treating other diseases, including hemophilia and two types of cancer: ovarian cancer and head and neck cancer. While we are not pursuing development of these programs at this time, we are seeking opportunities to further develop these programs through collaborations with other biotechnology or pharmaceutical companies.

Our potential products are in the following stages of development:

Gene	Delivery System	Indication	Development Status
			Preclinical / Phase I / Phase II / Phase III
CFTR	AAV	Cystic Fibrosis	
E1A	DCC	Head & Neck Cancer	
E1A	DCC	Ovarian Cancer	
IFNβ	AV	Glioma	
HIV	AAV	AIDS	
TNFR:Fc	AAV	Rheumatoid Arthritis	
F-VIII	AAV	Hemophilia A	
F-IX	AAV	Hemophilia B	
VLDLR	AAV	Hyperlipidemia	

We were incorporated in the state of Washington in 1989. Our executive offices are located at 1100 Olive Way, Suite 100, Seattle, Washington 98101, and our telephone number is (206) 623-7612. We file annual, quarterly and current reports, proxy statements and other information with the SEC. We make available in the investor relations portion of our website, free of charge, copies of our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports after filing these reports to the SEC. Our website is located at www.targen.com. You may also inspect and copy the documents that we have filed with the SEC, at prescribed rates, at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. You may obtain information regarding the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains a Web site that contains reports, proxy and information statements and other information regarding issuers that file with the SEC at http://www.sec.gov.

Core Product Development Programs

tgAAVCF for Cystic Fibrosis

Cystic fibrosis is one of the most common single-gene deficiencies affecting the Caucasian population, afflicting approximately 30,000 people in the United States and 60,000 people worldwide. The disease is caused by a defective cystic fibrosis transmembrane regulator, or CFTR gene, which interferes with normal lung function and results in a buildup of mucus in the lungs, leading to chronic infections, scarring of the lung, loss of lung function and early patient death. Current treatments for cystic fibrosis relieve the symptoms of the disease, but do not cure the underlying genetic defect that causes the disease or stop its progression.

tgAAVCF, our cystic fibrosis product candidate, is comprised of a DNA sequence, or gene, that codes for a functional CFTR protein delivered in an AAV vector. The objective of this gene therapy is to deliver the CFTR gene to cells of the lung, which can then produce the protein that is missing in cystic fibrosis patients. Based on our research and development activities to date, we believe that tgAAVCF may be superior to other gene therapies for treating cystic fibrosis, because the drug appears to have a good safety profile and an ability to deliver the CFTR gene to the appropriate cells in the lung and support production of the missing protein over an extended period. tgAAVCF has been granted orphan drug status by the FDA, which provides for seven years of market exclusivity and certain tax credits.

In October 2002, we announced the preliminary results of a Phase II clinical trial to explore the safety and clinical impact of repeated doses of aerosolized tgAAVCF delivered to the lungs of adult and adolescent cystic fibrosis patients. These preliminary results indicated that tgAAVCF met its primary endpoint demonstrating safety and tolerability in this first-ever repeat dosing study for an AAV-gene therapy product to treat cystic fibrosis. In this trial, which was a randomized, double-blind, placebo-controlled clinical trial that included 37 patients with mild cystic fibrosis, patients received treatment at days 0, 30 and 60. Preliminary aggregate data analysis suggests that the aerosolized product, administered via nebulizer to the lung, was safe and well tolerated by patients. Following approvals from an independent data safety monitoring board, the entry criteria for patients included in the clinical trial was reduced from 18 years of age to 12 years of age. No clinically significant differences in adverse events or laboratory safety parameters between placebo and tgAAVCF-treated patients were observed. Patients were also monitored for overall lung function using FEV1, a standard measure of lung function, at days 30, 60 and 90. Aggregate patient data from patients receiving tgAAVCF showed a statistically significant improvement in FEV1 lung function at day 30 (p=.04) compared to patients receiving placebo. Levels of IL-8, a cytokine associated with inflammation, were lower in tgAAVCF-treated patients at day 14 compared to placebo. Excellent gene transfer was also observed in all patients tested, as measured by DNA polymerase chain reaction, a method for amplifying a DNA sequence, on cells removed by a bronchoscopy procedure. Gene expression was not observed within the level of detection by the assays used to measure gene expression and AAV-neutralizing antibody response occurred systemically and locally.

Our October 2002 Phase II clinical trial followed a Phase I clinical trial in 2000, which tested the safety of aerosol delivery of tgAAVCF to the lungs of 12 cystic fibrosis patients, and early clinical trials involving over 60 patients. In total, we have treated approximately 90 patients in our cystic fibrosis clinical trials, the most of any

group developing gene therapies to treat cystic fibrosis. We are finishing the analysis of the data from the recent Phase II clinical trial, planning the next clinical trial for tgAAVCF and identifying potential sources of funding for such a study. We believe that the next clinical trial that we will conduct for tgAAVCF will involve a larger patient population and will be intended to evaluate the ability of tgAAVCF to improve the patient's lung function. Further clinical evaluation of tgAAVCF is subject to our ability to identify additional sources of funding which we are pursuing.

Rheumatoid Arthritis

Rheumatoid arthritis, or RA, is a chronic disease that causes pain, stiffness, swelling and loss of function in the joints and inflammation in other organs. According to the Arthritis Foundation, RA affects more than two million people in the United States, with disease onset occurring most frequently in people between the ages of 20 and 45. Direct and indirect costs associated with RA cost the U.S. economy nearly $65 billion per year. While the exact cause of the disease remains unknown, autoimmune and inflammatory processes lead to chronic and progressive joint damage. Researchers have found that the cytokine tumor necrosis factor-alpha, or TNFα, plays a pivotal role in this disease process and have validated anti-TNFα therapies as a valuable strategy to treat RA. RA is currently treated with protein therapies such as Amgen Inc.'s Enbrel®; a variety of systemic treatments, including steroid and nonsteroid anti-inflammatory drugs, monoclonal antibody therapies such as Johnson and Johnson's Remicade® and Abbott's Humira™; and other drugs such as methotrexate and cyclosporine.

TNFα is an important cytokine in the body's immune system. While anti-TNFα therapies have become widely used in the treatment of RA, their systemic use in patients can also cause harmful side effects. We believe that local administration of a DNA sequence encoding anti-TNFα proteins may be a potentially useful alternative to systemic administration of anti-TNFα proteins for treating RA and other inflammatory diseases. The characteristics of AAV vectors make them well suited for delivery of genes to joints and other local environments. We are developing an AAV-based product as a potential alternative or supplement to systemic protein therapy in patients with RA symptoms where one or several joints do not respond to protein therapy.

Our product candidate, AAV-TNFR:Fc, is comprised of an AAV vector to deliver a gene that encodes the soluble anti-TNFα protein TNFR:Fc. We have administered AAV-ratTNFR:Fc to the muscle or the joint of rats with experimentally induced RA. Data from these preclinical studies have shown that a single injection of a vector carrying the soluble TNFR gene into the ankles of arthritic rats resulted in a significant reduction in ankle and hind paw swelling as measured by arthritis index scores. Data also suggested that animals treated in a single joint experienced a reduction in swelling in both the treated joint as well as the contra-lateral joint. This was observed without accompanying elevated levels of systemic protein expression and suggests that a broader benefit may be possible with this treatment approach without the potential negative implications of a reduction of TNFα protein observed in the blood. We plan to file an investigational new drug, or IND, application in 2003 to support initiation of the first clinical trial for this program.

HIV Vaccine

According to the International AIDS Vaccine Initiative, or IAVI, more than 42 million people worldwide suffer from AIDS or are infected with Human Immunodeficiency Virus, or HIV, the virus that causes AIDS. Approximately 14,000 men, women and children worldwide are newly infected daily. While current drug therapies such as protease inhibitors and reverse transcriptase inhibitors have helped many patients with AIDS to manage their disease, these therapies have not been shown to be curative, have significant and often treatment-limiting side effects and are costly. We believe that a prophylactic vaccine to protect against the progression of HIV infection to AIDS could have significant market potential. To date, no company has applied for regulatory approval of a prophylactic AIDS vaccine, although several vaccines are under clinical development.

We are collaborating with IAVI and Children's Research Institute, or CRI, at Children's Hospital in Columbus, Ohio to develop a vaccine to protect against the progression of HIV infection to AIDS. The vaccine

will utilize our AAV vectors to deliver multiple HIV genes that express viral proteins that can be detected by the immune system to elicit a strong immune response against HIV. We believe that a single dose of an AAV-based vaccine containing HIV genes could allow for a sustained and high level of gene expression of HIV proteins *in vivo*, thereby eliciting a robust and sustained immune response. Data from studies in nonhuman primates suggest that AAV vector vaccines may hold significant promise by triggering both an antibody and a T-cell immune response. Monkeys immunized with AAV vectors carrying SIV genes, the primate equivalent of HIV, develop immune responses that provide protection against disease progression after challenge with a pathogenic SIV virus. These data provide the basis for moving forward with further preclinical development that we believe will support Phase I clinical trials in humans. We plan to submit regulatory filings to support initiation of a clinical trial in 2003. Under the terms of the public-private collaboration, IAVI will fund work at Targeted Genetics and at CRI focused on development and preclinical studies and Phase I clinical trials of a vaccine candidate. We have the right to commercialize in industrialized countries any vaccine that may result from this development collaboration, and we have the option to manufacture the vaccine for non-industrialized nations. The section below entitled "Research and Development Collaborations" provides a detailed description of this collaboration.

Other Product Development Programs

In addition to our core product development programs in cystic fibrosis, RA and AIDS prophylaxis we also have generated proof of concept data in several other diseases. We believe that several of these programs provide opportunities for establishing development partnerships that may provide us with additional revenue or sources of funding. We are not pursuing the further development of these programs unless and until we can find a development partner to fund further development or secure other sources of funding.

tgDCC-E1A for Cancer

Cancer is the second leading cause of death in the United States, with over one million new cases diagnosed each year. Cancer arises from the disruption of normal cell growth and division, which are regulated by cellular proteins and genes. Cancer can result from the structural alteration or abnormal expression of these genes or from mutation, or deletion, of tumor inhibitor genes.

In 1996, we acquired certain rights to the E1A gene, which is derived from a common virus. E1A regulates the expression of viral and cellular genes within cells infected by the virus. We recognized that if E1A could be delivered into cancerous cells, its ability to influence gene expression might be useful in slowing the growth of tumors and sensitizing them to chemotherapeutic drugs and radiation. To deliver the E1A gene into human cells, we have combined E1A with two of our proprietary lipid-based vectors, DC-Cholesterol and LPD (lipids, which are fats; polycations, which are compounds with multiple positive charges; and DNA) to create two potential delivery systems for the E1A gene. We believe these delivery systems may have the necessary characteristics for repeated and efficient delivery of the E1A gene into rapidly dividing cells, such as tumor cells.

Our product candidate for treating cancer is based on the E1A gene. We have exclusive worldwide rights to issued patents covering the use of the E1A gene in cancer therapy. Research data indicate that E1A can function as an inhibitor of the HER-2/neu oncogene, which is known to be over-expressed in many cancers. Research also indicates that E1A has anti-tumor effects unrelated to the inhibition of HER-2/neu expression. For example, our preclinical studies of our tgDCC-E1A product candidate in mice with tumors indicate that tgDCC-E1A inhibits expression of the HER-2/neu oncogene, inhibits growth and metastasis of the tumor cells and increases significantly the long-term survival of the mice. Other preclinical studies indicate that tgDCC-E1A sensitizes tumor cells to certain chemotherapeutic agents or radiation used to destroy the tumor cell.

We completed a series of Phase I and Phase II clinical trials of our tgDCC-E1A product candidate as a single agent in several different cancers before testing the product candidate in combination with chemotherapy and radiation treatments. In these trials, we delivered tgDCC-E1A into the peritoneal cavity of ovarian cancer patients and into the pleural cavity of breast cancer patients. The results indicated that clinicians could safely

administer the drug in biologically active amounts and that the E1A gene was present and active in tumor cells. Additionally, in some patients, we observed decreased levels of HER-2/neu expression and decreased numbers of tumor cells.

In Phase I and Phase II clinical trials in head and neck cancer patients who had failed to respond to previous chemotherapy and radiation treatments, we delivered tgDCC-E1A as a single agent by direct injection into their tumors. The results of these trials also indicated that clinicians could safely administer the drug in biologically active amounts and that the E1A gene was present and active in tumor cells.

In late 1999, we began the first clinical trial of tgDCC-E1A administered in combination with chemotherapeutic drugs. In this Phase I clinical trial, we treated advanced-stage ovarian cancer patients with a combination of tgDCC-E1A and two chemotherapy products, Taxol® and Cisplatin, at increasing dosage levels. tgDCC-E1A and Cisplatin are administered directly to the peritoneal cavity and Taxol® is administered intravenously. This trial was designed to evaluate drug safety and to assess maximum tolerable dose levels, as well as measure the biologic activity of E1A. In this trial, the maximum tolerated dose was not reached and the trial showed a good safety profile of the drug and efficient transfer of the E1A gene into the targeted cells. The trial also showed a decrease in the level of CA-125, a marker for ovarian cancer.

In late 2000, we began a multi-center Phase II clinical trial of tgDCC-E1A administered together with radiation therapy to patients with recurrent or inoperable head and neck cancer. Patients were treated with injections of tgDCC-E1A twice a week throughout six to seven weeks of radiation therapy. Primary endpoints of this trial include tumor response, as measured by CT scan 12 weeks following completion of therapy, and safety and tolerability of tgDCC-E1A in combination with radiation. Other endpoints include time-to-progression of treated tumors, length of relapse-free periods, overall survival rates and comparison of responses of tumor sites treated with both tgDCC-E1A and radiation to tumors treated with radiation alone. This trial has been closed to patient enrollment and the patient data is in the process of being analyzed.

During 2002, we implemented plans to restructure operations and to concentrate resources on key product development programs and business development activities. In connection with these operational changes, we suspended further clinical development of our cancer program until we can find a development partner to help fund development costs, or find other sources of funding for the program.

tgLPD-E1A for Metastatic Cancer

We believe that our clinical testing of tgDCC-E1A, our synthetic vector-based product candidate for treating cancer, has demonstrated the potential of E1A as a tumor inhibitor. We therefore believe that if we are able to deliver E1A systemically to reach tumor sites throughout the body, we could significantly expand the utility of E1A as a potential cancer treatment. We have therefore pursued the development of new formulations of E1A, which we believe have the potential to target cancer cells when administered systemically.

One of these formulations, tgLPD-E1A, uses LPD and results in the formation of stable DNA particles of a small and defined size encapsulated in a lipid shell. This formulation appears to significantly contribute to the stability of the compound and enables vector particles delivered via intravenous administration to travel throughout the body with greatly reduced rates of degradation, thus improving gene transfer efficiency. We believe that this condensed DNA delivery platform provides the basis for developing a systemic delivery system for administering E1A or other genes to tumors. Several preclinical studies of tgLPD-E1A indicate promising results. In a mouse model of human breast cancer tumors, we administered tgLPD-E1A systemically to evaluate its ability to inhibit tumor growth. The results indicated that the impact of tgLPD-E1A on tumor growth was comparable to the impact observed when administrating Taxol®, a chemotherapeutic drug. Additionally,

administering both Taxol® and tgLPD-E1A inhibited tumor growth in mice significantly better than administering either agent alone. Furthermore, additional studies suggest that the LPD platform could be modified to provide an enhanced efficacy and safety profile by incorporating targeting molecules that can direct delivery of the gene to specific tissue types and cells. Consequently, should we successfully partner this product candidate, we intend to perform evaluations of these alternate formulations before deciding which formulation, if any, will advance into a clinical development phase.

Hemophilia

Hemophilia is a hereditary disorder caused by the absence or severe deficiency of blood proteins that are essential for proper coagulation. In the case of hemophilia A, the missing protein is Factor VIII and, in the case of hemophilia B, the missing protein is Factor IX. According to the National Hemophilia Foundation, approximately 7,000 people in the United States suffer from hemophilia A and approximately 3,600 people in the United States suffer from hemophilia B. Hemophilia patients face spontaneous, uncontrolled bleeding that can lead to restricted mobility, pain and, if left untreated, death. Serious, acute bleeding incidents are generally treated by administering either manufactured or naturally-derived coagulation proteins. If slow, chronic bleeding is not treated, progressive, irreparable physical damage may result. Because both manufactured and naturally-derived coagulation proteins are expensive, protein therapy is generally limited to treating acute bleeding episodes in patients with hemophilia. Further, proteins derived from human serum may carry blood-borne pathogens such as HIV, Epstein Barr virus and hepatitis C.

We believe that there are several reasons for developing a gene therapy product that could be administered to hemophilia patients to prevent spontaneous bleeding incidents. Both hemophilia A and hemophilia B result from a single gene defect that is well understood, and replacement of the missing protein has been used as an effective therapy for the disease. Overproduction of the Factor VIII or Factor IX protein has not been shown to be harmful, which reduces the need for precise regulation of gene expression. Researchers believe that production of as little as 5% of normal levels of the missing protein could effectively prevent chronic bleeding incidents in hemophilia patients. The high cost of protein therapy generally limits its use to treating bleeding incidents, which may provide a significant market opportunity for gene-based prophylactic products that address the underlying disease. We believe the current global market for Factor VIII protein products, which is estimated at $1.2 billion not including hospitalization costs, represents a significant market opportunity. While the global market for Factor IX protein products is substantially smaller than the Factor VIII market, we believe it also represents a significant market opportunity.

We also believe that AAV vectors represent a promising means of delivering a gene to trigger production of the Factor VIII protein for treating hemophilia A or the Factor IX protein for treating hemophilia B. We have generated proof of concept data for our Factor VIII gene therapy product candidate, AAV-FVIII, in mouse models of hemophilia A and for our Factor IX gene therapy product candidate, AAV-FIX, in mouse and dog models of hemophilia B. In these models, the use of AAV vectors to deliver the Factor VIII or Factor IX gene resulted in decreased bleeding times for extended periods of time. A non-invasive route of administration such as pulmonary delivery may be particularly attractive for the treatment of a disease in which invasive procedures may increase the risk of bleeding episodes. Given our experience with pulmonary delivery of AAV vectors for the treatment of cystic fibrosis, we believe that we can adapt our product development infrastructure to support pulmonary delivery of genes to treat diseases that manifest themselves outside the lung. We have invested in significant infrastructure to support the development of tgAAVCF, our AAV-based product candidate for treating cystic fibrosis, and we believe this infrastructure can be efficiently adapted to developing an AAV-based gene therapy product for treating hemophilia A. Since November 2000, we had been developing our Factor VIII gene therapy product candidate with Wyeth/Genetics Institute. However, in November 2002, Wyeth notified us of its decision to terminate our development collaboration to support development of our product candidates for hemophilia. We entered into an agreement for the termination of the collaboration in February 2003. Until such time as we can obtain an alternative strategic partner or obtain other sources of funding, we have suspended further development of this program.

Glioma

Glioma is a type of brain cancer that affects 17,000 people in the United States each year. Current treatment options for glioma include surgery, radiation therapy, chemotherapy or a combination of these treatments. As part of our collaboration with Biogen, Inc., we provided Biogen with limited manufacturing process development support for its product development program directed at treating glioma using an adenoviral vector to deliver the gene for interferon beta. Interferon beta is a potent stimulator of the immune system, and sustained expression of this protein at the site of brain tumors may help the body rid itself of cancer cells. Localized, sustained production of interferon beta may result in superior anti-tumor efficacy with little or no systemic toxicity. We believe that preclinical studies in several animal cancer models validate this approach. Biogen owns worldwide rights to product candidates resulting from this research and has initiated a Phase I clinical trial for this product candidate. Under the term of our agreement with Biogen, we are entitled to receive a royalty on any future sales resulting from this product candidate.

Hyperlipidemia

We are exploring gene therapies for cardiovascular disease by applying our AAV vector technology to treating hyperlipidemia, the elevation of lipids (fats) such as cholesterol in the bloodstream. Approximately four million people in the United States have a genetic predisposition to some form of hyperlipidemia, such as familial hypercholesterolemia, familial combined hyperlipidemia and polygenic hypercholesterolemia. Approximately 10% of these patients have severe forms of the disease and do not respond to standard drug therapy, such as statins. If untreated, disease progression can lead to morbidity and death from heart attack or stroke. As part of our acquisition of Genovo, Inc., we acquired a product development program aimed at assessing the delivery of genes to treat dyslipidemia, a condition of increased levels of vLDL-type cholesterol. We have a sponsored research agreement with an academic laboratory to assess the potential clinical utility of our AAV-VLDLR product candidate for treating hyperlipidemia. We have exclusive rights to certain intellectual property related to the use of AAV-based gene therapy for treating hypercholesterolemia.

Gene Therapy

Overview. Gene therapy is an approach to treating or preventing genetic and acquired diseases that involves inserting a functional gene into target cells to modulate disease conditions. To be transferred into cells, a gene is incorporated into a delivery system called a vector, which may be either viral or synthetic. The process of gene transfer can be accomplished *ex vivo*, whereby cells are genetically modified outside of the body and infused into the patient, or *in vivo*, whereby vectors are introduced directly into the patient's body.

Once delivered into the cell, the gene can express, or produce, the specific proteins encoded by the gene. Proteins are fundamental components of all living cells and are essential to controlling cellular structure, growth and function. Cells produce proteins from a set of genetic instructions encoded in DNA, which contains all the information necessary to control cellular biological processes. DNA is organized into segments called genes, with each gene containing the information required to express a protein. When genes are expressed, the sequence of DNA is transcribed into RNA, which is then translated into a sequence of amino acids that constitutes the resulting protein.

An alteration in the gene, or an absence of specific genes, causes proteins to be over-produced, under-produced, or produced incorrectly, any of which can cause disease. These diseases include cystic fibrosis, in which a defective protein is produced, and hemophilia, in which a protein is under-produced. Deficient or absent genes can also cause cells to incorrectly regulate gene expression, which can cause diseases such as certain types of cancer and inflammatory disease. Gene therapy may be used to treat disease by replacing the missing or defective gene to facilitate the normal protein production or gene regulation capabilities of cells. In addition, *gene* delivery may be used to enable cells to perform additional roles in the body. For example, by delivering DNA sequences that encode proteins that are usually not expressed in the target cell, thus conferring new

function to these cells, gene therapy could enhance the ability of the immune system to fight infectious diseases or cancer. Gene therapy may also be used to inhibit production of undesirable proteins or viruses that cause disease, by suppressing expression of their related genes within cells.

A key factor in the progress of gene therapy has been the development of safer and more efficient methods of transferring genes into cells. A common gene delivery approach to date uses modified viruses to transfer the desired genetic material into a target cell. The use of viruses takes advantage of their natural ability to introduce genes into cells and, once present in the target cell, to use the cell's metabolic machinery to produce the desired protein. In some gene therapy applications, viruses are genetically modified to inhibit the ability of the virus to reproduce. Successful viral gene transfer for diseases requiring long-term gene expression involves meeting a number of essential technical requirements, including the ability of the vector to carry the desired genes, transfer the genes into a sufficient number of target cells and enable the delivered genes to persist in the host cell and produce proteins for a long duration. We are using viral vectors such as AAV for potential gene therapy applications requiring long-term gene expression.

Our AAV Viral Vectors. With our scientific collaborators, we have developed significant expertise in designing and using AAV vectors in gene therapy. We believe that our AAV vectors are particularly well suited for treating a number of diseases for the following reasons:

- AAV does not appear to cause human disease;
- our AAV vectors do not contain viral genes that could produce unwanted cellular immune responses leading to side effects or reduced efficacy;
- AAV vectors can introduce genes into non-dividing or slowly dividing cells;
- AAV vectors can persist in the host cell to provide relatively long-term gene expression; and
- our AAV vectors can be manufactured using methods utilized in the manufacture of other biopharmaceutical products.

We are building our proprietary position in AAV-based technology through our development or acquisition of exclusive rights to inventions that:

- provide important enhancements to AAV vectors;
- demonstrate novel approaches to the use of AAV vectors for gene therapy; and
- establish new and improved methods for large-scale production of AAV vectors.

In addition to our tgAAVCF clinical development program for treating cystic fibrosis, we have conducted preclinical experiments to assess the potential for using AAV vectors to deliver therapeutic genes to other target cells, including joints, muscles, the lung, the liver and the cardiovascular system (heart and blood vessels).

Synthetic Vectors. Synthetic vector systems generally consist of DNA incorporating the desired gene, combined with various compounds designed to enable the DNA to be taken up by the host cell. Synthetic *in vivo* gene delivery approaches include:

- injecting pure plasmid, or "naked," DNA in an aqueous solution;
- encapsulating genes into lipid carriers such as liposomes, which facilitate the entry of DNA into cells;
- combining negatively charged DNA with positively charged (cationic) lipids; and
- directing DNA to receptors on target cells by combining the gene with molecules (ligands) that bind to the receptors.

We have exclusive rights to a significant body of synthetic gene delivery technology based on cationic lipids. These synthetic vectors, such as DCC-Cholesterol, are formulated by mixing negatively charged DNA with positively charged cationic lipids, which promotes uptake of genes by cells. These vectors appear to have a good safety profile for use *in vivo*. We believe that synthetic vectors have several characteristics that make them particularly well-suited for treating certain diseases, including:

- ability to transfer relatively large segments of DNA;
- ability to deliver genes in rapidly dividing or non-dividing cells; and
- ability to target to specific cell receptors.

We are working to expand our synthetic vector capabilities by developing enhancements to cationic lipid-based systems that will expand the potential uses of synthetic vectors. In one enhancement, which we call LPD, DNA is condensed and then combined with cationic lipids and polycations to generate stable particles of a small and defined size that have significantly enhanced gene transfer efficiency and stability in the bloodstream. We believe that LPD-based formulations may be useful for delivering genes by intravenous administration.

Cell Therapy

In November 2000, we established CellExSys, Inc., a majority-owned subsidiary, to further develop our *ex vivo* cell therapy capabilities. CellExSys' portfolio of intellectual property includes patents and patent applications relating to modification of T-cells with chimeric receptors, the use of T-cells as gene delivery vehicles and other proprietary technologies related to cell therapy. Through our majority ownership of CellExSys, we own or have rights to over 75 issued patents and patent applications in the area of cell therapy and other applications of T-cell technology.

Cell therapy involves delivering living cells into a patient to treat disease, either in place of, or in combination with, other pharmaceuticals. One type of cell therapy involves the use of cytotoxic T lymphocytes, also known as CTLs, which are a type of immune system cell. The function of CTLs is to destroy foreign or diseased cells in the body. CellExSys is developing technology and expertise that enables the isolation of potent, disease-specific CTLs from small samples of patient blood, which can then be grown into a larger number of cells and used to treat disease. Key to this technology is a proprietary rapid expansion method, or REM. We have exclusive rights to a patent on REM that was issued to the Fred Hutchinson Cancer Research Center in October 1998. In addition, we have exclusively licensed an issued patent for the commercial expansion of T-cells to CellExSys. Using the REM process, CellExSys can grow billions of CTLs from small quantities of starting cells over several weeks, while preserving the cells' specific disease-fighting capabilities. We believe that CellExSys' technology and expertise could support development of a series of cell-based therapies to treat infectious diseases and cancer. In addition to the potential therapeutic uses of the REM technology, we believe that REM also has utility in new drug discovery and vaccine development.

The applications of the REM technology, an *ex vivo* therapeutic approach, are quite distinct from our *in vivo* gene delivery technologies and product development programs. As a result, we transferred our interests in our cell therapy and *ex vivo* therapy-related patents and patent applications to CellExSys. As a separate subsidiary focused on patient-specific cell therapy and other applications of REM technology, we believe that CellExSys is well-positioned to identify and take advantage of desirable product, partnership and financial opportunities that fall outside the field of *in vivo* gene therapy. We have funded the majority of CellExSys' activity since forming CellExSys in 2000 with the expectation of exploiting our cell therapy investment over the medium- to long-term. We are presently considering strategic opportunities to realize near-term benefit for our investment in CellExSys. These options include selling our interest in CellExSys to another company or licensing the CellExSys technology to other companies.

In October 2002 CellExSys and ITOCHU Corporation announced an agreement to form an alliance in the field of cellular therapy. Under the terms of the letter of intent, CellExSys and ITOCHU planned to form a

Japanese joint venture company that would have been responsible for the development, sales, marketing and manufacturing of CellExSys' potential cell therapy products in Japan. The letter of intent expired, without extension, on December 31, 2002. As a result, ITOCHU has a preferred stock interest in CellExSys of approximately 5%.

Research and Development Collaborations

We have entered into several product development collaborations with larger biotechnology companies and pharmaceutical companies. Our collaborations typically provide us with reimbursement of research and development costs, together with funding through purchases of our equity securities, loans, payments of milestone fees. If the product candidate covered by the collaboration is successfully commercialized, we are generally entitled to manufacturing and royalty-based revenue. Substantially all of our revenue, and substantially all of our expected revenue for the next several years, is derived from our product development collaborations. We have ongoing collaborations with Biogen, Inc. and the International AIDS vaccine Initiative. In 2002 our collaborations with Celltech Group plc, Elan Corporation plc, Genzyme Corporation and Wyeth/Genetics Institute concluded.

Biogen, Inc.

In September 2000, in connection with our acquisition of Genovo, we established a three-year, multiple-product development and commercialization collaboration with Biogen, Inc. Under the terms of a development agreement, Biogen has the option to collaborate with us to develop up to five gene therapy product candidates. Two product candidates were identified at the effective date of the agreement and three were to be determined by Biogen and us over the initial three-year development period. Two of these genes have been identified, one for treating an infectious disease and the other for treating a genetic disorder both of which are in early stages of research. We are responsible for manufacturing and supplying bulk vector supplies to Biogen to support product development, clinical trials and product commercialization. Biogen is responsible for providing us access to certain Biogen product specific proprietary technology and for providing sales, marketing and related commercial activities for any approved products we and Biogen develop under this collaboration.

Upon initiation of the collaboration Biogen paid us $8 million in research funding and upfront payments. Under our collaboration agreement, Biogen agreed to provide us with a minimum of $1 million per year in research and development funding over the initial three-year development period that ends September 30, 2003 and to pay us when Biogen achieves clinical trial, regulatory filing and regulatory approval milestones. Biogen also agreed to provide us with loans of up to $10 million and to purchase up to $10 million of our common stock under an equity purchase commitment, each at our discretion. During 2001, we borrowed $10 million from Biogen under the loan commitment. The loan is due in September 2006 and bears interest at the one-year LIBOR rate plus 1%, reset annually. Under the equity purchase commitment, we can elect to have Biogen purchase the common stock in one or more tranches. The price per share for any share purchase will equal the average of the daily closing prices of a share of our common stock for a specified period of time before and after the applicable exercise date. In September 2002, we raised $4 million through the sale of 5,804,673 shares of our common stock to Biogen at a price of $0.69 per share. We cannot currently access the $6 million remaining under this equity purchase commitment, which expires in August 2003, because the agreement provides that Biogen is not required to purchase shares of stock to the extent the purchase would result in Biogen's ownership interest in us exceeding 19.9%. Biogen's ownership interest now approximates this limitation.

We granted Biogen an exclusive worldwide license to sell any products that may be developed under the collaboration. We will receive royalties on sales of any products developed under the collaboration, or alternatively, we will sell products developed under the collaboration to Biogen at agreed upon transfer prices that include sales-based and cost-based components. Upon development of a product, the product manufacturing and supply provisions of the agreements are effective for the term of the patents covering our technology used to

develop the product. Although Biogen may terminate the development and marketing agreement at any time, Biogen is obligated to pay $750,000 to us in 2003 as minimum research funding. As of December 31, 2002, we have received approximately $1.8 million in minimum research funding payments from Biogen that we have not spent on research activities under our collaboration. Under the terms of our agreements with Biogen, after the completion of the three year research and development period on September 30, 2003 we are not obligated to perform any additional research and development. As a result, unless we and Biogen agree to extend our collaboration beyond September 30, 2003, we anticipate recognizing as revenue any unearned portion of revenue connected to Biogen's annual research funding payments on September 30, 2003. While we expect to pursue renewal of this collaboration, we are unable to predict whether we will be successful obtaining an extension to this collaboration or what the terms of such an extension may be. Through December 31, 2002, we earned $5.9 million in revenue from Biogen under this collaboration and have received $14 million in proceeds from the issuance of loan and equity securities.

International AIDS Vaccine Initiative

In February 2000, we entered into a three-year collaboration with the International AIDS Vaccine Initiative, or IAVI, and Children's Research Institute, or CRI, to develop prophylactic AIDS vaccines for use in developing countries of the world. In March 2003, we, CRI and IAVI extended the collaboration through December 31, 2003. The vaccines, which will utilize our AAV vectors to deliver selected HIV genes as vaccines, are designed to elicit a protective immune response against HIV and prevent its progression to AIDS. We anticipate that these vaccines would be provided to the developing countries of the world through the public health sector which includes the World Health Organization and IAVI. Our role is to develop vaccines, with funding from IAVI. We are expected to manufacture the vaccines and then sell them to IAVI at full cost of manufacturing plus a reasonable public sector profit. IAVI funds our development activities based upon an agreed upon annual work plan and budget. Under the terms of the agreement, we, CRI or IAVI can terminate this collaboration, without cause, with ninety day advance notice. IAVI has rights that, in the event of termination for certain reasons, or if we fail to continue to develop an AIDS vaccine, for reasons other than cessation of funding by IAVI, enables IAVI to develop and commercialize AIDS vaccines utilizing intellectual property owned by us for use in developing, manufacturing and commercializing AIDS vaccines in the developing world and developed world.

We, IAVI and CRI plan to coordinate efforts that will result in a regulatory filing in the second half of 2003 to support initiation of clinical trials of the first vaccine candidate developed in this collaboration. Through December 31, 2002, we have earned $7.6 million in research and development revenue from IAVI under this collaboration. In connection with the extension to the collaboration, we expect to receive up to $5.6 million of research and development funding from IAVI in 2003 if the current work plan is implemented.

Under the terms of the collaboration, IAVI has retained rights to ensure that any safe and efficacious AIDS vaccines developed as part of this collaboration will be distributed in developing countries at a reasonable price to be determined by IAVI. If we are not able or decline to produce the vaccine for developing countries in reasonable quantities and at a reasonable price, IAVI has rights that will allow IAVI to contract with other manufacturers to make the vaccines available at a reasonable price in those countries. We currently have rights to develop the technology utilized in or developed as a result of the IAVI collaboration for development, manufacture and commercialization of AIDS vaccines in the developed world.

Medeva Pharmaceuticals, Inc./Celltech Group plc

In 1998, we entered into a collaboration with Medeva Pharmaceuticals, Inc. to develop and commercialize tgAAVCF, our gene therapy product candidate for treating cystic fibrosis. Under the terms of the collaboration, we granted Medeva an exclusive worldwide license to products developed in this collaboration and we assumed responsibility for manufacturing and supplying bulk tgAAVCF product to support clinical trials and product commercialization. In January 2000, Celltech Group plc acquired Medeva and assumed Medeva's rights and obligations under our collaboration. In December 2002, Celltech notified us of its decision to terminate the

collaboration. Under the terms of our agreements, all rights that we granted or otherwise extended to Medeva related to the cystic fibrosis and gene vector technology that we have granted or otherwise extended to Medeva have been returned to us. As a result, we have full rights to the potential tgAAVCF product candidate.

Under the Medeva/Celltech collaboration, we earned a total of $28.3 million in license fees, development funding and milestone payments. We received $3 million from the sale of our common stock to Medeva as part of the collaboration. Under a credit agreement with Medeva, we received $2 million under a loan with a scheduled maturity in November 2003. In connection with the December 2002 termination of our collaboration with Celltech, we entered into a settlement agreement that provided that the $2 million loan was considered paid-in-full in exchange for settlement of outstanding development expenses that were to be reimbursed by Celltech under the collaboration. No cash was transferred between us and Celltech under the settlement agreement.

Emerald Gene Systems, Ltd.

In July 1999, we formed Emerald Gene Systems, Ltd. (Emerald), our joint venture with Elan International Services, Ltd., a wholly-owned subsidiary of Elan Corporation plc. Emerald was formed to develop enhanced gene delivery systems, based on a combination of our gene delivery technologies and Elan's drug delivery technologies. These gene delivery systems could potentially be systemically or orally administered to deliver genes targeting the desired cells within the body. The initial three-year development period for Emerald ended during 2002 and we have begun the process of dissolving the joint venture. As of December 31, 2002, there are no operating activities within the joint venture. The license agreements between both us and Elan and the joint venture will be terminated and all rights returned to the applicable licensor. We are negotiating with Elan the terms under which we will have access to technology developed by Emerald.

We own 80.1% of Emerald's common stock and 80.1% of Emerald's preferred stock and Elan owns the remaining 19.9% of Emerald's common and preferred stock. The common stock of Emerald held by Elan is similar in all respects to the common stock held by us, except that those shares held by Elan do not have voting rights. The common shares held by Elan may be converted into voting common shares at Elan's election. Although we currently own 100% of the voting stock, Elan and its subsidiaries have retained significant minority investor rights that are considered participating rights under the Financial Accounting Standards Board, or FASB, Emerging Issues Task Force, or EITF, Bulletin 96-16, *Investors' Accounting for an Investee When the Investor Has a Majority of the Voting Interest but the Minority Shareholder Has Certain Approval or Veto Rights*. Because Elan's participating rights prevent us from exercising control over Emerald, we do not consolidate the financial statements of Emerald, but instead account for our investment in Emerald under the equity method of accounting.

We and Elan funded the expenses of Emerald in proportion to our respective ownership interests. As of December 31, 2002, we had provided $7.5 million of cash funding to the Emerald joint venture. A joint operating committee determined the nature and scope of activities to be performed by the joint venture and we and Elan jointly conducted Emerald's research and development activities. Emerald reimbursed each company for the costs of research and development and related expenses, plus a profit percentage. We and Elan do not expect to perform any further additional development activities in the Emerald joint venture.

As part of our agreements related to Emerald, Elan has provided us funding as follows:

- Elan purchased $5 million of our common stock in 1999 at the closing of the joint venture agreements and purchased an additional $5 million of our common stock in 2000;
- During 2001 and 2002, we drew an aggregate amount of $7.9 million under a $12 million convertible note commitment by Elan to fund a portion of our investment in Emerald, which convertible note commitment has now expired and the amounts borrowed are due in July 2005; and
- In 1999, at the closing of the joint venture agreements, Elan received $12 million of our Series B convertible exchangeable preferred stock in exchange for our 80.1% interest in Emerald.

Elan may convert the Series B convertible exchangeable preferred stock, at its option, into shares of our common stock. The Series B preferred stock will automatically convert into common stock upon the occurrence of specified transactions involving a change of control of Targeted Genetics. Alternatively, until April 2003, Elan can exchange its Series B preferred stock for the preferred shares we hold in Emerald, which would bring Elan's ownership in Emerald to 50%. If Elan exercises its exchange right, it must make a cash payment to us equal to 30.1% of the joint venture losses that we and Elan funded to Emerald after its formation. As of December 31, 2002, the Series B preferred stock was convertible into 4,448,645 shares of our common stock.

Elan, as a holder of Series B preferred stock, is not entitled to vote together with the holders of our common stock, including with respect to the election of directors, or as a separate class, except as otherwise provided by the Washington Business Corporation Act.

We have borrowed $7.9 million from Elan in the form of a convertible note, the proceeds of which were used to fund our ongoing investment in Emerald. Interest on borrowings under this loan facility accrues at a rate of 12.0% per annum, compounded semi-annually. Principal and interest outstanding under this loan facility are due in July 2005, payable at our option either in cash or in shares of our common stock. Interest is payable semi-annually in cash and, if we elect not to pay in cash at that time, is treated as a new borrowing from Elan. Elan has the option to convert principal and interest outstanding under the loan facility, on a per-draw basis, into shares of our common stock. The applicable conversion prices for amounts outstanding as of December 31, 2002 range from $0.83 to $6.11. If Elan had elected to convert the outstanding principal and interest under the loan facility at December 31, 2002, it would have received approximately 3.0 million shares of our common stock. We have the option to prepay principal and interest outstanding under our Elan loan facility, in whole or on a per-draw basis, in either cash or shares of our common stock. If we elect to prepay outstanding amounts with our common stock, the conversion price will equal the lesser of the average closing price of our common stock for a specified period of time before the date of prepayment and the applicable conversion price for each draw. Unless we obtain approval of our shareholders, we would be limited in our ability to issue shares of our common stock to repay amounts outstanding under the loan facility to the extent the repayment caused Elan's ownership in our common stock to exceed 19.9% of our total shares then outstanding. If we elect to prepay the outstanding amounts in cash, we must pay an amount equal to the greater of the amount of principal and interest outstanding under the applicable draw and the value of our common stock that Elan would receive upon conversion, at the then current market price of those shares.

Wyeth/Genetics Institute

In November 2000, we entered into a collaboration with Wyeth/Genetics Institute, a unit of Wyeth Pharmaceuticals, to develop AAV vector-based gene therapy products for treating hemophilia A and, potentially, hemophilia B. In November 2002, Wyeth elected to terminate this hemophilia collaboration and related agreements. Under the terms of our agreements with Wyeth, all rights that we granted or otherwise extended to Wyeth related to the hemophilia technology have returned to us and we were granted an option to acquire a right and license to certain hemophilia patent rights controlled by Wyeth. In connection with the termination of our collaboration with Wyeth, we entered into a settlement agreement with Wyeth in February 2003, and in March 2003, we received $3.2 million in settlement of outstanding expenses incurred by us under the collaboration and as an early termination payment.

Through December 31, 2002, we earned $14.5 million in upfront fees and research and development revenue from Wyeth/Genetics Institute under this collaboration. Upon receipt of the $3.2 million settlement payment, we recognized $2.6 million as first quarter 2003 research and development revenue and the remaining $637,000 represents collection of receivables outstanding at December 31, 2002.

Genzyme Corporation

In 1999, Genovo entered into a research and development collaboration with Genzyme Corporation to develop potential products for treating lysosomal storage disorders. Under the terms of the development

agreement, Genovo was committed to perform, for up to three years and at its own cost, up to $2.9 million per year of research and development activities. A separate option agreement gave Genzyme the option to purchase up to $11.4 million of Genovo equity during the three-year research and development period, of which $3.4 million had been purchased before our acquisition of Genovo in 2000. In November 2000, Genzyme exercised its option to purchase 311,295 shares of our common stock (as successor company to Genovo) at a purchase price of approximately $12.85 per share, resulting in proceeds to us of $4 million. The development program under our agreement with Genzyme expired in August 2002 and was not renewed. All rights that we had granted or otherwise extended to Genzyme were returned to us, except that Genzyme retains an exclusive license to certain Genovo-related technology for use in the field of lysosomal storage disorders and we are not allowed to develop any potential products for treating lysosomal storage disorders for a three-year period following expiration or termination of the licensing agreement.

Alkermes, Inc.

In June 1999, we entered into a license agreement with Alkermes, Inc. in which we received exclusive rights to an issued patent and other pending patent applications related to AAV vector manufacturing. The license broadly covers a manufacturing method that we believe is critical to making AAV-based products in a commercially viable, cost-effective manner. The license to this technology, developed by Children's Hospital in Columbus, Ohio, covers the use of cell lines for manufacturing AAV vectors in multiple disease areas. Under the terms of the license agreement, we issued to Alkermes 500,000 shares of our common stock and warrants to purchase 2,000,000 additional shares of our common stock, which warrants expire from June 2007 to June 2009. Alkermes will also receive milestone payments and royalties on the sale of any products manufactured using the licensed technology and is entitled to a portion of any sub-licensing payments that we may receive.

Relationship with Amgen, Inc.

Targeted Genetics was formed in 1989 as a subsidiary of Immunex Corporation, a biopharmaceutical company developing recombinant proteins as therapeutics. In connection with our formation, we issued Immunex shares of our preferred stock that were subsequently converted into 1,920,000 shares of our common stock, in exchange for Immunex granting us an exclusive worldwide license to certain Immunex proprietary technology specifically applicable to gene therapy applications. The licensed technology relates to gene identification and cloning, panels of retroviral vectors, packaging cell technology, recombinant cytokines, DNA constructs, cell lines, promoter/enhancer elements and immunological assays.

In July 2002, Immunex was acquired by Amgen, Inc. Our license to the Immunex technology was not affected by the acquisition and we retain all rights granted under the original license.

Patents and Proprietary Rights

Patents and licenses are important to our business. Our strategy is to file or license patent applications to protect technology, inventions and improvements to inventions that we consider important to developing our business. To date, we have filed or exclusively licensed over 400 patent or patent applications with the USPTO, including foreign counterparts of some of these applications in Europe, Japan and other countries. Of these patent applications, over 100 patents have been issued or allowed. This proprietary intellectual property includes genes, formulations, methods of transferring genes into cells, processes to manufacture and purify gene delivery product candidates and other proprietary technologies and processes. We also rely on unpatented proprietary technology such as trade secrets, know-how and continuing technological innovations to develop and maintain our competitive position.

The patent positions of pharmaceutical and biotechnology firms, including our patent positions, are uncertain and involve complex legal and factual questions for which important legal principles are largely unresolved, particularly with regard to human therapeutic uses. Patent applications may not result in the issuance

of patents, and the coverage claimed in a patent application may be significantly reduced before a patent is issued. If any patents are issued, the patents may be subjected to further proceedings limiting their scope, may not provide significant proprietary protection and may be circumvented or invalidated. Patent applications in the United States and other countries generally are not published until more than 18 months after they are filed, and because publication of discoveries in scientific or patent literature often lags behind actual discoveries, we cannot be sure that we were, or our licensor was, the first creator of inventions covered by pending patent applications or the first to file patent applications for these inventions.

We have licensed technology underlying several issued and pending patents. Among these are two key patents that relate to the use of AAV vectors for gene delivery, which we licensed from the National Institutes of Health, or NIH, and the University of Florida Research Foundation. In addition, we have acquired nonexclusive rights to the CFTR gene being delivered in our tgAAVCF product candidate for cystic fibrosis, which uses our proprietary AAV delivery technology to deliver a copy of the CFTR gene. Licensing of intellectual property critical to our business involves complex legal, business and scientific issues. If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop or commercialize the affected product candidates. For example, in July 1997 the licensor of our licensed CFTR gene and related vector was notified that the USPTO had declared an interference proceeding to determine whether our licensor or an opposing party has the right to the patent application on the CFTR gene and related vector. Although we are not a party to the interference proceeding, its outcome could affect our license to the CFTR gene and related vector. If the USPTO or U.S. Circuit Court of Appeals ultimately determines that our licensor does not have rights to both the CFTR gene and the vector, we believe that we will be subject to one of several outcomes:

- our licensor could agree to a settlement arrangement under which we continue to have rights to the gene and the vector at our current license royalties;
- the prevailing party could require us to pay increased license royalties to maintain our access to the gene, the vector or both, as applicable, which licensing royalties could be substantial; or
- we could lose our license to the gene, the vector or both.

If our licensor does not retain its right to the CFTR gene and the vector, and we cannot obtain access at a reasonable cost or develop or license a replacement gene and vector at a reasonable cost, we will be unable to commercialize our potential tgAAVCF product candidate. For a more detailed description of this risk, see the section entitled "Factors Affecting Our Operating Results, Our Business and Our Stock Price—Litigation involving intellectual property, product liability or other claims and product recalls could strain our resources, subject us to significant liability, damage our reputation or result in the invalidation of our proprietary rights" in Part II, Item 7 of this annual report.

In addition to patent protection, we rely on trade secret protection for our confidential and proprietary information and technology. To protect our trade secrets, we generally require our employees, consultants, scientific advisors and parties to collaborative agreements to execute confidentiality agreements. In the case of employees and consultants, the agreements also provide that all inventions resulting from work performed by them while employed by us will be our exclusive property. Despite these agreements, and other precautions we take to protect our trade secrets and other proprietary unpatented intellectual property, we may be unable to meaningfully protect our trade secrets and other intellectual property from unauthorized use or misappropriation by a third party. These agreements may not provide adequate remedies in the event of unauthorized use or disclosure of our confidential information. In addition, our competitors could obtain rights to our nonexclusively licensed proprietary technology or may independently develop substantially equivalent proprietary information and technology. If our competitors develop and market competing products using our unpatented or *nonexclusively* licensed intellectual property or substantially similar technology or processes, our products could suffer a reduction in sales or be forced out of the market.

A number of pharmaceutical and biotechnology companies and research and academic institutions have developed technologies, filed patent applications or received patents for technologies that may be related to our business. Some of these technologies, applications or patents may conflict with our technologies or patent applications. This conflict could limit the scope of any patents that we may obtain for our technologies or result in denial of our patent applications. In addition, if patents or patent applications that cover our activities are or have been issued to other companies, we may be required to either obtain a license from the owner or develop or obtain alternative technology. A license may not be available on acceptable terms, if at all, and we may be unable to develop or obtain alternative technology.

As the biotechnology industry expands and more patents are issued, the risk increases that our processes and potential products may give rise to claims that they infringe on the patents of others. These other parties could bring legal actions against us claiming damages and seeking to stop clinical testing, manufacturing and marketing of the affected product or use of the affected process. If we are found by a court to have infringed on the proprietary rights of others, we could also face potential liability for significant damages and be required to obtain a license to the proprietary technology at issue if we continue to commercialize. A required license may not be available on acceptable terms, if at all, which could impair our ability to commercialize our product candidates. Similarly, administrative proceedings, litigation or both may be necessary to enforce patents issued to us, to protect trade secrets or know-how owned by us or to determine the enforceability, scope and validity of the proprietary rights of others. This type of litigation, regardless of its merit, could result in substantial expense to us and significantly divert the efforts of our technical and management personnel. An adverse outcome could adversely affect our business.

Competition

A number of companies and institutions are developing or considering the development of potential gene therapy and cell therapy treatments, including other gene delivery companies, biotechnology companies, pharmaceutical companies, universities, research institutions, governmental agencies and other healthcare providers. In addition to competition from these sources, our potential products will compete with more traditional therapies for the diseases on which we focus, including pharmaceutical products, medical devices and surgery. We also compete with others to acquire products or technology from research institutions or universities.

Many of our competitors have substantially more financial and other resources, larger research and development staffs and more experience and capabilities in researching, developing and testing products in clinical trials, obtaining FDA and other regulatory approvals and manufacturing, marketing and distributing products. In addition, the competitive positions of other companies may be strengthened through collaborative relationships, such as those with large pharmaceutical companies or academic institutions. As a result, our competitors may develop, obtain patent protection for, receive FDA and other regulatory approvals for or commercialize products more rapidly than we do or may manufacture and market their products more successfully than we do. Our competitors' technologies and products may be more effective or economically feasible than our potential products. If we are successful in commercializing our products, we will be required to compete with respect to manufacturing efficiency and marketing capabilities, areas in which we have no experience. These developments could limit the prices we are able to charge for any products we are able to commercialize or render our products less competitive or obsolete.

Governmental Regulation

All of our potential products must receive regulatory approval before they can be marketed. Human therapeutic products are subject to rigorous preclinical and clinical testing and other pre-market approval procedures administered by the FDA and similar authorities in foreign countries. In accordance with the federal Food, Drug and Cosmetics Act, the FDA exercises regulatory authority over the development, testing, formulation, manufacture, labeling, storage, record keeping, reporting, quality control, advertising, promotion, export and sale of our potential products. Similar requirements are imposed by foreign regulatory agencies. In some cases, state regulation may also apply.

Gene therapy and cell therapy are both relatively new technologies that have not been extensively tested or shown to be effective in humans. The FDA reviews all product candidates for safety and efficacy at each stage of clinical testing. Both safety and efficacy standards must be met before the FDA permits clinical testing to proceed to the next stage or grants product approval. Obtaining approval from the FDA and other regulatory authorities for a new therapeutic product candidate, if approval is ever obtained, is likely to take several years. We may encounter difficulties or unanticipated costs in our efforts to secure necessary governmental approvals, which could delay or prevent the marketing of our product candidates. In addition, the regulatory requirements governing gene and cell therapy product candidates and commercialized products frequently change. The approval process, and ongoing compliance with applicable regulations after approval, involves substantial expenditures of financial and other resources.

Preclinical studies generally require studies in the laboratory or in animals to assess the potential product's safety and effectiveness. Preclinical studies include laboratory evaluation of toxicity, pharmacokinetics, or how the body processes and reacts to the drug, and pharmacodynamics, or whether the drug is actually having the expected effect on the body. Preclinical studies must be conducted in accordance with the FDA's Good Laboratory Practice regulations and, before any proposed clinical testing in humans can begin, the FDA must review the results of these preclinical studies as part of an IND application.

If preclinical studies of a product candidate, including animal studies, demonstrate safety, and laboratory test results are acceptable, then the potential product will undergo clinical trials to test the therapeutic agent in humans. Human clinical trials are subject to numerous governmental regulations that provide detailed procedural and administrative requirements designed to protect the trial participants. Each institution that conducts human clinical trials has an Institution Review Board charged with evaluating each trial and any trial amendments to ensure that the trial is ethical, patients are protected and the trial meets the institutional requirements. These evaluations include reviews of how the institution will communicate the risks inherent in the clinical trial to potential participants, so that the patients may give their informed consent. Clinical trials must be conducted in accordance with the FDA's Good Clinical Practices regulations and the protocols the company establishes to govern the trial objectives, the parameters to be used for monitoring safety, the criteria for evaluating the efficacy of the potential product and the rights of each trial participant with respect to safety. FDA regulations require us to submit these protocols as part of the application. A FDA review or approval of the protocols, however, does not necessarily mean that the trial will successfully demonstrate safety and/or efficacy of the potential product.

Institutions that receive NIH funding for gene therapy clinical trials must also comply with the NIH Guidelines, and the clinical trials are subject to a review by the NIH's Office of Biotechnology Activities Recombinant DNA Advisory Committee, or RAC. The outcome of this review can be either an approval to initiate the trial without a public review or a requirement that the proposed trial be reviewed at a quarterly committee meeting. A clinical trial will be publicly reviewed when at least three of the committee members or the Director of the Office of Biotechnology Activities recommends a public review. Should the RAC require a public hearing, the start of the trial must be delayed until after the hearing date. Although the NIH guidelines do not have regulatory status, the RAC review process can impede the initiation of the trial, even if the FDA has reviewed the trial and approved its initiation. Additionally, before any clinical trial can be initiated at an NIH-funded site, the Institutional Biosafety Committee of that site must perform a review of the proposed clinical trial and ensure there are no safety issues associated with the trial.

Clinical trials are typically conducted in three phases often involving multiple clinical trials in each phase. In Phase I, clinical trials generally involve a small number of patients, who may or may not be afflicted with the target disease, to determine the preliminary safety profile. In Phase II, clinical trials are conducted with larger groups of patients afflicted with the target disease in order to establish preliminary effectiveness and optimal dosages and to obtain additional evidence of safety. In Phase III, large-scale, multi-center, comparative clinical trials are conducted with patients afflicted with the target disease in order to provide enough data for the statistical proof of efficacy and safety required by the FDA and other regulatory agencies for market approval. We report our progress in each phase of clinical testing to the FDA, which may require modification, suspension

or termination of the clinical trial if it deems patient risk too high. The length of the clinical trial period, the number of trials conducted and the number of enrolled patients per trial vary, depending on our results and FDA requirements for the particular clinical trial. Although we and other companies in our industry have made progress in the field of gene therapy, we cannot predict what the FDA or the RAC will require in any of these areas to establish to its satisfaction the safety and effectiveness of the product candidate.

If we successfully complete clinical trials for a product candidate, we must obtain FDA approval or similar approval required by foreign regulatory agencies, as well as the approval of several other governmental and nongovernmental agencies, before we can market the product in the United States or in foreign countries. Current FDA regulations relating to biologic therapeutics require us to submit an acceptable Biologics License Application, or BLA, to the FDA and receive approval before the FDA will permit commercial marketing. The BLA includes a description of our product development activities, the results of preclinical studies and clinical trials and detailed manufacturing information. Unless the FDA gives expedited review status, this stage of the review process generally takes at least one year. Should the FDA have concerns with respect to the potential product's safety and efficacy, it may request additional data, which could delay product review or approval. The FDA may ultimately decide that the BLA does not satisfy its criteria for approval and might require us to do any or all of the following:

- modify the scope of our desired product claims;
- add warnings or other safety-related information; and/or
- perform additional testing.

Because the FDA has not yet approved any gene therapy products, it is not clear what, if any, unforeseen issues may arise during the approval process. While we expect this regulatory structure to continue, we also expect the FDA's regulatory approach to product approval, and its requirements with respect to product testing, to become more predictable as its scientific knowledge and experience in the field of gene therapy increase. Adverse events in the field of gene therapy or other biotechnology-related fields, however, could result in greater governmental regulation, stricter labeling requirements and potential regulatory delays in the testing or approval of gene therapy products.

Once approved by the FDA, marketed products are subject to continual FDA review. Later discovery of previously unknown problems or failure to comply with applicable regulatory requirements may result in restrictions on marketing a product or in its withdrawal from the market, as well as potential criminal penalties or sanctions. In addition, the FDA requires that manufacturers of a product comply with current Good Manufacturing Practices requirements, both as a condition to product approval and on a continuing basis. In complying with these requirements, we expend significant amounts of time, money and effort in production, record keeping and quality control. Our manufacturing facilities are subject to periodic inspections by the FDA. If major problems are identified during these inspections that could impact patient safety, the FDA could subject us to possible action, such as the suspension of product manufacturing, product seizure, withdrawal of approval or other regulatory sanctions. The FDA could also require us to recall a product.

We are also subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other federal, state and local regulations. For example, our controlled use of hazardous materials in our research and development activities must comply with standards prescribed by state and federal law.

Employees

As of December 31, 2002 we, including our majority-owned subsidiary, CellExSys, had approximately 125 full-time-equivalent employees. On February 14, 2003, we eliminated approximately 40 of these positions, which left us with approximately 85 full-time-equivalent employees, of which approximately 64 are directly involved in

research and development, or support our research and development efforts. Eighteen of these employees have Ph.D. or M.D. degrees and a significant number of our management and professional employees have prior experience with other biotechnology or pharmaceutical companies.

Competition among biotechnology and pharmaceutical companies for highly skilled scientific and management personnel is intense. We believe that we have compensation and benefit programs in place that will allow us to be competitive in this environment. If we are ineffective, however, in retaining our existing workforce and scientific advisors or in attracting additional qualified employees and advisors, our business will not succeed. None of our employees are covered by a collective bargaining agreement.

Item 2. Properties

As of December 31, 2002, we occupied an aggregate of approximately 90,000 square feet of laboratory, manufacturing and office space in Seattle, WA and Sharon Hill, PA. The leases on our Seattle facilities expire in March 2004 and include options for us to extend the terms for two additional five-year periods. The lease on our laboratory and office facilities in Sharon Hill expires in November 2005 and includes options for us to extend its term for two additional five-year periods. In July 2000, we leased approximately 76,000 square feet of space in Bothell, WA for future large-scale manufacturing of our products, but have never occupied this facility. The lease on this facility expires in September 2015 and includes an option for us to extend its term for one additional five-year period.

In connection with the plan to reorganize our business operations and focus on our key development programs in cystic fibrosis, arthritis and our AIDS vaccine program, we decided to close our operations in Sharon Hill representing approximately 30,000 square feet of laboratory and office space and are seeking a replacement tenant for that facility and to terminate the lease. Similarly, as part of this reorganization of our business operations, we are seeking to terminate our lease on our Bothell facility to further reduce fixed operating costs and in December 2002 we recognized contract termination costs of $1.6 million associated with abandoning this facility. We believe that our current facilities in Seattle will be adequate to meet our projected research and development, manufacturing and administrative needs for the next several years. Within that time frame, however, we could be required to locate alternative facilities, depending on the extent of our growth and development.

Item 3. Legal Proceedings

We are not a party to any material legal proceedings.

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

No matters were submitted to a vote of our security holders during the fourth quarter of 2002.

PART II

Item 5. Market Price of and Dividends on the Registrant's Common Equity and Related Shareholder Matters

Our common stock trades on the Nasdaq SmallCap Market under the symbol TGEN. Until January 8, 2003, our common stock was traded on the Nasdaq National Market, under the symbol TGEN. As of March 5, 2003, we had 322 shareholders of record and approximately 18,600 beneficial holders of our common stock.

We have never paid cash dividends and do not anticipate paying them in the foreseeable future. In addition, our loan agreement with Biogen, Inc. restricts the amount of cash dividends we could pay.

The following table lists, for each calendar quarter indicated, the high and low bid quotations for our common stock, as quoted on the Nasdaq National Market. These quotes reflect inter-dealer prices, without retail mark-up or commission, and may not necessarily represent actual transactions.

	High	Low
2002:		
4th Quarter	$1.40	$0.30
3rd Quarter	1.19	0.49
2nd Quarter	2.09	1.04
1st Quarter	3.24	1.90
2001:		
4th Quarter	$3.50	$1.71
3rd Quarter	5.87	1.45
2nd Quarter	6.60	3.00
1st Quarter	9.25	2.38

The following table lists equity compensation plans, including individual compensation arrangements, under which equity securities are authorized for issuance as of December 31, 2002:

	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders	4,439,407	$3.80	446,030
Equity compensation plans not approved by security holders	5,358,474	2.51	—
Total	9,797,881	$3.09	446,030

Under technology licensing, equity financing and equipment financing arrangements, we have issued stock purchase warrants to purchase a total of 5,358,474 shares of our common stock. These are presented in the table above as "Equity compensation plans not approved by security holders" and include:

- In connection with a private placement of common stock in 1998, we issued warrants to purchase a total of 4,333,333 shares of common stock at an exercise price of $2.00 per share. In 2001 a warrant holder exercised warrants to purchase 1,000,000 shares of our common stock. The remaining warrants to purchase 3,333,333 shares of common stock issued in connection with the 1998 private placement expire in April 2003.
- In 1999, in connection with a technology license agreement, we issued to Alkermes, Inc. a warrant to purchase 1,000,000 shares of our common stock at an exercise price of $2.50 per share, expiring in June 2007, and a warrant to purchase 1,000,000 shares of our common stock at an exercise price of $4.16 per share, expiring in June 2009.
- We have outstanding warrants to purchase a total of 25,141 shares of our common stock related to equipment financing and consulting agreements. These warrants have a weighted average exercise price of $5.46 per share and expire between December 2003 and March 2004.

Item 6. Selected Financial Data

	Year Ended December 31,				
	2002 (3)	2001	2000 (1)(2)	1999	1998
Statement of Operations Data					
Revenue	$ 19,333,000	$ 18,880,000	$ 11,403,000	$ 6,848,000	$ 7,510,000
Operating expenses	42,074,000	47,484,000	57,208,000	33,694,000	16,373,000
Loss from operations	(22,741,000)	(28,604,000)	(45,805,000)	(26,846,000)	(8,863,000)
Loss before cumulative effect of change in accounting principle	(23,767,000)	(27,170,000)	(43,973,000)	(26,655,000)	(8,687,000)
Cumulative effect of change in accounting principle	—	—	(3,682,000)	—	—
Net loss	$(23,767,000)	$(27,170,000)	$(47,655,000)	$(26,655,000)	$ (8,687,000)
Basic and diluted net loss per share:					
Loss before cumulative effect of change in accounting principle	$ (0.52)	$ (0.62)	$ (1.16)	$ (0.83)	$ (0.33)
Cumulative effect of change in accounting principle	—	—	(0.10)	—	—
Net loss per basic and diluted common share	$ (0.52)	$ (0.62)	$ (1.26)	$ (0.83)	$ (0.33)
Shares used in computing basic and diluted net loss per common share	45,767,000	43,928,000	37,752,000	32,174,000	26,638,000
Proforma amounts assuming the accounting change is applied retroactively:					
Net loss	—	—	—	$(24,555,000)	$(14,468,000)
Net loss per common share	—	—	—	$ (0.77)	$ (0.54)

	December 31,				
	2002	2001	2000	1999	1998
Balance Sheet Data					
Cash and cash equivalents	$ 12,606,000	$ 25,186,000	$ 38,630,000	$ 7,153,000	$ 11,957,000
Total assets	52,713,000	71,038,000	87,974,000	13,692,000	16,204,000
Long-term obligations	20,494,000	16,403,000	2,447,000	2,088,000	900,000
Redeemable preferred stock	12,015,000	12,015,000	12,015,000	12,015,000	—
Total shareholders' equity	5,896,000	25,386,000	51,417,000	(5,049,000)	11,982,000

(1) Effective January 1, 2000, we changed our method of accounting for nonrefundable up-front license fees. See Note 1 to consolidated financial statements.

(2) In 2000, operating expenses include a charge for acquired in-process research and development of $28 million recorded in connection with our acquisition of Genovo. See Note 6 to consolidated financial statements.

(3) Effective January 1, 2002, we changed our method of accounting for goodwill and other intangible assets and costs associated with exit or disposal activities. See Note 1 to consolidated financial statements.

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

Overview

We develop gene therapy products and technologies to treat acquired and inherited diseases on our own and through various research and development collaborations with others. We have financed our product development activities and general corporate functions primarily through proceeds from public and private sales of our equity securities, through cash payments received from our collaborative partners and proceeds from the issuance of debt. To a lesser degree, we have also financed our operations through interest earned on cash, cash equivalents and short-term investments, funding under equipment leasing agreements and research grants. A significant portion of our operating expenses has been funded through collaborations with third parties which are summarized as follows:

Ongoing collaborations:

- a multiple-product collaboration with Biogen, the initial development period of which will conclude in September 2003; and
- a three-year collaboration with IAVI, to develop an AIDS vaccine, the initial development period of which concluded in January 2003 and has been extended through December 2003.

Collaborations that ended in 2002:

- a collaboration with Celltech Group plc to develop our product candidate for the treatment of cystic fibrosis that was terminated in November 2002;
- a research and development joint venture with Elan, called Emerald Gene Systems, to develop enhanced gene delivery technologies. The initial three-year development period of the Emerald joint venture concluded in the third quarter of 2002 and we are working towards dissolving the joint venture which no longer has any ongoing operating activities;
- a collaboration with Genzyme to develop treatments for lysosomal storage diseases which concluded in August 2002; and
- a collaboration with Wyeth/Genetics Institute to develop treatments for hemophilia, notice of termination of which was made by Wyeth on November 12, 2002. In February 2003, we entered into an agreement to terminate this collaboration.

Our development collaborations typically provide us with funding, including one or more purchases of our equity securities, loans, payments for reimbursement of research and development costs and milestone fees and payments. We and our partner will typically agree on a development plan for the product candidate, which often extends for multiple years and subject to termination or extension. The product candidate's progress is periodically reviewed with the partner. We generally maintain manufacturing and royalty-based interests in successfully developed product candidates. We have a lead AAV product candidate under development for treating cystic fibrosis that has been evaluated in a Phase II clinical trial. In October 2002, we announced preliminary results of this Phase II study. Our analysis of the preliminary data indicates that the primary endpoint of safety and tolerability of the drug was achieved. In addition, positive trends in improvement of lung function, levels of inflammatory cytokines and transfer of the correct gene into the cells of the lung were observed. We also have a pipeline of product candidates focused on treating arthritis, hemophilia, and cancer and we are developing a vaccine candidate for the prevention of AIDS, which is partnered with a public health organization. Our synthetic vector product candidates for treating cancer have been evaluated in Phase I and Phase II clinical trials, which showed a good safety profile of the drug, efficient transfer of the gene of interest into the targeted cells, a decrease in the level of proteins produced at abnormally high levels by tumor cells and a reduction in tumor burden. Through partnership activities and other internally funded efforts, we have successfully advanced our product candidates into clinical development, including Phase II clinical trials for our lead cystic fibrosis

product candidate and Phase I and Phase II clinical trials of our cancer product candidates. During 2002, we implemented plans to restructure operations to concentrate resources on key product development programs and business development activities. In connection with these operational changes, we suspended further clinical development of our cancer and hemophilia programs until we can find a development partner to help fund development costs, or find other sources of funding for these programs. We have focused our efforts on advancing the clinical development of our product candidate to treat cystic fibrosis and on initiating clinical trials for our product development candidate to treat arthritis and our HIV vaccine.

We have developed processes to manufacture our AAV-based potential products at a scale amenable to clinical development and expandable to large-scale production for commercialization, pending successful completion of clinical trials and regulatory approval. We believe that our successes in assembling a broad platform of proprietary intellectual property for developing and manufacturing potential products, in establishing collaborative relationships and advancing our potential products to clinical evaluation serve to demonstrate the value of our intellectual property and our potential to develop gene therapy product candidates to treat a range of diseases.

A wide range of diseases may potentially be treated with gene-based products, including cancer, genetic diseases and infectious diseases. We believe that there is also a significant opportunity to treat diseases, currently treated with proteins using recombinant DNA technology, monoclonal antibodies or small molecules that may be more effectively treated by gene-based therapies due to their ability to provide a long term or a localized treatment modality. Our business strategy is to develop multiple gene delivery systems, which we believe will maximize our product opportunities. Using these gene delivery systems, we are developing product candidates across multiple diseases with the belief that gene-based therapies may provide a means to treat disease in ways not currently achievable with traditional pharmaceuticals. We believe that, if successful, we can establish significant market potential for our product candidates. Because there are currently no commercially available gene therapy products, we intend to pursue product development programs that will enable us to demonstrate proof of concept and eventually commercialize gene-based therapeutics to address currently unmet medical needs in treating disease. If this is achieved, we believe that the value of our assets can be leveraged into multiple opportunities.

Although we believe that our technology appears promising, we do not know whether any commercially viable products will result from our research and development efforts or those of our collaborators. We anticipate that we will not generate revenue from the sale of commercial products for at least the next several years. Unless and until we successfully commercialize one or more product candidates, we expect to generate revenue primarily through research funding, milestone payments and licensing fees from current and potential future corporate collaborators. The timing and amount of our future revenue will be subject to significant fluctuations, based in part on the success of our research activities, the receipt of necessary regulatory approvals, the timing of achievement of milestones and the extent to which associated costs are reimbursed under our collaborative arrangements. Each of our product candidates combines different licensed technology from several licensors. We will have an obligation to our licensors to pay royalties on products that utilize their technologies. Because each product may require a different set of technologies, third-party royalties will be determined and paid on a product-by-product basis. Royalty payment rates may also vary between products depending on the extent of licensed technology or because some technology licenses provide for lower royalties when the licensed technologies are combined with other royalty-bearing technologies. The royalty payment rates that we owe to our licensors will significantly influence the price and viability of our potential products.

Our research and development expenses may fluctuate due to the timing of expenditures for the varying stages of our research, product development and clinical development programs and the availability of capital resources. Because a significant portion of our revenue is directly tied to our research and development activities, our revenue will fluctuate with the level of future research and development activities. We expect that our revenue will continue to fluctuate as we proceed with our current development collaborations, enter into potential new development collaborations and licensing agreements and earn milestone payments.

As of December 31, 2002, our accumulated deficit totaled $202 million. We expect to generate substantial additional losses for the foreseeable future, primarily due to the costs associated with our preclinical and clinical development programs, developing our manufacturing capabilities and preparing our products under development for commercialization. Our expenses are driven by the size and scope of our development programs, our staffing levels, outside costs for supplies and materials and clinical trial activities. We significantly decreased our staffing, outside costs and clinical trial activities in late 2002 as a result of the terminated collaborations and the need to narrow our focus on key development programs. As a result we anticipate 2003 staffing and outside costs for supplies, materials and clinical trial activities will decrease significantly from 2002. The development periods of our two ongoing collaborations conclude in 2003. If we and the collaborators do not agree to extend these collaborations, they will terminate. Absent new collaborative partnerships or expansions to our existing collaborative partnerships, we anticipate that both our research and development costs and our revenue will decrease in 2003. We will need to scale our research and development activities to match the levels of funding provided by our collaborators and other sources of capital available to us, which may be subject to fluctuation in the future.

We may be unable to achieve profitability on a sustained basis, if at all. Further, successful development of our product candidates will require that we access significantly higher amounts of capital than we currently have. We may be unable to obtain required funding when needed and on acceptable terms, obtain and maintain corporate partnerships or complete acquisition transactions necessary or desirable to complete the development of our product candidates.

In September 2000, we acquired Genovo, Inc., a privately held biotechnology company focused on developing therapeutic products based on AAV vectors. The purchase price totaled $66.4 million, which consisted of 5,250,805 shares of our common stock, valued at $58.4 million, assumed Genovo options valued at $7.7 million and transaction costs of $584,000 less $301,000 allocated to the intrinsic value of unvested stock options that we assumed. The $66.4 million purchase price consisted of $28.0 million of acquired in-process research and development (IPR&D) expenses; $39.5 million of intangibles, which consisted of AAV vector know-how of $12.7 million, assembled workforce of $1.6 million and goodwill of $25.2 million; $1.9 million of tangible assets; and $3.0 of liabilities assumed.

Critical Accounting Policies

Note 1 of the notes to our consolidated financial statements, "*Description of Business and Summary of Significant Accounting Policies*" summarizes each of our significant accounting policies that we believe are critical to the presentation of our consolidated financial statements. The most critical accounting policies include those related to revenue recognition, specifically as these policies relate to our collaborative development relationships with other companies, the accounting and presentation for our unconsolidated joint venture interest in Emerald, the application of assumptions and estimates in accounting for acquired IPR&D costs and the valuation of our intangible assets and restructuring charges associated with the reorganization of our operations that we initiated in August 2002 and December 2002.

We generate revenue from technology licenses, collaborative research arrangements and cost reimbursement agreements. Revenue under technology licenses and collaborative agreements typically consist of nonrefundable, up-front license fees, collaborative research funding, technology access fees and various other payments. Revenue from nonrefundable, up-front license fees and technology access payments is recognized ratably over the development period in the collaborative agreement. Revenue associated with performance milestones is recognized as earned, based upon the achievement of the milestones defined in the applicable agreements. Revenue under research and development cost-reimbursement contracts is recognized as the related costs are incurred. Advance payments received in excess of amounts earned are classified as deferred revenue.

We own 80.1% of Emerald's common stock and 80.1% of Emerald's preferred stock and Elan owns the remaining 19.9% of Emerald's common and preferred stock. The common stock of Emerald held by Elan is similar in all respects to the common stock held by us, except that those shares held by Elan do not have voting rights. The common shares held by Elan may be converted into voting common shares at Elan's election. Although we currently own 100% of the voting stock, Elan and its subsidiaries have retained significant minority investor rights that are considered "participating rights" under the FASB's EITF Bulletin 96-16, "*Investors' Accounting for an Investee When the Investor Has a Majority of the Voting Interest but the Minority Shareholder Has Certain Approval or Veto Rights.*" Because Elan's participating rights prevent us from exercising control over Emerald, we do not consolidate the financial statements of Emerald, but instead account for our investment in Emerald under the equity method of accounting. We are currently in the process of dissolving this joint venture and as of December 31, 2002, Emerald had no ongoing operating activities.

Our Series B convertible exchangeable preferred stock, which is currently valued at $12.0 million, is convertible into shares of our common stock or may be exchanged, at Elan's option, for a 30.1% ownership interest in Emerald. The exchange right expires in April 2003 and we are currently planning the process of dissolving the joint venture. The Series B preferred stock will be reclassified to shareholders' equity upon the earlier of the expiration of the exchange right, the dissolution of the joint venture or its conversion into our common stock. Because Emerald is being dissolved, we believe that it is unlikely that Elan will exercise its exchange right. Instead, we believe that the Series B preferred stock will automatically convert into common stock in July 2005 unless converted earlier by Elan. In the unlikely event that Elan exercises its exchange right, it must make a cash payment to us equal to 30.1% of the joint venture losses that we and Elan funded after Emerald's formation. Until such time as the exchange right expires, we will periodically monitor the redemption value of the Series B preferred stock, as measured by 30.1% of the fair value of the joint venture that Elan would receive, less the cash payable to us upon exchange by Elan. If the redemption value of the Series B preferred stock exceeds its then current carrying value, we will increase the carrying value of the Series B preferred stock to equal the redemption value and recognize a corresponding dividend to the Series B preferred shareholder. We will recognize subsequent increases or decreases in redemption value of the Series B preferred stock; however, decreases will be limited to amounts previously recorded as increases, so as not to reduce the carrying amount of the Series B preferred stock below the original basis of $12.0 million.

In June 2002, the FASB issued Statement of Financial Accounting Standards, or SFAS, No. 146, *"Accounting for Costs Associated with Exit or Disposal Activities,"* which is effective for exit or disposal activities initiated after December 31, 2002. This statement requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred. Previous guidance required that a liability for exit or disposal costs be recognized at the date of an entity's commitment to an exit plan. We elected to adopt the provisions of SFAS No.146 prior to the effective date as encouraged by the FASB and have incurred restructure charges for employee termination benefits and operating lease contingencies in connection with our December 2002 restructuring. The restructuring charges, and in particular, those changes associated with the exiting of a facility, are subject to many assumptions and estimates. Assumptions as to estimated sublease rates and the period of time to enter into a sublease significantly impact the accrual. As additional information becomes available, these estimates will be revised and adjustments will be made to the accrual.

Goodwill consists of acquired technology that is core to our development programs. On January 1, 2002, we adopted SFAS No. 142, *Goodwill and Other Intangible Assets.* SFAS No. 142 discontinues the amortization of goodwill and certain indefinite lived intangibles. The provisions of this accounting standard required us to complete a transitional impairment test upon adoption and identify any impairment in the value of goodwill as a cumulative effect of a change in accounting principle. We performed a transitional impairment test as of January 1, 2002 and no impairment in the value of our goodwill existed as of that date. In accordance with SFAS No.142, we test goodwill for impairment in value at least annually and more frequently if impairment indicators arise, and if goodwill is impaired, we will write down the value of goodwill through a charge to expense. We performed an annual impairment test as of October 1, 2002 and an interim impairment test in December 2002 related to our most recent restructuring and no impairment in the value of our goodwill has occurred.

Our estimates are based on assumptions we believe to be reasonable at the time we perform these estimates. Changes in the underlying assumptions may result in substantially different accounting estimates. For example, when we acquired Genovo in September 2000, we assigned value to the acquired assets on the basis of several estimates and assumptions. Changes in these underlying estimates may result in substantially different allocation of the overall purchase price and the amount of expenses recorded on our balance sheet as acquired IPR&D and intangible assets. In addition, we will make assumptions and estimates on a periodic basis when we evaluate the carrying value of goodwill for evidence of impairment and the estimation of costs associated with exit or disposal activities.

The summary of significant accounting policies should be read in conjunction with our consolidated financial statements and related notes and this discussion of our results of operations and liquidity and capital resources.

Results of Operations

Revenue

Total revenue in 2002 totaled $19.3 million, compared to $18.9 million in 2001. This increase in revenue reflects higher revenue earned under our hemophilia product development collaboration with Wyeth and our AIDS vaccine collaboration with IAVI, partially offset by lower revenue earned under our development program with Celltech for the treatment of cystic fibrosis. Development activities for our cystic fibrosis program decreased in 2002 as the program transitioned into clinical trial evaluation, the preliminary results of which were presented in October 2002. Revenue in 2001 totaled $18.9 million, compared to $11.4 million in 2000. This increase primarily resulted from revenues earned under our hemophilia product development collaboration with Wyeth and our multiple-product development collaboration with Biogen, both of which were established in late 2000. The increase also reflects growth in revenue earned from the Emerald joint venture and revenue earned under our AIDS vaccine collaboration with IAVI. The increase in revenue in 2001 was partially offset by a decrease in revenue earned under our development program with Celltech for a cystic fibrosis product candidate, under which we earned a $2 million milestone payment in 2000. We earned revenue from collaborative agreements as follows:

	Year Ended December 31,		
	2002	2001	2000
Revenue from collaborative agreements:			
Biogen	$ 2,871,000	$ 2,587,000	$ 429,000
Celltech	1,280,000	5,030,000	8,647,000
IAVI	5,662,000	1,866,000	23,000
Wyeth	7,543,000	6,513,000	454,000
Other	6,000	121,000	—
Revenue from collaborative agreements	17,362,000	16,117,000	9,553,000
Revenue from collaborative agreement with unconsolidated, majority-owned research and development joint venture	1,971,000	2,763,000	1,850,000
Total revenue	$19,333,000	$18,880,000	$11,403,000

Our collaborations with Celltech, Elan and Wyeth have concluded and as a result, revenue earned under these collaborations for research and development performed by us will not continue in 2003, except for $2.6 million in revenue that we will record in the first quarter of 2003 from a termination payment received from Wyeth. We expect our 2003 revenue to consist primarily of research and development revenue from our Biogen and IAVI collaborations and any revenue that we might generate from new collaborations or manufacturing arrangements and is ultimately dependent on our product development success. Revenue after 2003 is dependent upon our success in extending our existing collaborations and establishing new ones. While our collaboration

agreements with Biogen provide for Biogen to pay us milestone payments according to its product development progress, we cannot predict Biogen's future development progress and thereby cannot predict the timing of milestone payments, if any, we may receive from the Biogen collaboration in the next five years. In February 2003, we entered into a termination agreement with Wyeth and in March 2003 received a $3.2 million cash payment from Wyeth. Upon receipt of the $3.2 million settlement payment, we recognized $2.6 million as first quarter 2003 research and development revenue and the remaining $637,000 represents collection of receivables outstanding at December 31, 2002.

Operating Expenses

Research and Development. Research and development expenses increased to $29.4 million in 2002 from $29.2 million in 2001. The increase in research and development expense reflects expanded activities in our research and preclinical product development programs for the treatment of hemophilia and arthritis and our AIDS vaccine program, in addition to increased project-related support and technology development activities. These increases were partially offset by lower product and clinical development costs in our cancer and cystic fibrosis programs. We incurred research and development expenses of $29.2 million in 2001, compared to $17.5 million in 2000. This increase resulted primarily from increased research and development efforts in our hemophilia and AIDS vaccine product development collaborations, design costs associated with our large-scale manufacturing facility expansion and the addition of Genovo's research and development operations, which we acquired in September 2000.

Our research and development expenses for the years ended December 31, 2002, 2001 and 2000 were as follows:

	Year Ended December 31,		
	2002	2001	2000
Clinical programs:			
Cystic fibrosis	$ 1,096,000	$ 2,852,000	$ 3,887,000
Cancer products	1,943,000	3,129,000	3,218,000
Indirect costs	3,684,000	6,711,000	5,651,000
Total clinical programs expense	6,723,000	12,692,000	12,756,000
Research and preclinical programs expense	22,666,000	16,526,000	4,732,000
Total research and development expense	$29,389,000	$29,218,000	$17,488,000

Research and development costs attributable to clinical programs include costs of salaries, benefits, clinical trial site costs, outside services, materials and supplies incurred to support the clinical programs. Indirect costs allocated to clinical programs include facility and occupancy costs, research and development administrative costs, and license and royalty payments. Costs attributed to research and preclinical programs largely represent our product pipeline-generating activities. Because of the large number of research projects we have ongoing at any one time, and our ability to utilize resources across several projects, the majority of our research and preclinical development costs are not directly assigned to individual projects and are instead allocated among multiple projects. For purposes of reimbursement from our collaboration partners, we capture the level of effort expended on a project through our project management system, which is based primarily on human resource time allocated to each project, supplemented by an allocation of indirect costs and other specifically identifiable costs, if any. As a result, the costs we allocate to a project are not intended to, and do not necessarily, reflect the actual costs of the project.

Costs associated with our preclinical program activities increased in 2002 compared to 2001 primarily due to increased activity in our AIDS vaccine collaboration with IAVI. Preclinical program activities increased in 2001 compared to 2000 due to increased activity in our hemophilia collaboration with Wyeth, increased AIDS vaccine collaboration activity and increased activity in our internally-funded arthritis and gene delivery

technology development programs. Costs associated with our clinical program activities decreased in 2002 compared to 2001 reflecting completion of our cystic fibrosis Phase II clinical trial and our August 2002 decision to suspend cancer product development activity programs until we can find a development partner to help fund development costs. Clinical program activities in 2001 were relatively stable compared to 2000 as increases in indirect costs associated with our clinical programs were offset by decreases in costs attributable to our cystic fibrosis research and development program.

The size and scope of our research programs is dependent on the availability of resources, such as funding provided by our partners under our collaborative agreements. During 2003, we expect research and development costs to be lower than in 2002 as we suspended certain programs due to collaborations that terminated.

Equity in Net Loss of Unconsolidated, Majority-Owned Research and Development Joint Venture. We recognized a loss of $1.9 million in 2002, $3.7 million in 2001 and $2.5 million in 2000. Losses reflect our 80.1% equity share in the losses generated by Emerald. Emerald's initial development period concluded in August 2002 and we have begun the process of dissolving the joint venture. As a result, we do not expect that losses resulting from our equity in the net loss of Emerald will be significant in the future.

Acquired In-Process Research and Development. In 2000, we recorded $28.0 million in IPR&D expenses, which reflects the portion of the purchase price paid to acquire Genovo that was allocated to acquired IPR&D. We incurred no IPR&D expenses in 2002 or 2001.

We acquired ongoing IPR&D projects from Genovo in the fields of AAV manufacturing platforms, lysosomal storage disorders, glioma, hemophilia and hyperlipidemia. The amount recorded as IPR&D expense for the Genovo acquisition represents the present value of the estimated after-tax cash flows that we believe may be generated by the purchased technology that, as of the acquisition date, had not yet reached technological feasibility. We based the cash flow projections for revenue on estimates of growth rates and the aggregate size of the markets for each product, the probability of technical success given the stage of development at the time of acquisition, royalty rates based on prior licensing agreements, product sales cycles and the estimated life of the product's underlying technology. We deducted our estimated operating expenses and income taxes from our estimated revenue projections to arrive at our estimated after-tax cash flows. The rate that we used to discount projected cash flows for in-process technologies ranged from 30% to 45%, depending on the relative risk of each in-process technology, and were based primarily on internal rates of return, cost of capital, rates of return for research and development and our weighted average cost of capital at the time of acquisition. The acquired IPR&D projects consisted of the following:

- AAV manufacturing platform projects related to hyperlipidemia, hemophilia, lysosomal storage disorders, and glioma, which pursue manufacture of AAV as a stable gene therapy vector capable of delivering genes to a variety of dividing and nondividing cells. Since acquiring Genovo we have continued to perform preclinical development of the manufacturing platform.
- Technology in the area of lysosomal storage disorders, which is a family of approximately 40 genetic diseases in which single-gene defects prevent the production of one or more lysosomal enzymes, which leads to abnormal deposits of substrates within lysosomal vacuoles. In August 2002, the development program under our collaboration with Genovo focused on lysosomal storage diseases expired and was not renewed.
- Glioma technology, intended to treat brain tumors in adults. These tumors, which are highly malignant, are nearly always fatal and currently have no known curative treatment. Genovo had been developing a gene therapy product to treat glioma with Biogen. Since we acquired Genovo, Biogen has begun a Phase I clinical trial of its gene therapy product candidate to treat glioma and partnered this technology with Idec Pharmaceuticals Corporation.

- Technologies for treating hemophilia, which is a genetic disorder that results in prolonged external and/or internal bleeding. In November 2002, Wyeth terminated our collaboration to develop gene therapy product candidates to treat hemophilia and we are presently seeking alternative partners for this product candidate.
- Technologies for treating hyperlipidemia, which is an elevation of lipids in the bloodstream that are transported as part of large molecules called lipoproteins. We currently have limited preclinical development activities focused on hyperlipidema.

We based our estimates and projections on assumptions believed to be reasonable at the time of the acquisition, but that are inherently uncertain and unpredictable. If we do not successfully develop these projects, our business, operating results and financial condition may be adversely affected as we experienced in 2002 with the termination of our hemophilia project and conclusion of our lysosomal storage diseases collaboration. As of the date of the acquisition, we concluded that Genovo's technologies under development, once completed, can be economically used only for their specifically intended purposes and that these in-process technologies have no alternative future use after taking into consideration the overall objectives of the project, progress toward the objectives and uniqueness of developments to these objectives. Given the uncertainties involved in developing these product candidates, we are unable to predict whether we will be able to successfully develop any of these product candidates or the time or costs involved in doing so. The risk of untimely completion includes the risk that competitors will develop alternative products.

Amortization of Acquisition-Related Intangibles. We recorded amortization expenses of $365,000 in 2002 for non-competition agreements acquired in connection with our acquisition of Genovo in 2000, compared to $6.1 million we recorded in 2001 for goodwill, non-competition agreements and assembled workforce that we acquired when we purchased Genovo. The decrease is the result of our adoption of SFAS No. 142, "*Goodwill and Other Intangible Assets*," as of January 1, 2002, under which goodwill is no longer amortized. The non-competition agreements acquired in connection with our acquisition of Genovo were fully amortized as of September 30, 2002. We recorded amortization expenses of $6.1 million in 2001, compared to $1.7 million in 2000, for goodwill, non-competition agreements and assembled workforce. As of December 31, 2002, our intangible assets that are subject to amortization were fully amortized.

General and Administrative. We incurred general and administrative expenses of $8.1 million in 2002, compared to $8.5 million in 2001. The decrease primarily reflects decreased administrative support for our collaborative partnerships and nonrecurring expenses that we incurred in early 2001 in connection with our acquisition of Genovo. We incurred general and administrative expenses of $8.5 million in 2001 as compared to $7.5 million in 2000. This increase is attributable to higher business development and legal costs, including expenses related to the spin-out of our majority-owned cell therapy subsidiary, CellExSys, Inc., and increased administrative support for our growing number of collaborative partnerships. General and administrative expense includes patent related costs of $2.4 million in 2002, $2.3 million in 2001 and $1.8 million in 2000.

Restructure Charges. We recorded restructure charges of $2.3 million in 2002 to account for the operational changes implemented in August and December 2002. These charges include termination benefits paid to former employees, charges related to an abandoned leased manufacturing facility located in Bothell, Washington, and other associated costs.

Other Income and Expense

Investment Income. Our investment income from marketable securities, all of which are cash equivalents, was $398,000 in 2002, compared to $1.9 million in 2001 and $2.1 million in 2000. The decreases resulted from lower average cash balances in 2002 and decreases in the yield of our short-term bond mutual fund in both periods.

Interest Expense. Interest expense relates to interest on outstanding loans from our collaborative partners, notes and obligations under equipment financing arrangements and installment loans we use to finance purchases of laboratory and computer equipment, furniture and leasehold improvements. Interest expense increased to $1.4 million in 2002 from $452,000 in 2001 and from $265,000 in 2000. The increases reflect borrowing under loan commitments from Biogen and Elan which totaled $6.0 million during 2002 and $13.0 million during 2001.

Liquidity and Capital Resources

We have financed our product development activities and general corporate functions primarily through proceeds from public and private sales of our equity securities, through cash payments received from our collaborative partners and proceeds from the issuance of debt. To a lesser degree, we have also financed our operations through interest earned on cash, cash equivalents and short-term investments, funding loan commitment from our collaboration partners and under equipment leasing agreements and research grants. These financing sources have historically allowed us to maintain adequate levels of cash and investments.

Our future cash requirements will depend on many factors, including:

- the rate and extent of scientific progress in our research and development programs;
- the timing, costs and scope of, and our success in, clinical trials, obtaining regulatory approvals and filing, prosecuting and enforcing patents;
- competing technological and market developments;
- the timing and costs of, and our success in, any product commercialization activities and facility expansions, if and as required; and
- the outcome of any litigation or administrative proceedings involving our intellectual property, or access to third party intellectual property through licensing agreements.

All of our product candidates are in research, preclinical and clinical development and we expect to continue incurring significant expense in advancing our product candidates toward commercialization. As a result, we do not expect to generate positive cash flow from our operations for at least the next several years and only then if we can successfully develop and commercialize our product candidates. We will require substantial additional financial resources to fund the development and commercialization of our product candidates, grow our business and expand research and development of our product candidates for treating additional diseases.

Our combined cash and cash equivalents total $12.6 million at December 31, 2002. We believe that our cash and cash equivalents, the funding anticipated to be received from collaborators, including the extension with IAVI and the $3.2 million termination payment received in March 2003 from our former collaborator, Wyeth, will be sufficient to fund our operations at least through the end of 2003.

The size and scope of our development activities are dependent on the availability of resources. For example, in August 2002 and December 2002, we implemented plans to restructure our operations to reduce expenses and concentrate resources on key product development programs and business development activities. As part of these plans, we suspended further clinical development of our cancer and hemophilia programs and implemented a reduction in headcount of approximately 48%, consisting of approximately 80 positions in operations, scientific and administrative functions that were not required to support our AIDS vaccine, cystic fibrosis and arthritis development programs. We implemented these operational changes to reduce expenses and to concentrate our resources with advancing these programs, pursuing corporate strategic initiatives and accessing additional capital.

A significant portion of our operating expenses is funded through collaborations with third parties. We received funding in 2002 from the following strategic partnerships:

Ongoing collaborations:

- a multiple-product collaboration with Biogen, the initial development period of which will conclude in September 2003; and

- a collaboration with IAVI, to develop an AIDS vaccine, the initial development period of which concluded in January 2003 and has been extended through December 2003.

Collaborations that ended in 2002:

- a collaboration with Celltech to develop our product candidate for the treatment of cystic fibrosis that was terminated in November 2002;
- a research and development joint venture with Elan, called Emerald Gene Systems, to develop enhanced gene delivery technologies. The initial three-year development period of the Emerald joint venture concluded in the third quarter of 2002 and we are working towards dissolving the joint venture which no longer has any ongoing operating activities;
- a collaboration with Genzyme to develop treatments for lysosomal storage diseases which concluded in August 2002; and
- a collaboration with Wyeth to develop treatments for hemophilia, notice of termination of which was made by Wyeth in November 2002. In February 2003, we entered into a settlement agreement with Wyeth to terminate this collaboration.

Under our partnerships with Biogen and IAVI, we expect to receive additional collaborative funding of $7.9 million in research and development payments to reimburse expenses incurred in connection with the applicable development collaboration.

With limited exceptions, each strategic partner has the right to terminate the collaboration at any time for scientific or business reasons. If we were to lose the collaborative funding expected from any strategic partner and were unable to obtain alternative sources of funding for the product candidate covered by the collaboration, we may be unable to continue our research and development program for that product candidate. For example, we had expected to receive approximately $8 million of collaboration funding from Wyeth during 2003. However, on November 12, 2002, Wyeth notified us of its decision to terminate the collaboration. In February 2003, we entered into an agreement with Wyeth that provides for Wyeth to fund $3.2 million to reimburse us for termination costs and costs incurred by us up until November 12, 2002.

We intend to seek partners for our hemophilia and cancer programs and have implemented cost reduction measures so that our available cash resources, in combination with the $7.9 million of collaborative funding expected from Biogen and IAVI in 2003 and receipt of the $3.2 million termination payment from Wyeth will be sufficient to fund our operations through at least the end of 2003.

We are pursuing other opportunities to obtain additional capital to fund our operations beyond that time. Additional sources of financing could involve one or more of the following:

- entering into additional product development and funding collaborations or other strategic transactions, or extending or expanding our current collaborations;
- selling or licensing our technology or product candidates;
- issuing equity in the public or private markets; or
- issuing debt.

Additional funding may not be available to us on reasonable terms, if at all. Depending on our ability to successfully access additional funding, we may be forced to make further significant cost reduction measures. These adjustments may include scaling back, delaying or terminating one or more research and development programs, curtailing capital expenditures or reducing other operating activities. We may also be required to relinquish some rights to our technology or product candidates or grant licenses on unfavorable terms, either of which would reduce the ultimate value to us of the technology or product candidates.

The following are our contractual commitments associated with our debt and lease obligations:

	Payments Due by Period						
Contractual Obligations	2003	2004	2005	2006	2007	Thereafter	Total
Lease commitments ..	$2,888,000	$1,834,000	$ 1,509,000	$ 1,362,000	$1,362,000	$11,925,000	$20,880,000
Long-term obligations	1,298,000	743,000	9,686,000	10,065,000	—	—	21,792,000
Total	$4,186,000	$2,577,000	$11,195,000	$11,427,000	$1,362,000	$11,925,000	$42,672,000

We are negotiating with the landlords of the Bothell, WA and Sharon Hill, PA facilities to terminate our leases or to sublease the facilities in an effort to reduce fixed operating costs, to extend our cash horizon and to concentrate resources on key product development programs.

Impact of New Accounting Pronouncements

In August 2001, the FASB issued SFAS No. 144, *"Accounting for the Impairment or Disposal of Long-Lived Assets,"* which is effective for financial statements issued for fiscal years beginning after December 15, 2001. SFAS No. 144 addresses financial accounting and reporting for the impairment or disposal of long-lived assets and requires that we review the carrying value and fair value of long-lived assets whenever events or changes in circumstances indicate that there may be impairment in value. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used, or a significant adverse change that would indicate that the carrying amount of an asset or group of assets is not recoverable. We tested our long-lived assets subsequent to the adoption of our December 2002 restructure plan and concluded that carrying value exceeded the fair value of certain assets located at the Sharon Hill, PA facility. We recognized an impairment loss of approximately $90,000 as a result of this impairment.

In June 2002, the FASB issued SFAS No. 146, *"Accounting for Costs Associated with Exit or Disposal Activities,"* which is effective for exit or disposal activities initiated after December 31, 2002. This statement requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred. Previous guidance required that a liability for exit or disposal costs be recognized at the date of an entity's commitment to an exit plan. We elected to adopt the provisions of SFAS No. 146 prior to the effective date as encouraged by the FASB. During 2002, we incurred restructure charges of $2.3 million for employee termination benefits and ongoing lease commitment costs related to an abandoned facility. These charges are reflected in a separate line item within operating expenses on the Consolidated Statement of Operations. As of December 31, 2002, we have an accrued a liability of $3.1 million for costs that will continue to be incurred under a lease obligation for its remaining term, without economic benefit to us. If we had accounted for restructure costs, of the December 2002 restructure plan, under Emerging Issues Task Force 94-3, *"Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring),"* and not elected to adopt SFAS 146 early, we would have also accrued restructure charges of approximately $180,000 during 2002 primarily due to charges related to an abandoned leased facility located in Sharon Hill, Pennsylvania.

In December 2002, the FASB issued SFAS No. 148, *"Accounting for Stock-Based Compensation—Transition and Disclosure—an amendment of FASB Statement No. 123."* This statement provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, this statement amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. We do not expect the provisions of SFAS No. 148 to have a significant effect on our financial position or operating results.

In November 2002, the FASB issued FASB Interpretation, or FIN, No. 45, *"Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others."* FIN No. 45

elaborates on the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. FIN No. 45 also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and initial measurement provisions of FIN No. 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. The disclosure requirements in this Interpretation are effective for financial statements ending after December 15, 2002. We do not expect the provisions of FIN No. 45 to have a significant effect on our financial position or operating results.

In January 2003, the FASB issued FIN No. 46, *"Consolidation of Variable Interest Entities."* This interpretation of Accounting Research Bulleting No. 51, *"Consolidated Financial Statements"* addresses consolidation of business enterprises of variable interest entities in which: (1) the equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support from other parties, which is provided through other interests that will absorb some or all of the expected losses of the entity, and (2) the equity investors lack one or more of certain essential characteristics of a controlling interest. FIN No. 46 applies immediately to variable interest entities created after January 31, 2003, and to variable interest entities in which an enterprise obtains interest after that date. We do not expect the provisions of FIN No. 46 to have a significant effect on our financial position or operating results.

Factors Affecting Our Operating Results, Our Business and Our Stock Price

In addition to the other information contained in this annual report, you should carefully read and consider the following risk factors. If any of these risks actually occur, our business, operating results or financial condition could be harmed. This could cause the trading price of our stock to decline, and you could lose all or part of your investment.

Risks Related to Our Business

We expect to continue to operate at a loss and may never become profitable, which could result in a decline in the value of our common stock and a loss of your investment.

Substantially all of our revenue has been earned under collaborative research and development agreements relating to the development of our potential product candidates. We have incurred, and will continue to incur for the foreseeable future, significant expense to develop our research and development programs, conduct preclinical studies and clinical trials, seek regulatory approval for our product candidates and provide general and administrative support for these activities. As a result, we have incurred significant net losses since inception, and we expect to continue to incur substantial additional losses in the future. As of December 31, 2002, we had an accumulated deficit of approximately $202 million. We may never generate profits and, if we do become profitable, we may be unable to sustain or increase profitability.

All of our product candidates are in early-stage clinical trials or preclinical development, and if we are unable to successfully develop and commercialize our product candidates we will be unable to generate sufficient capital to maintain our business.

Our product candidate for cystic fibrosis is in a Phase II clinical trial. In October 2002, we announced the preliminary results of this trial and we are in the process of further evaluating the data. Our product candidates for cancer have been evaluated in Phase I and Phase II clinical trials. In connection with the operational changes that we implemented in 2002 and the termination of our collaboration with Wyeth in February 2003, we suspended further clinical development of our cancer program and further development of our hemophilia program until we can find development partners to help fund the development costs of, or find other sources of funding for these programs. Our product candidates for hemophilia, arthritis and our AIDS vaccine are all in preclinical stages. Accordingly, we will not generate any product revenue for at least several years and only then if we can successfully develop and commercialize our product candidates. Commercializing our potential products depends upon successful completion of additional research and development and testing, in both preclinical and clinical trials. Completion of clinical trials may take several years or more. The number and cost

of clinical trials and the length of time necessary to complete clinical trials generally varies substantially according to the type, complexity, novelty and intended use of the product candidate. The commencement, cost and rate of completion of our clinical trials may vary or be delayed for many reasons, including the risks discussed elsewhere in this section. If we are unable to successfully complete preclinical and clinical development of some or all of our product candidates in a timely manner, we will be unable to generate sufficient product revenue to maintain our business.

Even if our potential products succeed in clinical trials and are approved for marketing, these products may never achieve market acceptance. If we are unsuccessful in commercializing our product candidates for any reason, including greater effectiveness or economic feasibility of competing products or treatments, the failure of the medical community or the public to accept or use any products based on gene delivery, inadequate marketing and distribution capabilities or other reasons discussed elsewhere in this section, we will be unable to generate sufficient product revenue to maintain our business.

The regulatory approval process for our product candidates is costly, time-consuming and subject to unpredictable changes and delays, and our product candidates may never receive regulatory approval.

To our knowledge, no gene therapy products have received regulatory approval for marketing from the U.S. Food and Drug Administration, or FDA, or similar regulatory agencies in other countries. Because our product candidates involve new and unproven technologies, we believe that regulatory approval may proceed more slowly than clinical trials involving traditional drugs. The FDA and applicable state and foreign regulators must conclude at each stage of clinical testing that our clinical data suggest acceptable levels of safety and efficacy in order for us to proceed to the next stage of clinical trials. In addition, gene therapy clinical trials conducted at institutions that receive funding from the National Institutes of Health, or NIH, are subject to review by the NIH's Office of Biotechnology Activities Recombinant DNA Advisory Committee, or RAC. Although NIH guidelines do not have regulatory status, the RAC review process can impede the initiation of the trial, even if the FDA has reviewed the trial and approved its initiation. Moreover, before a clinical trial can begin at an NIH-funded institution, that institution's Institutional Biosafety Committee must review the proposed clinical trial to assess the safety of the trial.

The regulatory process for our product candidates is costly, time-consuming and subject to unpredictable delays. The clinical trial requirements of the FDA, NIH and other agencies and the criteria these regulators use to determine the safety and efficacy of a product candidate vary among trials and potential products. In addition, regulatory requirements governing gene and cell therapy products frequently change. Accordingly, we cannot predict how long it will take or how much it will cost to obtain regulatory approvals for clinical trials or for manufacturing or marketing our potential products. Some or all of our product candidates may never receive regulatory approval. A product candidate that appears promising at an early stage of research or development may not result in a commercially successful product. Our clinical trials may fail to demonstrate the safety and efficacy of a product candidate or we may encounter unacceptable side effects or other problems during or after clinical trials. Should this occur, we may have to delay or discontinue development of the product candidate, and the corporate partner that supports development of that product candidate may terminate its support. Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approval necessary to bring a potential product to market could decrease our ability to generate sufficient product revenue to maintain our business.

If we are unable to raise additional capital when needed, we will be unable to conduct our operations and develop our potential products.

Because internally generated cash flow will not fund development and commercialization of our product candidates, we will require substantial additional financial resources. Our future capital requirements will depend upon many factors, including:

- the rate and extent of scientific progress in our research and development programs;
- the timing, costs and scope of, and our success in, conducting clinical trials, obtaining regulatory approvals and pursuing patent prosecutions;

- competing technological and market developments;
- the timing and costs of, and our success in, any commercialization activities and facility expansions, if and as required; and
- the outcome of any litigation or administrative proceedings involving our intellectual property.

As of December 31, 2002, we had approximately $12.6 million in cash and cash equivalents. In March 2003, we received a $3.2 million payment from Wyeth which represented collection of an account receivable of $637,000 recorded in 2002 for services performed prior to Wyeth's termination and a termination settlement of approximately $2.6 million to be recognized as revenue in the first quarter of 2003. In addition, we expect to receive additional collaborative funding of up to $7.9 million under our collaboration with Biogen which ends in September 2003, and IAVI which ends in December 2003.

We intend to seek partners for our hemophilia and cancer programs. We have implemented cost reduction measures in an effort to ensure that our available cash resources in combination with the $7.9 million of collaborative funding we expect to receive from Biogen and IAVI and the $3.2 million termination payment from we received from Wyeth will be sufficient to fund our operations through at least the end of 2003. We are pursuing opportunities to obtain additional capital to fund our operations beyond that time. Additional sources of financing could involve one or more of the following:

- entering into additional product development and funding collaborations or extending or expanding our current collaborations;
- selling or licensing our technology or product candidates;
- issuing equity in the public or private markets; or
- issuing debt.

Additional funding may not be available to us on reasonable terms, if at all. The funding that we expect to receive from our collaborative partners is dependent on continued scientific progress under the collaboration and our collaborative partners' ability and willingness to continue or extend the collaborations. In August 2002, we implemented several operational changes intended to reduce our operating costs, including reducing our research and administrative staff and suspending clinical development of our cancer product candidates. In December 2002, we initiated further significant cost reduction measures, including further reductions in staffing and expenses. As part of these cost reduction measures, we began:

- reducing and consolidating fixed operating costs;
- eliminating approximately 40 staff positions and suspending further development of our hemophilia program.
- identifying and pursuing development partners for our hemophilia, cystic fibrosis and cancer product development programs;
- pursuing opportunities to derive revenue by leveraging our manufacturing capacity;
- pursuing all available capital raising options; and
- consolidating all of our operations at our Seattle location.

If we are unable to successfully access additional capital, we may be forced to make further significant cost reduction measures. These adjustments may include scaling back, delaying or terminating on or more of our cystic fibrosis, arthritis or AIDS vaccine programs, further curtailing capital expenditures or reducing other operating activities. We may also be required to relinquish some rights to our technology or product candidates or grant licenses on unfavorable terms, either of which would reduce the ultimate value to us of the technology or product candidates.

If we lose significant funding from our strategic partners or if our collaborative relationships are unsuccessful, we may be unable to develop our potential products.

A significant portion of our operating expenses is funded through our collaborative agreements with third parties. We have collaborative development agreements under which, we expect to receive approximately $7.9 million in additional funding from Biogen and IAVI. This funding is to reimburse research and development expenses we incur in connection with the applicable development collaboration.

If we were to lose the collaborative funding expected from any strategic partner and were unable to obtain alternative sources of funding for the product candidate covered by the collaboration, we may be unable to continue our research and development program for that product candidate. In addition, the loss of significant amounts of collaborative funding could cause not only the delay, reduction or termination of the related research and development programs, but also a reduction in capital expenditures and other operating activities necessary to support general operations. Such a reduction could further impede our ability to develop our product candidates. With limited exceptions, each strategic partner has the right to terminate its obligation to provide research funding at any time for scientific or business reasons. For example, Wyeth has terminated our hemophilia collaboration, effective February 2003. As a result, we have suspended further development of our hemophilia product candidate until we can find another development partner or secure other sources of funding for the program.

If our strategic partners terminate or decline to extend our collaborations, we may be unable to develop our potential products.

Our strategic partners, along with outside scientific consultants and contractors, also perform research, develop technology and processes to advance and augment our internal efforts and provide access to important intellectual property and know-how. Their activities include, for example, clinical evaluation of our product candidates, product development activities performed under our research and development collaborations, research under sponsored research agreements and contract manufacturing services. In addition, collaborations with established pharmaceutical and biotechnology companies and academic, research and public health organizations, particularly those that are leaders in the field, often provide a measure of validation of our product development efforts in the eyes of securities analysts, investors and the medical community. The development of many of our potential products, and therefore, the success of our business, depends on the performance of our strategic partners, consultants and contractors. If they do not dedicate sufficient time or technical resources to the research and development programs for our product candidates or if they do not perform their obligations as expected, we may experience delays in, and may be unable to continue, the preclinical or clinical development of those product candidates. Each of our strategic collaborations and scientific consulting relationships concludes at the end of the term specified in the applicable agreement unless we and our partners agree to extend the relationship. Any of our strategic partners may decline to extend the collaboration, or may extend the collaboration with a significantly reduced scope, for a number of scientific or business reasons. Competition for scientific consultants and strategic partners in gene therapy is intense. We may be unable to successfully maintain our existing relationships or establish additional relationships necessary for the development of our product candidates on acceptable terms, if at all. If we are unable to do so, our research and development programs may be delayed or we may lose access to important intellectual property or know-how.

A significant portion of our operating expenses is funded through collaborations with third parties. We have the following active strategic partnerships:

- a multiple-product collaboration with Biogen, the initial development period of which will conclude in September 2003; and
- a collaboration with IAVI to develop an AIDS vaccine, the initial development period of which concluded in January 2003 and has been extended through December 2003.

One or both of these strategic partners may choose not to continue the collaboration, or may choose to terminate the collaboration at any time. The loss of any of our collaborations may result in the loss of access to intellectual property, know-how and development support. As a result, the development of the affected product candidate could be delayed or terminated.

The reductions in workforce associated with our recent operational changes may impair our ability to develop our potential products.

In August 2002, we restructured our operations to reduce expenses and focus resources on key product development programs and business activities. In connection with the August restructuring, we reduced our research and administrative staff by approximately 25%, placing addition demands on our remaining workforce. Additionally, in December 2002, we began further restructuring our operations to reduce expenses and focus our resources on our cystic fibrosis, arthritis and AIDS prophylaxis product development programs. In connection with the December restructuring, we reduced our staff by approximately 30% on February 14, 2003. Both of these restructurings may have unanticipated consequences, such as employee attrition. In addition, many of the terminated employees possess specific knowledge or expertise that may later prove to be important to our operations. As a result of these factors, our ability to respond to challenges in the future may be impaired and we may be unable to take advantage of new opportunities.

If we do not attract and retain qualified personnel, or if we are unable to secure our rights with respect to intellectual property invented or discovered by our consultants, we may be unable to develop and commercialize some of our potential products.

Our future success depends in large part on our ability to attract and retain key technical and management personnel. All of our employees and consultants, including our executive officers with whom we have employment-related contracts, are employed at will, which means they can leave us at any time. We have programs in place designed to retain personnel, including competitive compensation packages and programs to create a positive work environment. Other companies, research and academic institutions and other organizations in our field compete intensely for employees, however, and we may be unable to retain our existing personnel or attract additional qualified employees and consultants. Moreover, our recent restructurings may reduce employee morale and create concern among potential and existing employees about job security, which may lead to difficulty in hiring and increased turnover among our existing workforce. If we experience excessive turnover or difficulties in recruiting new personnel, our research and development of product candidates could be delayed and we could experience difficulties in generating sufficient revenue to maintain our business.

Any rights in inventions or processes discovered by a scientific consultant may be contractually subject to the rights of his or her research institution in that work. Some consultants may have obligations to other entities under consulting agreements, invention assignment agreements or other agreements that may potentially conflict with their obligations to us. Disputes, and potentially litigation, may arise with respect to ownership of technology invented or discovered by a scientific consultant or with respect to a product candidate developed under collaborations. If we are unable to secure our rights, we may lose access to the intellectual property and the development of the affected product candidate could be delayed.

If we are unable to obtain and maintain licenses for necessary third-party technology on acceptable terms or to develop alternative technology, we may be unable to develop and commercialize our product candidates.

We have entered into license agreements, both exclusive and nonexclusive, that give us and our partners rights to use technologies owned or licensed by commercial and academic organizations in the research, development and commercialization of our potential products. For example, we have licensed several issued and pending patents for the gene used in our cancer product development programs, the gene and vector delivered in

our product candidate for cystic fibrosis and the processes that we use to manufacture our AAV-based product candidates. If we are unable to maintain our current licenses for third-party technology or, if necessary, obtain additional licenses on acceptable terms, we may be required to expend significant time and resources to develop or license replacement technology. If we are unable to do so, we may be unable to develop or commercialize the affected product candidates. In addition, the license agreements for technology for which we hold exclusive licenses, such as the license for the process that we use to manufacture our AAV-based product candidates, typically contain provisions requiring us to meet minimum development milestones in order to maintain the license on an exclusive basis. If we do not meet these requirements, our licensor may convert the license to a nonexclusive license or terminate the license.

In many cases, patent prosecution of our licensed technology is controlled solely by the licensor. If our licensors fail to obtain and maintain patent or other protection for the proprietary intellectual property we license from them, we could lose our rights to the intellectual property or our exclusivity with respect to those rights, and our competitors could market competing products using the intellectual property. Licensing of intellectual property critical to our business involves complex legal, business and scientific issues and is complicated by the rapid pace of scientific discovery in our industry. Disputes may arise regarding intellectual property subject to a licensing agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent and other rights under our collaborative development relationships;
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our strategic partners; and
- the priority of invention of patented technology.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates. For example, in July 1997 the licensor of our licensed CFTR gene and related vector was notified that the United States Patent and Trademark Office, or USPTO, had declared an interference proceeding to determine whether our licensor or an opposing party has the right to the patent application on the CFTR gene and related vector. Our tgAAVCF product candidate for treating cystic fibrosis uses our proprietary AAV delivery technology to deliver a normal copy of the CFTR gene. Interference proceedings before the USPTO and the U.S. Circuit Court are confidential, involving the opposing parties only, and can take several years to complete. Although we are not a party to the interference proceeding, its outcome could affect our license to the CFTR gene and related vector. The USPTO or the U.S. Circuit Court could rule that our licensor has priority of invention on both the CFTR gene and vector that we license, that our licensor has priority of invention on neither the gene nor the vector, or that our licensor has priority of invention on only the gene or only the vector. If the USPTO or Court of Appeals ultimately determines that our licensor does not have rights to both the CFTR gene and the vector, we believe that we will be subject to one of several outcomes:

- our licensor could agree to a settlement arrangement under which we continue to have rights to the gene and the vector at our current license royalties;
- the prevailing party could require us to pay increased license royalties to maintain our access to the gene, the vector or both, as applicable, which licensing royalties could be substantial; or
- we could lose our license to the gene, the vector, or both.

If our licensor does not retain its rights to the CFTR gene and the vector, and we cannot maintain access at a reasonable cost or develop or license a replacement gene and vector at a reasonable cost, we will be unable to commercialize our potential tgAAVCF product.

The success of our clinical trials and preclinical studies may not be indicative of results in a large number of patients or long-term efficacy.

Results in early-stage clinical trials are based on limited numbers of patients. Our reported progress and results from our early phases of clinical testing of our cystic fibrosis and cancer product candidates may not be indicative of progress or results that will be achieved from larger populations, which could be less favorable. Moreover, we do not know if the favorable results we have achieved in clinical trials will have a lasting effect. If a larger group of patients does not experience positive results, or if any favorable results do not demonstrate a lasting effect, our product candidate for cystic fibrosis, or any other potential products that we advance to clinical trials, may not receive approval from the FDA for further clinical trials or commercialization. Any report of clinical trial results that are below the expectations of financial analysts or investors could result in a decline in our stock price.

In addition, the successful results of our technology in preclinical studies using animal models may not be predictive of the results that we will see in our clinical trials. If successful results for a potential product in animal models are not replicated in clinical trials, we may have to expend greater resources to pass the clinical trial stage and obtain regulatory approval of the product candidate or abandon its development.

Failure to recruit patients could delay or prevent clinical trials of our potential products, which could delay or prevent the development of potential products.

Identifying and qualifying patients to participate in clinical trials of our potential products is critical to our success. The timing of our clinical trials depends on the speed at which we can recruit patients to participate in testing our product candidates. We have experienced delays in our clinical trials, and we may experience similar delays in the future. If patients are unwilling to participate in our gene therapy trials because of negative publicity from adverse events in the biotechnology industry or for other reasons, the timeline for recruiting patients, conducting trials and obtaining regulatory approval of potential products will be delayed. These delays could result in increased costs, delays in advancing our product development, delays in proving the effectiveness of our technology or termination of the clinical trials altogether.

We may be unable to adequately protect our proprietary rights, which may limit our ability to successfully market any products.

Our success substantially depends on our ability to protect our proprietary rights and operate without infringing on the proprietary rights of others. We own or license patents and patent applications, and may need to license additional patents, for genes, processes, practices and techniques critical to our present and potential product candidates. If we fail to obtain and maintain patent or other intellectual property protection for this technology, our competitors could market competing products using those genes, processes, practices and techniques. The patent process takes several years and involves considerable expense. In addition, patent applications and patent positions in the field of biotechnology are highly uncertain and involve complex legal, scientific and factual questions. Our patent applications may not result in issued patents and the scope of any patent may be reduced both before and after the patent is issued. Even if we secure a patent, the patent may not provide significant protection and may be circumvented or invalidated.

We also rely on unpatented proprietary technology and technology that we have licensed on a nonexclusive basis. While we take precautions to protect our proprietary unpatented technology, we may be unable to meaningfully protect this technology from unauthorized use or misappropriation by a third party. Our competitors could also obtain rights to our nonexclusively licensed proprietary technology. In any event, other companies may independently develop substantially equivalent proprietary information and techniques. If our competitors develop and market competing products using our unpatented or nonexclusively licensed proprietary technology or substantially similar technology, our products, if successfully developed, could suffer a reduction in sales or be forced out of the market.

Litigation involving intellectual property, product liability or other claims and product recalls could strain our resources, subject us to significant liability, damage our reputation or result in the invalidation of our proprietary rights.

As the biotechnology industry expands, the risk increases that others may claim that our processes and potential products infringe on their patents. In addition, administrative proceedings, litigation or both may be necessary to enforce our intellectual property rights or determine the rights of others. Defending or pursuing these claims, regardless of their merit, would be costly and would likely divert management's attention and resources away from our operations. If there were to be an adverse outcome in a litigation or interference proceeding, we could face potential liability for significant damages or be required to obtain a license to the patented process or technology at issue, or both. If we are unable to obtain a license on acceptable terms, or to develop or obtain alternative technology or processes, we may be unable to manufacture or market any product or potential product that uses the affected process or technology.

Clinical trials and the marketing of any potential products may expose us to liability claims resulting from the testing or use of our products. Gene therapy treatments are new and unproven, and potential known and unknown side effects of gene therapy may be serious and potentially life-threatening. Product liability claims may be made by clinical trial participants, consumers, health care providers or other sellers or users of our products. Although we currently maintain liability insurance, the costs of product liability and other claims against us may exceed our insurance coverage. In addition, we may require increased liability coverage as additional product candidates are used in clinical trials and commercialized. Liability insurance is expensive and may not continue to be available on acceptable terms. A product liability or other claim or product recall not covered by or exceeding our insurance coverage could significantly harm our financial condition. In addition, adverse publicity resulting from a product recall or a liability claim against us, one of our partners or another gene therapy company could significantly harm our reputation and make it more difficult to obtain the funding and collaborative partnerships necessary to maintain our business.

If we do not develop adequate manufacturing, sales, marketing and distribution capabilities, either alone or with our business partners, we will be unable to generate sufficient product revenue to maintain our business.

We currently do not have the capacity to manufacture large-scale commercial quantities of our potential products. To do so, we will need to expand or improve our current facilities and staff or supplement them through the use of contract providers. If we are unable to obtain and maintain the necessary manufacturing capabilities, either alone or through third parties, we will be unable to manufacture our potential products in quantities sufficient to sustain our business. Moreover, we are unlikely to become profitable if we, or our contract providers, are unable to manufacture our potential products in a cost-effective manner.

In addition, we have no experience in sales, marketing and distribution. To successfully commercialize any products that may result from our development programs, we will need to develop these capabilities, either on our own or with others. We intend to enter into collaborations with strategic partners to utilize their mature marketing and distribution capabilities, but we may be unable to enter into marketing and distribution agreements on favorable terms, if at all. If our current or future collaborative partners do not commit sufficient resources to timely marketing and distributing our future products, if any, and we are unable to develop the necessary marketing and distribution capabilities on our own, we will be unable to generate sufficient product revenue to sustain our business.

Post-approval manufacturing or product problems or failure to satisfy applicable regulatory requirements could prevent or limit our ability to market our products.

Commercialization of any products will require continued compliance with FDA and other federal, state and local regulations. For example, our current manufacturing facility, which is designed for manufacturing our AAV vectors for clinical and development purposes, is subject to the Good Manufacturing Practices requirements and other regulations of the FDA, as well as to other federal, state and local regulations such as the Occupational

Health and Safety Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act and the Environmental Protection Act. Any future manufacturing facilities that we may construct for large-scale commercial production will also be subject to regulation. We may be unable to obtain regulatory approval for or maintain in operation this or any other manufacturing facility. In addition, we may be unable to attain or maintain compliance with current or future regulations relating to manufacture, safety, handling, storage, record keeping or marketing of potential products. If we fail to comply with applicable regulatory requirements or discover previously unknown manufacturing, contamination, product side effects or other problems after we receive regulatory approval for a potential product, we may suffer restrictions on our ability to market the product or be required to withdraw the product from the market.

Risks Related to Our Industry

Adverse events in the field of gene therapy could damage public perception of our potential products and negatively affect governmental approval and regulation.

Public perception of our product candidates could be harmed by negative events in the field of gene therapy. For example, in November 1999, a patient being treated for a rare metabolic disorder died in a gene therapy trial using an adenoviral vector to deliver a therapeutic gene. Genovo, Inc., a company we later acquired, was alleged to have provided partial funding for this investigator-sponsored trial conducted at the University of Pennsylvania. Other patient deaths, though unrelated to gene therapy, have occurred in other clinical trials. These deaths and the resulting publicity, as well as any other adverse events in the field of gene therapy that may occur in the future, could result in a decrease in demand for any products that we may develop. The commercial success of our product candidates will depend in part on public acceptance of the use of gene therapy for preventing or treating human diseases. If public perception is influenced by claims that gene therapy is unsafe, our product candidates may not be accepted by the general public or the medical community. For example, there has been concern in the past regarding the potential safety and efficacy of gene therapy products derived from pathogenic viruses like adenoviruses. Our product candidates use AAV vectors, which are derived from a nonpathogenic virus, or non-viral vectors. However, the public and the medical community nonetheless may conclude that our technology is unsafe. Moreover, to the extent that unfavorable publicity or negative public perception arising from other biotechnology-related fields such as human cloning and stem-cell research are linked in the public mind to gene therapy, our industry will be harmed.

Future adverse events in, or negative public perception regarding, gene therapy or the biotechnology industry could also result in greater governmental regulation, stricter labeling requirements and potential regulatory delays in the testing or approval of our potential products. Any increased scrutiny could delay or increase the costs of our product development efforts or clinical trials.

Our use of hazardous materials exposes us to liability risks and regulatory limitations on their use, either of which could reduce our ability to generate product revenue.

Our research and development activities involve the controlled use of hazardous materials, including chemicals, biological materials and radioactive compounds. Our safety procedures for handling, storing and disposing of these materials must comply with federal, state and local laws and regulations, including, among others, those relating to solid and hazardous waste management, biohazard material handling, radiation and air pollution control. We may be required to incur significant costs in the future to comply with environmental or other applicable laws and regulations. In addition, we cannot eliminate the risk of accidental contamination or injury from hazardous materials. If a hazardous material accident were to occur, we could be held liable for any resulting damages, and this liability could exceed our financial resources. Accidents unrelated to our operations could cause federal, state or local regulatory agencies to restrict our access to hazardous materials needed in our research and development efforts, which could result in delays in our research and development programs. Paying damages or experiencing delays caused by restricted access could reduce our ability to generate revenue and make it more difficult to fund our operations.

The intense competition and rapid technological change in our market may result in pricing pressures and failure of our potential products to achieve market acceptance.

We face increasingly intense competition from a number of commercial entities and institutions that are developing gene therapy and cell therapy technologies. Our competitors include early-stage and more established gene delivery companies, other biotechnology companies, pharmaceutical companies, universities, research institutions and government agencies developing gene therapy products or other biotechnology-based therapies designed to treat the diseases on which we focus. We also face competition from companies using more traditional approaches to treating human diseases, such as surgery, medical devices and pharmaceutical products. In addition, we compete with other companies to acquire products or technology from research institutions or universities. Many of our competitors have substantially more financial and infrastructure resources and larger research and development staffs than we do. Many of our competitors also have greater experience and capabilities than we do in:

- research and development;
- clinical trials;
- obtaining FDA and other regulatory approvals;
- manufacturing; and
- marketing and distribution.

In addition, the competitive positions of other companies, institutions and organizations, including smaller competitors, may be strengthened through collaborative relationships. Consequently, our competitors may be able to develop, obtain patent protection for, obtain regulatory approval for, or commercialize new products more rapidly than we do, or manufacture and market competitive products more successfully than we do. This could limit the prices we could charge for the products that we are able to market or result in our products failing to achieve market acceptance.

Gene therapy is a new and rapidly evolving field and is expected to continue to undergo significant and rapid technological change and competition. Our competitors may develop new technologies and products that are available for sale before our potential products or that may be more effective than our potential products. Rapid technological development by our competitors, including development of technologies, products or processes that are more effective or more economically feasible than those we have developed, could result in our actual and proposed technologies, products or processes losing market share or becoming obsolete.

Healthcare reform measures and the unwillingness of third-party payors to provide adequate reimbursement for the cost of our products could impair our ability to successfully commercialize our potential products and become profitable.

Sales of medical products and treatments substantially depend, both domestically and abroad, on the availability of reimbursement to the consumer from third-party payors. Our potential products may not be considered cost-effective by third-party payors, who may not provide coverage at the price set for our products, if at all. If purchasers or users of our products are unable to obtain adequate reimbursement, they may forego or reduce their use of our products. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment.

Increasing efforts by governmental and third-party payors, such as Medicare, private insurance plans and managed care organizations, to cap or reduce healthcare costs will affect our ability to commercialize our product candidates and become profitable. We believe that third-party payors will attempt to reduce healthcare costs by limiting both coverage and level of reimbursement for new products approved by the FDA. There have been and will continue to be a number of federal and state proposals to implement government controls on pricing, the

adoption of which could affect our ability to successfully commercialize our product candidates. Even if the government does not adopt any such proposals or reforms, their announcement could impair our ability to raise capital.

Risks Related to Our Common Stock

If we are unable to comply with the minimum requirements for quotation on the Nasdaq SmallCap Market and we lose our quotation on Nasdaq, the liquidity and market price of our common stock would decline.

On January 8, 2003, our stock was transferred from the Nasdaq National Market to the Nasdaq SmallCap Market. In order to continue to be listed on the Nasdaq SmallCap Market, we must meet specific quantitative standards, including maintaining $2.5 million in shareholders' equity and a minimum bid price of $1.00 for our common stock. Our shareholders' equity as of December 31, 2002 totaled $5.9 million; however, the closing bid price of our common stock is below $1.00. We have not regained compliance with the minimum $1.00 bid price per share requirement; however, we meet the Nasdaq SmallCap Market's initial listing requirement of $5 million of stockholders' equity. Accordingly, we have been provided an additional 180 calendar days, or until September 15, 2003, to regain compliance with the minimum $1.00 bid price per share requirement. If we continue to meet the other core initial listing requirements of the Nasdaq SmallCap Market at the end of this 180-day grace period, we will be granted an additional 90-day grace period to regain compliance with the $1.00 minimum bid price per share requirement. Ultimately, if we are unable to satisfy the minimum bid price requirement or if we are unable to comply with the minimum shareholders' equity requirement and all of the other current or future listing requirements, we could lose our quotation on the Nasdaq SmallCap Market. Delisting of our common stock from the Nasdaq SmallCap Market would likely result in a loss in liquidity of our common stock and in a decline in its market price, and you could lose all or part of your investment. In addition, our ability to raise capital through the issuance of debt or equity securities may be impaired if our common stock is delisted.

Concentration of ownership of our common stock may give certain shareholders significant influence over our business and the ability to disproportionately affect our stock price.

A significant number of shares of our common stock are held by a small number of investors, including holdings by Biogen, Celltech and Elan. Elan also has the right to convert principal and interest outstanding under a loan facility into our common stock and to exchange its shares of our Series B preferred stock into shares of our common stock. As of December 31, 2002, if Elan had converted the outstanding balance on the loan facility and exchanged its preferred shares into common stock, Elan would own approximately 10.3 million shares of our common stock. This concentration of stock ownership may allow these shareholders to exercise significant control over our strategic decisions and block, delay or substantially influence all matters requiring shareholder approval, such as:

- election of directors;
- amendment of our charter documents; or
- approval of significant corporate transactions, such as a change of control of Targeted Genetics.

The interests of these shareholders may conflict with the interests of other holders of our common stock with regard to such matters. Furthermore, this concentration of ownership of our common stock could allow these shareholders to delay, deter or prevent a third party from acquiring control of Targeted Genetics at a premium over the then-current market price of our common stock, which could result in a decrease in our stock price.

Market fluctuations or volatility could cause the market price of our common stock to decline and limit our ability to raise capital.

The stock market in general and the market for biotechnology-related companies in particular have experienced extreme price and volume fluctuations, often unrelated to the operating performance of the affected

companies. The market price of the securities of biotechnology companies, particularly companies such as ours without earnings and product revenue, has been highly volatile and is likely to remain so in the future. We believe that this volatility has contributed to the decline in the market price of our common stock, and may do so in the future. In addition, the trading price of our common stock could decline significantly as a result of sales of a substantial number of shares of our common stock, or the perception that significant sales could occur. In the past, securities class action litigation has been brought against companies that experience volatility in the market price of their securities. Market fluctuations in the price of our common stock could also adversely affect our collaborative opportunities and our future ability to sell equity securities at a price we deem appropriate. As a result, you could lose all or part of your investment.

Our future capital-raising activities could involve the issuance of equity securities, which would dilute your investment and could result in a decline in the trading price of our common stock.

To meet all or a portion our long-term funding requirements, we may sell securities in the public or private equity markets if and when conditions are favorable, even if we do not have an immediate need for additional capital at that time. Raising funds through the issuance of equity securities will dilute the ownership of our existing shareholders. Furthermore, we may enter into financing transactions at prices that represent a substantial discount to market price. A negative reaction by investors and securities analysts to any discounted sale of our equity securities could result in a decline in the trading price of our common stock.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Short-term investments: Because of the short-term nature of our investments, we believe that our exposure to market rate fluctuations on those investments is minimal. Currently, we do not use any derivative or other financial instruments or derivative commodity instruments to hedge any market risks and do not plan to employ these instruments in the future. At December 31, 2002, we held $12.6 million in cash and cash equivalents, which are primarily invested in a short-term bond fund that invests in securities that, on the average, mature in less than 12 months. An analysis of the impact on these securities of a hypothetical 10% change in short-term interest rates from those in effect at December 31, 2002, indicates that such a change in interest rates would not have a significant impact on our financial position or on our expected results of operations in 2003.

Notes payable: Our results of operations are affected by changes in short-term interest rates as a result of a loan from Biogen that contains a variable interest rate. Interest payments on this loan are determined by the LIBOR plus a margin of 1%. The carrying amounts of the notes payable and equipment financing arrangements approximate fair value because the interest rates on these instruments change with, or approximate, market rates. The following table provides information as of December 31, 2002, about our obligations that are sensitive to changes in interest rate fluctuations (in millions):

	Expected Maturity Date				
	2003	2004	2005	2006	Total
Maturities of long-term obligations:					
Variable rate note	$—	$—	$—	$10.0	$10.0
Fixed rate notes	0.2	—	9.3	—	9.5
Fixed rate equipment financing	1.1	0.8	0.4	—	2.3
	$ 1.3	$ 0.8	$ 9.7	$10.0	$21.8

Item 8. Financial Statements and Supplementary Data

REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

The Board of Directors and Shareholders
Targeted Genetics Corporation

We have audited the accompanying consolidated balance sheets of Targeted Genetics Corporation as of December 31, 2002 and 2001, and the related consolidated statements of operations, redeemable preferred stock and shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2002. 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 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 Targeted Genetics Corporation at December 31, 2002 and 2001, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2002 in conformity with accounting principles generally accepted in the United States.

As discussed in Note 1 to the consolidated financial statements, in 2002 the Company changed its method of accounting for goodwill and other intangible assets and in 2000 the Company changed its method of accounting for revenue recognition.

ERNST & YOUNG LLP

Seattle, Washington
February 24, 2003, except for
the third paragraph of Note 1,
as to which the date is March 20, 2003

TARGETED GENETICS CORPORATION

CONSOLIDATED BALANCE SHEETS

	December 31, 2002	December 31, 2001
ASSETS		
Current assets:		
Cash and cash equivalents	$ 12,606,000	$ 25,186,000
Accounts receivable	1,170,000	2,475,000
Receivable from unconsolidated, majority-owned research and development joint venture	—	893,000
Prepaid expenses and other	452,000	935,000
Total current assets	14,228,000	29,489,000
Property and equipment, net	5,520,000	8,308,000
Goodwill, net	31,649,000	31,752,000
Other assets	1,316,000	1,489,000
Total assets	$ 52,713,000	$ 71,038,000
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 2,012,000	$ 3,452,000
Accrued restructure expenses	1,202,000	—
Payable to unconsolidated, majority-owned research and development joint venture	—	1,123,000
Accrued employee expenses	729,000	1,114,000
Deferred revenue	6,041,000	4,631,000
Current portion of long-term obligations	1,298,000	1,308,000
Total current liabilities	11,282,000	11,628,000
Deferred rent and accrued restructure expenses	2,276,000	640,000
Long-term obligations	20,494,000	16,403,000
Deferred revenue	—	4,966,000
Commitments (Note 9)		
Minority interest in preferred stock of subsidiary	750,000	—
Series B convertible exchangeable preferred stock	12,015,000	12,015,000
Shareholders' equity:		
Preferred stock, $0.01 par value, 6,000,000 shares authorized:		
Series A preferred stock, 800,000 shares designated, none issued and outstanding	—	—
Series B preferred stock, 12,015 shares designated, issued and outstanding	—	—
Common stock, $0.01 par value, 120,000,000 shares authorized, 50,566,348 shares issued and outstanding at December 31, 2002 and 44,125,677 shares issued and outstanding at December 31, 2001	506,000	441,000
Additional paid-in capital	207,139,000	202,927,000
Accumulated deficit	(201,749,000)	(177,982,000)
Total shareholders' equity	5,896,000	25,386,000
Total liabilities and shareholders' equity	$ 52,713,000	$ 71,038,000

See accompanying notes to consolidated financial statements

TARGETED GENETICS CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2002	2001	2000
Revenue:			
Collaborative agreements	$ 17,362,000	$ 16,117,000	$ 9,553,000
Collaborative agreement with unconsolidated, majority-owned research and development joint venture	1,971,000	2,763,000	1,850,000
Total revenue	19,333,000	18,880,000	11,403,000
Operating expenses:			
Research and development	29,389,000	29,218,000	17,488,000
Equity in net loss of unconsolidated, majority-owned research and development joint venture	1,926,000	3,666,000	2,474,000
Acquired in-process research and development	—	—	28,029,000
Amortization of acquisition-related intangibles	365,000	6,069,000	1,686,000
General and administrative	8,067,000	8,531,000	7,531,000
Restructure charges	2,327,000	—	—
Total operating expenses	42,074,000	47,484,000	57,208,000
Loss from operations	(22,741,000)	(28,604,000)	(45,805,000)
Investment income	398,000	1,886,000	2,097,000
Interest expense	(1,424,000)	(452,000)	(265,000)
Loss before cumulative effect of change in accounting principle	(23,767,000)	(27,170,000)	(43,973,000)
Cumulative effect of change in accounting principle	—	—	(3,682,000)
Net loss	$(23,767,000)	$(27,170,000)	$(47,655,000)
Computation of basic and diluted net loss per common share:			
Loss before cumulative effect of change in accounting principle	$ (0.52)	$ (0.62)	$ (1.16)
Cumulative effect of change in accounting principle	—	—	(0.10)
Net loss per common share	$ (0.52)	$ (0.62)	$ (1.26)
Shares used in computation of basic and diluted net loss per common share	45,767,000	43,928,000	37,752,000

See accompanying notes to consolidated financial statements

TARGETED GENETICS CORPORATION

CONSOLIDATED STATEMENTS OF REDEEMABLE PREFERRED STOCK AND SHAREHOLDERS' EQUITY

	Series B Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Shareholders' Equity
	Shares	Amount	Shares	Amount				
Balance at January 1, 2000	12,015	$12,015,000	34,019,175	$340,000	$ 97,783,000	$(103,157,000)	$(16,000)	$(5,050,000)
Net loss—2000	—	—	—			(47,655,000)		(47,655,000)
Unrealized losses on securities available for sale	—	—	—			—	16,000	16,000
Comprehensive loss								(47,639,000)
Sale of common stock for cash, net of issuance costs of $2,181,000	—	—	2,164,285	22,000	28,097,000	—	—	28,119,000
Issuance of common stock to Elan for cash, net of issuance costs of $4,000	—	—	382,739	4,000	4,992,000	—	—	4,996,000
Issuance of common stock in Genovo acquisition	—	—	5,250,805	53,000	66,077,000	—	—	66,130,000
Exercise of stock options	—	—	730,765	7,000	4,600,000	—	—	4,607,000
Exercise of warrants	—	—	61,174	—	254,000	—	—	254,000
Balance at December 31, 2000	12,015	12,015,000	42,608,943	426,000	201,803,000	(150,812,000)	—	51,417,000
Net loss and comprehensive loss—2001	—	—	—	—	—	(27,170,000)	—	(27,170,000)
Cancellation of shares held in escrow related to Genovo acquisition	—	—	(155,649)	(2,000)	(1,998,000)	—	—	(2,000,000)
Exercise of stock options	—	—	672,383	7,000	1,052,000	—	—	1,059,000
Exercise of warrants	—	—	1,000,000	10,000	1,990,000	—	—	2,000,000
Stock based compensation	—	—	—	—	80,000	—	—	80,000
Balance at December 31, 2001	12,015	12,015,000	44,125,677	441,000	202,927,000	(177,982,000)	—	25,386,000
Net loss and comprehensive loss—2002	—	—	—	—	—	(23,767,000)	—	(23,767,000)
Cancellation of shares held in escrow related to Genovo acquisition	—	—	(1,549)	—	(20,000)	—	—	(20,000)
Exercise of stock options	—	—	35,053	1,000	37,000	—	—	38,000
Issuance of common stock to Biogen for cash	—	—	5,804,673	58,000	3,919,000	—	—	3,977,000
Issuance of common stock related to Genovo acquisition	—	—	602,494	6,000	276,000	—	—	282,000
Balance at December 31, 2002	12,015	$12,015,000	50,566,348	$506,000	$207,139,000	$(201,749,000)	$ —	$ 5,896,000

See accompanying notes to consolidated financial statements

TARGETED GENETICS CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2002	2001	2000
Operating activities:			
Net loss	$(23,767,000)	$(27,170,000)	$(47,655,000)
Adjustments to reconcile net loss to net cash used in operating activities:			
Cumulative effect of change in accounting principle	—	—	3,682,000
Equity in net loss of unconsolidated, majority-owned research and development joint venture	1,926,000	3,666,000	2,474,000
Acquired in-process research and development	—	—	28,029,000
Depreciation and amortization	3,252,000	2,623,000	1,473,000
Amortization of acquisition-related intangibles	365,000	6,069,000	1,686,000
Non cash interest expense	825,000	120,000	—
Loss on disposal of assets	99,000	—	—
Stock-based compensation expense	—	80,000	301,000
Changes in assets and liabilities:			
Increase (decrease) in deferred revenue	(3,555,000)	(6,719,000)	12,635,000
Increase in accounts receivable	(816,000)	(1,388,000)	(1,695,000)
Decrease (increase) in accounts receivable from unconsolidated, majority-owned research and development joint venture	893,000	(716,000)	269,000
Decrease (increase) in prepaid expenses and other	482,000	(643,000)	(396,000)
Increase (decrease) in current liabilities	(1,609,000)	121,000	(972,000)
Increase in accrued restructure expenses and deferred rent	1,635,000	236,000	364,000
Increase (decrease) in other assets	174,000	178,000	(800,000)
Net cash used in operating activities	(20,096,000)	(23,543,000)	(605,000)
Investing activities:			
Purchases of property and equipment	(563,000)	(4,411,000)	(2,797,000)
Investment in unconsolidated, majority-owned research and development joint venture	(1,926,000)	(2,805,000)	(2,807,000)
Maturities and sales of securities available for sale	—	—	3,024,000
Net cash acquired in acquisition	—	—	359,000
Net cash used in investing activities	(2,489,000)	(7,216,000)	(2,221,000)
Financing activities:			
Loan proceeds from collaborative partners	5,950,000	13,000,000	—
Net proceeds from sales of capital stock	4,014,000	3,059,000	37,976,000
Proceeds from leasehold improvements and equipment financing arrangements	607,000	2,401,000	671,000
Payments under leasehold improvements and equipment financing arrangements	(1,316,000)	(1,145,000)	(1,292,000)
Minority interest contribution	750,000	—	—
Net cash provided by financing activities	10,005,000	17,315,000	37,355,000
Net increase (decrease) in cash and cash equivalents	(12,580,000)	(13,444,000)	34,529,000
Cash and cash equivalents, beginning of year	25,186,000	38,630,000	4,101,000
Cash and cash equivalents, end of year	$ 12,606,000	$ 25,186,000	$ 38,630,000
Supplemental information:			
Cash paid for interest	$ 439,000	$ 269,000	$ 245,000
Acquisition-related common stock issued (recovered)	282,000	(2,000,000)	66,130,000

See accompanying notes to consolidated financial statements

TARGETED GENETICS CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business and Summary of Significant Accounting Policies

Description of Business

Targeted Genetics was incorporated in the state of Washington in March 1989. We operate our business in one reportable segment: research and product development. On both our own behalf and in connection with various collaborative agreements with others, we conduct research and development of gene therapy products and technologies for treating acquired and inherited diseases.

Basis of Presentation

Our consolidated financial statements include the accounts of Targeted Genetics, our wholly-owned subsidiaries Genovo, Inc. (Genovo) and TGCF Manufacturing Corporation (inactive), and our majority-owned subsidiary, CellExSys, Inc. The consolidated financial statements do not include Emerald Gene Systems, Ltd. (Emerald) our unconsolidated, majority-owned research and development joint venture with Elan International Services Ltd., a wholly-owned subsidiary of Elan Corporation plc, because we do not have operating control of the joint venture. The operations of Emerald terminated during 2002 and we are in the process of dissolving the joint venture. All significant inter-company transactions have been eliminated in consolidation.

Our consolidated financial statements are presented on a basis that contemplates the realization of assets and satisfaction of liabilities in the normal course of business. We have accumulated operating losses of approximately $202 million, including a net loss of $23.8 million for the year ended December 31, 2002. Net losses are likely to continue as we proceed with the development of our technologies. Our cash and cash equivalents are $12.6 million at December 31, 2002 and as of December 31, 2002 we have $21.8 million of long-term debt obligations that are due as follows: $1.3 million 2003, $800,000 in 2004, $9.7 million in 2005 and $10.0 million in 2006. We believe that our cash and cash eqivalents, the funding anticipated to be received from collaborators, including the extension with IAVI signed on March 20, 2003, and the $3.2 million termination payment received in March 2003 from our former collaborator, Wyeth, will be sufficient to fund our operations through at least the end of 2003. In March 2003, the development period of this IAVI collaboration was extended through December 31, 2003 which provides additional research and development funding of up to $5.6 million. In addition, we may seek additional financing, as needed, through additional product development and funding collaborations or other strategic transactions, selling or licensing our technology or product candidates, or equity or debt offerings. There can be no assurance that additional funding will be available to us on satisfactory terms, if at all. Depending on our ability to successfully access additional funding, we may be forced to make further significant cost reduction measures, which may include scaling back, delaying or terminating one or more research and development programs, curtailing capital expenditures, reducing other operating activities and/or the sale of some or all of our assets.

Cash Equivalents

Cash equivalents include short-term investments that have a maturity at the time of purchase of three months or less, are readily convertible into cash and have insignificant interest rate risk. Our cash equivalents are recorded at cost, which approximates fair market value, and consist principally of money market accounts and shares of a short-term, limited-maturity mutual fund.

Fair Value of Financial Instruments

We believe that the carrying amounts of financial instruments such as cash and cash equivalents, accounts receivable and accounts payable approximate fair value, because of the short-term nature of these items. We believe that the carrying amounts of the notes payable and equipment financing obligations approximate fair value because the interest rates on these instruments change with, or approximate, market interest rates.

Property and Equipment

Our financial statements present property and equipment at cost less accumulated depreciation. We compute depreciation of property and equipment using the straight-line method over the asset's estimated useful life,

which ranges from three to seven years. Leasehold improvements are amortized over the asset's estimated useful life or the lease term, whichever is shorter.

Goodwill

Goodwill consists of acquired technology that is core to our development programs. On January 1, 2002, we adopted Statement of Financial Accounting Standards (SFAS) No. 142, "*Goodwill and Other Intangible Assets.*" SFAS No. 142 discontinues the amortization of goodwill and certain indefinite lived intangibles. The provisions of this accounting standard required us to complete a transitional impairment test upon adoption and identify any impairment in the value of goodwill as a cumulative effect of a change in accounting principle. We performed a transitional impairment test as of January 1, 2002 and no impairment in the value of our goodwill existed as of that date. In accordance with SFAS No. 142, we test goodwill for impairment in value at least annually and more frequently if impairment indicators arise, and if goodwill is impaired, we will write down the value of goodwill through a charge to expense. We performed an annual impairment test as of October 1, 2002 and an interim impairment test in December 2002 related to our most recent restructuring and no impairment in the value of our goodwill has occurred.

The following table reconciles the results of operations we reported for the years ended December 31, 2000 and 2001 to the amounts adjusted for the elimination of goodwill amortization that we would have recorded had we adopted SFAS No. 142 as of the beginning of each of those periods:

	Year ended December 31,		
	2002	2001	2000
Net loss	$(23,767,000)	$(27,170,000)	$(47,655,000)
Elimination of goodwill amortization	—	5,564,000	1,547,000
Net loss, as adjusted	$(23,767,000)	$(21,606,000)	$(46,108,000)
Net loss per common share:			
Net loss per common share, as reported	$ (0.52)	$ (0.62)	$ (1.26)
Elimination of goodwill amortization	—	0.13	.04
Net loss per common share, as adjusted	$ (0.52)	$ (0.49)	$ (1.22)

Long-Lived Assets

On January 1, 2002, we adopted SFAS No. 144, "*Accounting for the Impairment or Disposal of Long-Lived Assets.*" In accordance with SFAS No. 144, we review the carrying value and fair value of long-lived assets whenever events or changes in circumstances indicate that there may be impairment in value. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used, or a significant adverse change that would indicate that the carrying amount of an asset or group of assets is not recoverable. In connection with the restructuring plan we initiated in December 2002, we tested the long-lived assets at our Sharon Hill, PA facility and concluded that the carrying value of certain assets that are affixed to the premises exceeded their fair value. Accordingly, we recognized a loss of approximately $90,000 as a result of this impairment. This loss is reflected within general and administrative expenses on the Consolidated Statement of Operations for the year ended December 31, 2002.

Series B Convertible Exchangeable Preferred Stock

Our Series B convertible exchangeable preferred stock, valued at $12.0 million, is convertible into shares of our common stock or may be exchanged, at Elan's option, for a 30.1% ownership interest in Emerald. If Elan

exercises its exchange right, it must make a cash payment to us equal to 30.1% of the joint venture losses that we and Elan funded after its formation. We periodically monitor the redemption value of the Series B preferred stock, as measured by 30.1% of the fair value of the joint venture that Elan would receive, less the cash payable to us upon exchange by Elan. If the redemption value of the Series B preferred stock exceeds its then current carrying value, we will increase the carrying value of the Series B preferred stock to equal the redemption value and recognize a corresponding dividend to the Series B preferred shareholder. We will recognize subsequent increases or decreases in redemption value of the Series B preferred stock; however, decreases will be limited to amounts previously recorded as increases, so as not to reduce the carrying amount of the Series B preferred stock below the original basis of $12.0 million. The exchange right currently expires in April 2003 and we are in the process of dissolving the joint venture and believe that it is unlikely that Elan will exercise its exchange right. Instead, we believe that the Series B preferred stock will automatically convert into common stock in July 2005 unless converted earlier by Elan. The Series B preferred stock will be reclassified to shareholders' equity upon the earlier of the expiration of the exchange right, the dissolution of the joint venture or the conversion into our common stock.

Stock Compensation

As permitted by the provisions of Financial Accounting Standards Board (FASB) Statement No. 123, "*Accounting for Stock-Based Compensation*," we have elected to follow Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," and related interpretations in accounting for employee stock option grants, and we apply the disclosure-only provisions to account for our stock option plans. See Note 5 for discussion of proforma results of operations. We do not recognize any compensation expense for options granted to employees because we grant all options at fair market value on the date of grant. Options granted to consultants are recorded as an expense over their vesting term based on their fair value, which is determined using the Black-Scholes method.

Revenue Recognition under Collaborative Agreements

We generate revenue from technology licenses, collaborative research arrangements and cost reimbursement contracts. Revenue under technology licenses and collaborative agreements typically consists of nonrefundable, up-front license fees, collaborative research funding, technology access fees and various other payments.

Revenue from nonrefundable, up-front license fees and technology access payments is recognized ratably over the development period in the collaborative agreement. Revenue associated with performance milestones is recognized as earned, based upon the achievement of the milestones defined in the applicable agreements. Revenue under research and development cost-reimbursement contracts is recognized as the related costs are incurred. Payments received in excess of amounts earned are classified as deferred revenue in the accompanying Consolidated Balance Sheets.

We previously recognized nonrefundable, up-front license fees as revenue when the technology was transferred and when all of its significant contractual obligations relating to the fees had been fulfilled. Effective January 1, 2000, we changed our method of accounting for nonrefundable up-front license fees to recognize such fees over the term of the related research and development collaboration arrangement on a straight-line basis, as this method best matches the effort provided. We believe that this change in accounting principle is preferable, based on guidance provided in the SEC's Staff Accounting Bulletin (SAB) No. 101, *"Revenue Recognition in Financial Statements."* The $3.7 million cumulative effect of the change in accounting principle, calculated as of January 1, 2000, was reported as a charge for the year ended December 31, 2000. The cumulative effect was recorded as deferred revenue that was recognized as revenue over the remaining term of the research and development collaboration agreements which resulted in $1.6 million ($0.04 per share) in 2001 and $2.1 million ($0.06 per share) in 2000.

Relationships with Strategic Partners

In connection with our collaborations with Biogen, Inc., Celltech Group plc and Genzyme Corporation and our joint venture with Elan, each strategic partner purchased shares of our common stock. The number of shares of our common stock that we issued to each of our strategic partners represented less than 20% of our total shares then outstanding. Under an equity purchase commitment that is part of our collaboration with Biogen, we issued shares of our common stock to Biogen during 2002 which increased its ownership in us to approximately 20%. Our collaborations with Celltech and Genzyme have concluded. We cannot control or monitor shares of our stock that these partners and former partners may buy or sell in open market transactions. Although each of our collaborative partners influence the activities specific to their collaborations with us, our partners do not influence our management or operating policies generally or otherwise significantly influence our operating activities.

Significant Revenue Relationships and Concentration of Risk

Wyeth, Celltech, Biogen and IAVI accounted for substantially all of the revenue we recorded from collaborative agreements in 2002, 2001 and 2000. All of our revenue from collaborative agreements with unconsolidated joint ventures is from Emerald, our 80.1%-owned joint venture with Elan. Our collaborations with Wyeth, Elan and Celltech have concluded and, except for $2.6 million that will be recorded as revenue in 2003 related to termination costs received from Wyeth, these sources of revenue have ended. A change in the level of work or funding received from any one of our ongoing collaborative partners could disrupt our business and adversely affect our cash flow and results of operations.

Research and Development Costs

Research and development costs include salaries, costs of outside collaborators and outside services, clinical trial expenses, royalty and license costs and allocated facility, occupancy and utility expenses. We expense research and development costs as incurred. Costs and expenses related to programs conducted under collaborative agreements that result in collaborative revenue totaled approximately $14.7 million in 2002, $11.4 million in 2001 and $6.6 million in 2000. See Note 7 for more detailed information.

Net Loss Per Common Share

Net loss per common share is based on net loss after giving effect to preferred stock dividends, divided by the weighted average number of common shares outstanding during the period. Our diluted net loss per share is the same as our basic net loss per share because all stock options, warrants and other potentially dilutive securities are antidilutive and therefore excluded from the calculation of diluted net loss per share. The total number of shares that we excluded from the calculations of net loss per share were 17,284,151 shares in 2002, 13,871,348 shares in 2001 and 14,028,623 shares in 2000.

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. Our actual results may differ from those estimates.

Recently Issued Accounting Standards

In June 2002, the FASB issued SFAS No. 146, *"Accounting for Costs Associated with Exit or Disposal Activities,"* which is effective for exit or disposal activities initiated after December 31, 2002. This statement

requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred. Previous guidance required that a liability for exit or disposal costs be recognized at the date of an entity's commitment to an exit plan. We elected to adopt the provisions of SFAS No. 146 prior to the effective date as encouraged by the FASB. During 2002, we incurred restructure charges of $2.3 million for employee termination benefits and ongoing lease commitment costs related to an abandoned facility. These charges are reflected in a separate line item within operating expenses on the Consolidated Statement of Operations. As of December 31, 2002, we have an accrued a liability of $3.4 million for severance costs and for costs that will continue to be incurred under a lease obligation for its remaining term, without economic benefit to us. If we had accounted for restructure costs, of the December 2002 restructure plan, under Emerging Issues Task Force 94-3, *"Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring),"* and not elected to adopt SFAS 146 early, we would have also accrued restructure charges of approximately $180,000 during 2002 primarily due to charges related to our leased facility located in Sharon Hill, Pennsylvania, abandoned in February 2003. Such charges will be recorded in the first quarter of 2003.

In December 2002, the FASB issued SFAS No. 148, *"Accounting for Stock-Based Compensation—Transition and Disclosure—an amendment of FASB Statement No. 123."* This statement provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, this statement amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. We do not expect the provisions of SFAS No. 148 to have a significant effect on our financial position or operating results.

In November 2002, the FASB issued FASB Interpretation, or FIN, No. 45, *"Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others."* FIN No. 45 elaborates on the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. FIN No. 45 also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and initial measurement provisions of FIN No. 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. The disclosure requirements in FIN No. 45 are effective for financial statements ending after December 15, 2002. We do not expect the provisions of FIN No. 45 to have a significant effect on our financial position or operating results.

In January 2003, the FASB issued FIN No. 46, *"Consolidation of Variable Interest Entities."* This interpretation of Accounting Research Bulleting No. 51, *"Consolidated Financial Statements"* addresses consolidation of business enterprises of variable interest entities in which: (1) the equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support from other parties, which is provided through other interests that will absorb some or all of the expected losses of the entity and (2) the equity investors lack one or more of certain essential characteristics of a controlling interest. FIN No. 46 applies immediately to variable interest entities created after January 31, 2003, and to variable interest entities in which an enterprise obtains an interest after that date. We do not expect the provisions of FIN No. 46 to have a significant effect on our financial position or operating results.

Reclassifications

Certain reclassifications have been made to conform prior year results to the current year presentation.

2. Property and equipment

Property and equipment consisted of the following:

	December 31, 2002	December 31, 2001
Furniture and equipment	$ 7,055,000	$ 9,848,000
Leasehold improvements	9,527,000	9,433,000
	16,582,000	19,281,000
Less accumulated depreciation and amortization	(11,062,000)	(10,973,000)
	$ 5,520,000	$ 8,308,000

We finance a portion of our equipment through equipment financing arrangements and pledge the equipment as security for the financing. The cost of equipment that has been pledged under financing arrangements totaled $4.2 million at December 31, 2002 and $3.7 million at December 31, 2001.

3. Goodwill and other intangibles

Goodwill and other purchased intangibles consisted of the following:

	December 31, 2002	December 31, 2001
Goodwill	$38,154,000	$37,892,000
Other purchased intangibles	605,000	1,615,000
	38,759,000	39,507,000
Less accumulated amortization	(7,110,000)	(7,755,000)
	$31,649,000	$31,752,000

During 2002, we recorded additional purchase consideration of $262,000 related to the Genovo acquisition as acquisition contingencies were resolved. As of December 31, 2002, no intangible assets are subject to amortization. Other purchased intangibles include non-compete agreements totaling $1.0 million, less accumulated amortization of $645,000 as of December 31, 2001. These agreements were fully amortized in 2002 and written off.

4. Long-Term Obligations

Long-term obligations consisted of the following:

	December 31, 2002	December 31, 2001
Loan payable to Biogen, due August 2006	$10,000,000	$10,000,000
Loan payable to Celltech	—	2,000,000
Convertible loans payable to Elan, due July 2005	7,950,000	2,000,000
Equipment financing obligations	2,383,000	3,153,000
Other long-term obligations	1,459,000	558,000
	21,792,000	17,711,000
Less current portion	(1,298,000)	(1,308,000)
	$20,494,000	$16,403,000

Future aggregate principal payments related to long-term obligations are $1.3 million in 2003, $800,000 in 2004, $9.7 million in 2005 and $10.0 million in 2006.

During 2001, we borrowed $10.0 million from Biogen against a $10.0 million unsecured loan agreement. Outstanding borrowings under this loan bear interest at the one-year LIBOR rate plus 1%, which is reset annually. At December 31, 2002, the interest rate was 2.4%. The loan agreement contains financial covenants establishing limits on our ability to declare or pay cash dividends. The loan is due in August 2006 and we may repay it at anytime without penalty.

In December 2002, we entered into a settlement and termination agreement with Celltech to finalize certain unresolved matters related to our product development collaboration with Celltech that has been terminated. In connection with this agreement, we and Celltech agreed that the $2.0 million loan plus accrued interest that was due to Celltech in November 2003, was considered paid in full, in exchange for settlement of outstanding development expenses that were to be reimbursed by Celltech under the collaboration. No cash was transferred between us and Celltech under the settlement agreement.

Under a $12.0 million loan commitment from Elan, we borrowed $5.95 million in 2002 and $2.0 million in 2001 to fund our share of the operating costs of Emerald. Interest on borrowings under this loan facility accrues at a rate of 12.0% per annum, compounded semi-annually. Principal and interest outstanding under this loan facility are due in July 2005, payable either in cash or shares of our common stock. Interest is payable semi-annually in cash and, if we elect not to pay in cash at that time, is treated as a new borrowing from Elan. Elan has the option to convert principal and interest outstanding under the loan facility, on a per-draw basis, into shares of our common stock. As of December 31, 2001, we had borrowed $2.0 million from Elan under the loan commitment at an applicable conversion price of $6.11. As of December 31, 2002, the following loans are outstanding to Elan under the loan commitment which has now expired:

Amount	Conversion Price	Conversion Shares
$2,000,000	$6.11	327,399
2,000,000	3.78	529,801
3,000,000	2.48	1,211,509
950,000	1.95	487,248
$7,950,000		2,555,957

In addition, unpaid interest totaling $547,000 is outstanding at December 31, 2002 and is included in other long term obligations. To date, we have not made any cash payments of interest to Elan. Should Elan elect to convert this interest into our common stock, the conversion prices range from $0.83 to $3.70 for a total of 481,668 shares of our common stock as of December 31, 2002.

We have the option to prepay principal and interest outstanding under our Elan loan facility, in whole or on a per-draw basis, in either cash or shares of our common stock. If we elect to prepay outstanding amounts with our common stock, the conversion price will equal the lesser of the average closing price of our common stock for a specified period of time before the date of prepayment and the applicable conversion price for each draw. Unless we obtain shareholder approval, we are limited in our ability to issue shares of our common stock to repay amounts outstanding under the loan facility to the extent the repayment caused Elan's ownership in our common stock to exceed 19.9% of our then total shares outstanding. If we elect to prepay the outstanding amounts in cash, we must pay an amount equal to the greater of the amount of principal and interest outstanding under the applicable draw and the value of our common stock that Elan would receive upon conversion at the applicable conversion price for each draw, at the then current market price of those shares.

Equipment financing obligations relate to secured financing for the purchase of capital equipment and leasehold improvements. These obligations bear interest at rates ranging from 7.75% to 15.04% and mature from May 2003 to June 2006.

Other long-term obligations include a promissory note payable to Biogen, which we assumed in September 2000 as part of our acquisition of Genovo. This promissory note has an outstanding principal amount of $650,000 and bears no interest. At the time of the acquisition, we discounted the note to reflect market interest rates, using an imputed interest rate of 5.6%. The note is due in September 2005.

5. Redeemable Preferred Stock and Shareholders' Equity

Redeemable Preferred Stock

Series B Convertible Exchangeable Preferred Stock

In July 1999, we issued shares of our Series B convertible exchangeable preferred stock, valued at $12 million, to Elan in exchange for our 80.1% interest in Emerald (see Note 8). The Series B preferred stock is convertible until July 2005, at Elan's option, into shares of our common stock, at an initial conversion price of $3.32 per share. Compounding dividends accrue semi-annually at 7% per year on the $1,000 per share face value of the stock, plus dividends. Dividends are not paid in cash but rather result in an increase in the number of shares of common stock issuable upon conversion. The Series B preferred stock and accrued dividends were convertible into 4,448,645 shares of our common stock at December 31, 2002, 4,283,471 shares at December 31, 2001 and 3,998,375 shares at December 31, 2000. The Series B preferred stock will automatically convert into shares or our common stock in the event of specified transactions involving a change of control of Targeted Genetics. In the event that the issuance of common stock to Elan upon the conversion of the Series B preferred stock would result in Elan owning more than 19.9% of our then outstanding shares of our common stock and we were unable to obtain shareholder approval for such issuance, we have the right, at our option, to redeem that number of shares that would exceed 19.9% of our then outstanding shares.

Alternatively, Elan may exchange the Series B preferred stock for all shares of preferred stock that we hold in Emerald, which would increase Elan's ownership in Emerald to 50%. In the unlikely event that Elan exercises its exchange right, Elan must make a cash payment to us equal to 30.1% of the joint venture losses that we and Elan funded after its formation. We periodically monitor the redemption value of the Series B preferred stock, as measured by 30.1% of the fair value of the joint venture that Elan would receive, less the cash payable to us upon exchange by Elan. If the redemption value of the Series B preferred stock exceeds its then current carrying value, we will increase the carrying value of the Series B preferred stock to equal the redemption value and recognize a corresponding dividend to the Series B preferred shareholder. We will recognize subsequent increases or decreases in redemption value of the Series B preferred stock; however, decreases will be limited to amounts previously recorded as increases, so as not to reduce the carrying amount of the Series B preferred stock below the original basis of $12.0 million. The exchange right expires in April 2003 and because we are in the process of dissolving the joint venture we believe that it is unlikely that Elan will exercise its exchange right. The Series B preferred stock will be reclassified to shareholders' equity upon the earlier of the expiration of the exchange right, the dissolution of the joint venture or conversion of the Series B preferred stock into our common stock.

Elan, as a holder of Series B preferred stock, is not entitled to vote together with holders of common stock, including with respect to election of directors, or as a separate class, except as otherwise provided by the Washington Business Corporation Act.

Shareholders' Equity

Stock Purchase Warrants

In 1998, in connection with a private placement of common stock, we issued warrants to purchase a total of 4,333,333 shares of our common stock at an exercise price of $2.00 per share. In 2001 warrants to purchase 1,000,000 shares of our common stock were exercised, resulting in $2.0 million of proceeds. The remaining warrants to purchase 3,333,333 shares of our common stock expire in April 2003.

In 1999, in connection with a technology license agreement, we issued to Alkermes, Inc. a warrant to purchase 1,000,000 shares of our common stock at an exercise price of $2.50, expiring in June 2007, and a warrant to purchase 1,000,000 shares at an exercise price of $4.16 per share, expiring in June 2009. Both of these warrants remain outstanding at December 31, 2002.

We have outstanding warrants to purchase a total of 25,141 shares of our common stock related to equipment financing and consulting agreements. These warrants have a weighted average price of $5.46 per share and expire between December 2003 and March 2004.

Shareholder Rights Plan

In 1996, our board of directors adopted a shareholder rights plan. Under our rights plan, each holder of a share of outstanding common stock is also entitled to one preferred stock purchase right. We adopted the rights plan to guard against partial tender offers and other abusive tactics that might be used in an attempt to gain control of Targeted Genetics without paying all shareholders a fair price for their shares. The rights plan will not prevent a change of control, but is designed to deter coercive takeover tactics and to encourage anyone attempting to acquire us to first negotiate with our board. Generally, if any person or group becomes the beneficial owner of more than 15% of our outstanding common stock (an acquiring person), then each preferred stock purchase right not owned by the acquiring person or its affiliates would entitle its holder to purchase a share of our common stock at a 50% discount, which would result in a significant dilution of the acquiring person's interest in Targeted Genetics. If we or 50% or more of our assets or earnings are thereafter acquired, each right will entitle its holder to purchase a share of common stock of the acquiring entity for a 50% discount.

The rights plan expires in October 2006. Our board of directors will generally be entitled to redeem the rights for $0.01 per right at any time before a person or group acquires more than 15% of our common stock. In addition, at any time after an acquiring person crosses the 15% threshold but before it acquires us or 50% of our assets or earnings, the board may exchange all or part of the rights (other than those held by the acquiring person) for one share of common stock per right.

Stock Options

We have granted non-qualified and incentive stock options to purchase up to 6,979,444 shares of our common stock under our stock option plans. Beginning in 1999, we began granting all options under our 1999 Stock Option Plan (the 1999 Plan), and discontinued granting options under our two other plans. In connection with our acquisition of Genovo, we established the 2000 Genovo, Inc. Roll-over Stock Option Plan (the Genovo Plan). In 2001, our shareholders approved both the Genovo Plan and an increase in the number of shares available for grant under the 1999 Plan from 1.5 million shares to 3.5 million shares.

The 1999 Plan, as amended, provides for option grants to our employees, directors and officers and to consultants, agents, advisors and independent contractors who provide services to us, or our subsidiaries. The exercise price for incentive stock options shall not be less than the fair market value of the shares on the date of

grant. Options granted under the 1999 Plan expire no later than ten years from the date of grant and generally vest and become exercisable over a three or four-year period following the date of grant. As of December 31, 2002, options to purchase 446,030 shares of our common stock were available for future grant under the 1999 Plan.

The Genovo Plan was established to convert Genovo employees' options to purchase shares of Genovo common stock into options to purchase our common stock. In 2000, we granted options to purchase 679,444 shares of our common stock at a weighted average exercise price of $1.30 per share under the Genovo Plan to the former employees of Genovo. The size of the grant to each former Genovo employee was based on the number of shares subject to that employee's Genovo options at the effective time of the acquisition. Options granted under the Genovo Plan are fully vested and expire ten years from the date that the underlying Genovo stock options were granted. No additional options will be granted under the Genovo Plan.

The following table summarizes activity related to our stock option plans:

	Shares	Weighted Average Exercise Price	Options Exercisable
Balance, January 1, 2000	2,441,342	$2.26	1,094,420
Granted	1,373,716	5.65	
Exercised	(419,470)	1.45	
Canceled	(74,810)	6.13	
Balance, December 31, 2000	3,320,778	3.66	1,782,082
Granted	1,510,075	5.27	
Exercised	(672,383)	1.57	
Canceled	(274,637)	5.05	
Balance, December 31, 2001	3,883,833	4.55	1,861,093
Granted	1,347,500	1.72	
Exercised	(35,053)	1.06	
Canceled	(756,873)	4.12	
Balance, December 31, 2002	4,439,407	3.80	2,389,393

The following table summarizes information regarding our outstanding and exercisable options at December 31, 2002:

	Outstanding			Exercisable	
Range of Exercise Prices	Number of Option Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Number of Option Shares	Weighted Average Exercise Price
$0.50 – $1.22	883,350	$ 0.87	8.05	340,831	$ 1.02
1.32 – 2.02	789,188	1.76	6.73	524,539	1.74
2.18 – 2.57	922,546	2.44	7.95	443,592	2.32
2.73 – 5.95	817,546	4.87	5.91	528,153	4.75
6.25 – 8.38	803,127	7.34	7.73	423,054	7.55
9.31 – 21.38	223,650	11.50	7.58	129,224	11.62
	4,439,407	3.80	7.32	2,389,393	3.97

As allowed by SFAS No.123, we do not recognize compensation expense on stock options granted to employees and directors. If we had elected to recognize compensation expense based on the fair market value at the grant dates for stock options granted, the pro forma net loss and net loss per common share would have been as follows:

	2002	2001	2000
Net loss:			
as reported	$(23,767,000)	$(27,170,000)	$(47,655,000)
stock-based compensation under SFAS 123	(3,311,000)	(5,108,000)	(6,038,000)
pro forma	$(27,078,000)	$(32,278,000)	$(53,693,000)
Basic net loss per share:			
as reported, restated	$ (0.52)	$ (0.62)	$ (1.26)
pro forma	(0.59)	(0.73)	(1.42)

We estimated the fair value of each option on the date of grant using the Black-Scholes pricing model with the following weighted average assumptions:

	2002	2001	2000
Expected dividend rate	Nil	Nil	Nil
Expected stock price volatility	1.480	1.590	1.661
Risk-free interest rate	4.03%	4.79%	6.47%
Expected life of options	4 years	4 years	4 years
Weighted (per share) average fair value of options granted	$1.58	$4.94	$9.90

Reserved Shares

As of December 31, 2002, we had reserved shares of our common stock for future issuance as follows:

Stock options granted	4,439,407
Available for future grants	446,030
Stock purchase warrants	5,358,474
Conversion of Series B preferred stock and notes payable and accrued interest	7,486,270
Total reserved shares	17,730,181

6. Acquisition of Genovo, Inc.

In September 2000, we acquired Genovo, a privately held biotechnology company focused on developing therapeutic products based on AAV vectors, which we accounted for as a purchase. The consolidated results of Genovo have been included in our consolidated financial statements since the acquisition. The purchase price for our acquisition of Genovo, Inc. was approximately $66.4 million, which consisted of the following:

Issuance of 5,250,805 shares of common stock	$58,461,000
Fair value of options to purchase 1,302,034 shares of common stock	7,668,000
Transaction costs	584,000
Total consideration	66,713,000
Less: intrinsic value of unvested stock options	(301,000)
Purchase price	$66,412,000

The $66.4 million purchase price consisted of $28.0 million of acquired in-process research and development (IPR&D) expenses; $39.5 million of intangibles, which consisted of AAV vector know-how of $12.7 million, assembled workforce of $1.6 million and goodwill of $25.2 million; $1.9 million of tangible assets; and $3.0 of liabilities assumed.

We evaluated acquired IPR&D connected with our acquisition of Genovo by utilizing the present value of the estimated after-tax cash flows expected to be generated by the purchased technology, which had not reached technological feasibility at the effective time of the acquisition. We based the cash flow projections for revenue on estimates of growth rates and the aggregate size of the markets for each product or technology; the probability of technical success given the stage of development at the time of acquisition; royalty rates, based on prior licensing agreements; product sales cycles; and the estimated life of the product's underlying technology. We deducted estimated operating expenses and income taxes from estimated revenue projections to arrive at estimated after-tax cash flows. We utilized discount rates of 30% to 45% to discount projected cash flows for in-process technologies, depending on the relative risk of each in-process technology. We computed these rates based primarily on our internal rates of return, cost of capital, rates of return for research and development and the weighted average cost of capital at the time of acquisition. Projected operating expenses include general and administrative expenses and research and development costs.

We based all of the foregoing estimates and projections regarding the Genovo acquisition on assumptions that we believed to be reasonable at the time of the acquisition but that are inherently uncertain and unpredictable. If we do not successfully develop the projects and technologies considered in these estimates, our business, operating results and financial condition may be adversely affected. As of the date of the acquisition, we concluded that the technologies under development, once completed, could be economically used only for their specifically intended purposes and that the in-process technology had no alternative future use after taking into consideration the overall objectives of the project, progress toward the objectives and uniqueness of developments to these objectives. If we fail in these development efforts, no alternative economic value will result from these technologies and the economic contribution that we projected from the IPR&D will not materialize. The risk of unsuccessful or untimely completion includes the risk that our competitors will develop alternative gene delivery technologies or will develop more effective or economically feasible technologies using more traditional approaches to treating human diseases.

In connection with our acquisition of Genovo, we established an escrow of 550,872 shares of our common stock held for the benefit of former Genovo stockholders, pending resolution of specified contractual and technology licensing pre-acquisition contingencies related to Genovo. During 2001, a party associated with a pre-acquisition contractual matter notified us that it would dispute reimbursing us for a $2.0 million settlement payment we made. Based on our review of the facts, we determined that the $2.0 million receivable we had recorded in anticipation of reimbursement was not collectable. As a result, and in accordance with the terms of the Genovo merger agreement, we cancelled 155,649 shares held in escrow, valued at $2.0 million. We reflected the $2.0 million as a reduction of equity and goodwill during 2001 and retired the shares. During 2002 we cancelled 1,549 shares held in escrow and reduced goodwill by $20,000 based on the original per share valuation. In December 2002 we released the remaining 393,670 of this escrow shares to the former Genovo stockholders.

In connection with our acquisition of Genovo, we also agreed to issue up to 700,000 additional shares of our common stock to the former Genovo stockholders pending completion of licensing arrangements that were unresolved at the time of our merger with Genovo. During 2002, we completed our technology evaluation and elected to secure rights to a portion of the technology. In connection with completion of these license arrangements we issued 381,850 shares of our common stock to the former Genovo shareholders.

In connection with the Genovo merger and a collaborative research agreement previously entered into between Genzyme Corporation and Genovo, we assumed two outstanding options for Genzyme to purchase Genovo capital stock. After the merger, Genzyme exercised the first option to purchase 311,295 shares of our common stock (as successor company to Genovo) at a price of $12.8495 per share. The terms of our merger with Genovo provided that if Genzyme did not elect to make this additional investment, or if Genzyme provided us with less than $4.0 million through exercise of the option agreement, the former Genovo shareholders could receive additional shares of our common stock. Accordingly, in 2002 we issued 155,644 shares of our common stock to the former Genovo stockholders as a result of Genzyme not exercising its option agreement.

In each of these above circumstances, we determined the fair value of the shares issued to the former Genovo stockholders on the date each contingency was resolved and reflected the share issuances as additional purchase price. In total we recognized $282,000 of additional purchase price related to the resolution of these contingencies.

7. Collaborative and Other Agreements

We have entered into various relationships with pharmaceutical and biotechnology companies and a public health organization to develop several of our product candidates. Under these partnerships, we typically receive reimbursement for research and development activities performed by us under the collaboration as well as milestone and upfront payments. The aggregate revenue we earned under all of our collaborative research and development collaborations were $19.3 million in 2002, $18.9 million in 2001, and $11.4 million in 2000.

Biogen Agreement

In September 2000, we established a multiple-product development and commercialization collaboration with Biogen, Inc. Under the terms of the collaborative agreement, we granted Biogen an exclusive worldwide license to sell any products developed in the collaboration and assumed responsibility for manufacturing and supplying any developed products to Biogen to support product development, clinical trials and product commercialization. We are entitled to receive royalties on sales of any products that result from the collaborative product development efforts or, alternatively, we may sell product to Biogen at specified transfer prices. Upon initiation of the collaboration in 2000, Biogen paid us $8.0 million, which included an up-front technology license of $5.0 million and up-front prepaid research and development funding of $3.0 million. Under the three-year research and development agreement, Biogen agreed to provide a minimum of $3.0 million of additional research and development funding, paid at a rate of a minimum of $1.0 million per year. Although Biogen may terminate the development and marketing agreement at any time, its obligation under the research and development agreement to pay the minimum annual project funding would continue through September 2003.

We are amortizing the $8.0 million up-front fee paid by Biogen over the initial three-year research and development collaboration period which ends on September 30, 2003. We recognize revenue on the $1.0 million minimum annual project funding to the extent we perform specified research and development. We recognized revenue of $2.9 million in 2002, $2.6 million in 2001 and $429,000 in 2000 related to the Biogen collaboration. As of December 31, 2002, unearned revenue associated with the annual project funding and prepaid research and development funding portion of the collaboration totaled $1.8 million and is classified as deferred revenue. We will recognize any unearned revenue associated with this annual project funding at the conclusion of the collaboration period in September 2003, unless extended.

Under our collaboration agreement with Biogen, Biogen also agreed to provide us with loans of up to $10.0 million, which amount we borrowed in 2001. Under this collaboration, Biogen has also committed to purchase, at our discretion, up to $10.0 million of our common stock. In September 2002, we issued 5,804,673 shares of our

common stock to Biogen at a price of approximately $0.69 per share and received proceeds of $4.0 million. Proceeds were used to fund our ongoing research and development activities and general corporate purposes. The remaining $6.0 million under this commitment expires in August 2003 and is currently not accessible because Biogen is not required to purchase shares of our common stock to the extent that the purchase would cause its ownership in us to exceed 19.9%. Biogen's current ownership interest approximates this limitation.

International AIDS Vaccine Initiative Agreement

In February 2000, we entered into a three-year development collaboration with IAVI and Children's Research Institute on the campus of Children's Hospital in Columbus, Ohio, to develop a vaccine against HIV infection. Under the terms of the collaboration, IAVI provides funding to support development, preclinical studies and manufacturing of product for clinical trial studies. The collaboration provides for IAVI to reimburse us for research and development costs on a cost reimbursable basis.

Under the terms of the IAVI agreement, we have rights to manufacture any vaccines developed under the collaboration and will retain worldwide exclusive commercialization rights, in developed countries, to any product that results from the collaboration. If we decline or are unable to produce the vaccine for developing countries in reasonable quantity and at a reasonable price, IAVI has the right to contract with other manufacturers to make the vaccine for use in those countries. We recognized $5.7 million in revenue from IAVI in 2002, $1.9 million of revenue in 2001 and $23,000 of revenue in 2000.

Celltech Group Agreement

In October 1998, we entered into a series of agreements with Medeva Pharmaceuticals, Inc. to collaborate on the development of our tgAAVCF gene therapy product for treating cystic fibrosis. In January 2000, Medeva merged with Celltech/Chiroscience to become part of Celltech Group plc and Celltech assumed Medeva's rights and responsibilities under these agreements. Under the terms of the agreements, Celltech agreed to provide funding to support research and development activities of our product candidate for cystic fibrosis and to reimburse us for certain clinical trial expenses.

We recognized revenue of $1.3 million in 2002, $5.0 million in 2001 and $8.6 million in 2000 under the Celltech collaboration and we have recognized total revenue of $28.3 million since the inception of the collaboration. Revenue recognized since inception include $6.0 million of deferred revenue amortization resulting from our adoption of SAB 101, as follows: zero in 2002, $1.6 million in 2001, $2.1 million in 2000 and $2.3 million prior to 2000. Under related agreements, Celltech purchased 1,427,392 shares of our common stock for $2.8 million and loaned us $2.0 million, originally due in November 2003.

In December 2002, we terminated our collaboration with Celltech. In connection with this termination, we entered into a settlement agreement whereby, the $2.0 million loan plus interest was considered paid in full, in exchange for settlement of outstanding development expenses that were to be reimbursed by Celltech under the collaboration. In connection with this settlement agreement we recognized $964,000 of revenue representing reimbursement for research and development expenses that we incurred prior to the termination. No cash was transferred between us and Celltech under the settlement agreement. As a result of terminating our collaboration with Celltech, we regained all of our rights to the tgAAVCF product that had been granted to Celltech.

Wyeth/Genetics Institute Agreement

In November 2000, we entered into a collaboration to develop gene therapy products for treating hemophilia with Wyeth/Genetics Institute, a unit of Wyeth Pharmaceuticals. Under the terms of a research and development funding agreement, Wyeth/Genetics Institute paid us up-front payments of $5.6 million and was to pay us up to

$15.0 million to develop a product candidate for hemophilia A over a three-year research and development collaboration period ending in November 2003. In November 2002, Wyeth elected to terminate this hemophilia collaboration and related agreements. In February 2003, we entered into a termination agreement with Wyeth that provided for a $3.2 million cash payment from Wyeth, in payment of an account receivable of $637,000 recorded in 2002 for services performed prior to Wyeth's termination and as a termination settlement of approximately $2.6 million to be recognized as revenue in the first quarter of 2003. All rights that we granted or otherwise extended to Wyeth related to hemophilia were returned to us and we were granted an option to acquire a right and license to certain hemophilia patent rights controlled by Wyeth.

We recognized revenue of $7.5 million in 2002, $6.5 million in 2001 and $454,000 in 2000 under this collaboration. These revenue amounts include amortization in each period of the $5.6 million of up-front payments and the collaborative research funding earned during the period.

Genzyme Agreement

In connection with the acquisition of Genovo in September 2000, we assumed a three-year development and license agreement with Genzyme Corporation that Genovo had entered into in August 1999. Under that agreement, Genovo was committed to perform up to $2.9 million per year of research and development activities related to product candidates for treating lysosomal storage disorders.

The development program under our agreement with Genzyme expired in August 2002. Under the terms of our agreements with Genzyme all rights that we granted or otherwise extended to Genzyme have returned to us, except that Genzyme has retained an exclusive license to certain Genovo-related manufacturing technology for use in the field of lysosomal storage disorders. In connection with our acquisition of Genovo, we also assumed a separate agreement that granted Genzyme an option to purchase up to $11.4 million of Genovo equity, of which $3.4 million had been purchased as of the Genovo acquisition date. After the execution of the amended agreement, Genzyme exercised its option to purchase 311,295 shares of our common stock for a total of $4.0 million. Genzyme did not exercise its final option to acquire up to an additional 311,295 shares of our common stock also at a price of $12.8495 per share. We did not recognize revenue on the research that we performed in connection with this collaboration because we funded this project through the proceeds received from the sale of equity securities to Genzyme.

Alkermes License

In June 1999, we entered into an agreement with Alkermes, Inc. to acquire the exclusive rights to a patent and other pending patent applications for manufacturing AAV vectors. The license to this technology, first developed by Children's Hospital in Columbus, Ohio, covers the use of cell lines for the manufacture of AAV vectors and expands a previously acquired limited field license to these rights. The Alkermes license agreement requires us to satisfy specified development requirements in order to maintain the exclusivity of the license. We are obligated to make clinical and regulatory development milestone payments for any product candidates using this technology, to pay royalties upon the sale of any products using the licensed technology and to make payments to Alkermes if we sublicense the technology covered by the license agreement.

8. Emerald Gene Systems Joint Venture

In July 1999, we formed Emerald Gene Systems, our joint venture with Elan, to develop product candidates based on our expertise in gene delivery and Elan's expertise in drug delivery. The initial three-year development period for Emerald ended during 2002 and we have begun the process of dissolving the joint venture. As of December 31, 2002, there are no operating activities within the joint venture.

We own 80.1% of Emerald's common stock and 80.1% of Emerald's preferred stock and Elan owns the remaining 19.9% of Emerald's common and preferred stock. The common stock of Emerald held by Elan is similar in all respects to the common stock held by us, except that those shares held by Elan do not have voting rights. The common shares held by Elan may be converted into voting common shares at Elan's election. Although we currently own 100% of the voting stock, Elan and its subsidiaries have retained significant minority investor rights that are considered participating rights under the FASB's Emerging Issues Task Force Bulletin 96-16, *Investors' Accounting for an Investee When the Investor Has a Majority of the Voting Interest but the Minority Shareholder Has Certain Approval or Veto Rights*. Because Elan's participating rights prevent us from exercising control over Emerald, we do not consolidate the financial statements of Emerald, but instead account for our investment in Emerald under the equity method of accounting. We record our share of Emerald's net loss from operations as equity in net loss of unconsolidated, majority owned research and development joint venture in the accompanying statements of operations. The preferred shares of Emerald are entitled to a liquidation preference equal to the amount paid by Elan and us for the preferred stock. However, we do not expect to realize any proceeds in connection with these rights or otherwise on the dissolution of Emerald. In addition, upon the exercise of the exchange option by Elan (see Note 4), all non-voting preferred shares that Elan holds in Emerald will automatically be converted into voting common shares on a one-for-one basis. Both the common stock and preferred stock of Emerald are subject to certain transfer restrictions, other than to an affiliate.

We acquired our 80.1% interest and Elan acquired its 19.9% interest in Emerald in exchange for capital contributions receivable of $12.0 million and $3.0 million, respectively. Both Elan and we licensed intellectual property to Emerald. Emerald valued the technology licensed by Elan to Emerald at $15.0 million, which represented the consideration to be paid under the License Agreement. The $15.0 million technology license fee represented rights to technology, which had not reached technological feasibility at the date of acquisition and did not have alternative future uses. This in-process research and development was immediately charged to expense by Emerald. Due to our 80.1% ownership interest, the value assigned by Emerald to the license of our technology was zero, representing our carrying value of the technology licensed. We are entitled to receive royalties if and when commercialization of product candidates occurs. The parties agreed to settle the capital contribution obligations to the joint venture and the technology license fee payable to Elan through a non-cash cross receipt agreement. This cross receipt agreement represented a written acknowledgement by all parties of the receipt of sums owed to and from Emerald, Elan and us. Simultaneous with the formation of the joint venture, we issued to Elan shares of our Series B convertible exchangeable preferred stock valued at $12.0 million. These shares were issued in exchange for Elan's assumption of our capital contribution to Emerald. Because we did not receive any cash from the issuance of the Series B preferred stock, we have presented its issuance as a non-cash transaction in our financial statements.

We and Elan funded the expenses of Emerald in proportion to our respective ownership interests. A joint operating committee determined the nature and scope of activities to be performed by the joint venture on a periodic basis and at least annually. Since formation we have provided Emerald cash funding totaling $7.5 million consisting of $1.9 million in 2002 and $2.8 million of cash funding in 2001 and 2000. We and Elan conducted research and development for Emerald and Emerald reimbursed each company for the costs of research and development and related expenses plus a profit percentage. Reimbursements that we received from Emerald are reflected as revenue from collaborative agreement with unconsolidated, majority-owned joint venture in the Consolidated Statements of Operations and related expenses are included in research and development expense. Under a convertible note facility provided to us from Elan, we had the option to borrow up to $12.0 million from Elan to fund our share of Emerald's expenses. We borrowed a total of $8.0 million against this facility consisting of $6.0 million in 2002 and $2.0 million in 2001. This convertible loan facility expired in 2002 and borrowings are due in July 2005.

The unaudited condensed financial statements of Emerald are as follows:

	December 31,	
	2002	2001
Total assets, current	$ 4,000	$ 6,000
Current liabilities	—	1,393,000
Total shareholders' equity	4,000	(1,387,000)
Total liabilities and shareholders' equity	$ 4,000	$ 6,000

	Year Ended December 31,		
	2002	2001	2000
Revenue	$ —	$ —	$ —
Expenses:			
Research and development	2,400,000	4,563,000	3,073,000
General and administrative	16,000	14,000	14,000
Net loss	$(2,416,000)	$(4,577,000)	$(3,087,000)

9. Commitments

We lease our research and office facilities in Seattle, WA under two non-cancelable operating leases that expire in March 2004. The research and office facility leases may be extended under two additional five-year renewal options. We lease a facility in Bothell, WA under a non-cancelable operating lease that expires in October 2015, which was intended to accommodate future manufacturing of our product candidates. The manufacturing facility lease may be extended for an additional five-year period. We also lease research and office facilities in Sharon Hill, PA, under a non-cancelable operating lease that expires in November 2005. This lease may be extended for two additional five-year periods.

Future minimum payments under non-cancelable operating leases at December 31, 2002 were as follows:

Year ending December 31,	
2003	$ 2,888,000
2004	1,834,000
2005	1,509,000
2006	1,362,000
2007	1,362,000
Thereafter	11,925,000
Total minimum lease payments	$20,880,000

Rent expense under operating leases was $3.1 million for 2002, $2.9 million for 2001 and $1.1 million for 2000. In December 2002 we began the implementation of a restructuring plan intended to consolidate our operations and to reduce our occupancy and other costs. In connection with this restructuring plan, we intend to vacate our facility in Sharon Hill, Pennsylvania and to seek replacement tenants or otherwise terminate the leases for our Sharon Hill, PA and Bothell, WA facilities (See Note 12).

10. Employee Retirement Plan

We sponsor an employee retirement plan under Section 401(k) of the Internal Revenue Code. All of our employees and those of our subsidiaries who are 21 years old or older are eligible to participate in the plan. We contribute to the 401(k) plan in the form of matching contributions. Our contributions to the 401(k) plan are made at the discretion of our board of directors and were $181,000 in 2002, $192,000 in 2001 and $144,000 in 2000. Our board of directors has suspended matching contributions effective January 1, 2003.

11. Income Taxes

At December 31, 2002, we had net operating loss carryforwards of $133.0 million and research and tax credit carryforwards of $5.4 million. The carryforwards, which are available to offset future federal income taxes, begin to expire in 2008 if not utilized. We have provided a valuation allowance to offset the excess of deferred tax assets over the deferred tax liabilities, due to the uncertainty of realizing the benefits of the net deferred tax asset.

Significant components of our deferred tax assets and liabilities were as follows:

	December 31,	
	2002	2001
Deferred tax assets		
Net operating loss carryforwards	$ 45,150,000	$ 39,150,000
Deferred revenue	50,000	400,000
Research and experimental credit carryforwards	5,420,000	4,300,000
Depreciation and amortization	1,710,000	1,340,000
Other	230,000	420,000
Gross deferred tax assets	52,560,000	45,610,000
Valuation allowance for deferred tax assets	(52,560,000	(45,610,000)
Net deferred tax asset	$ —	$ —

The change in the valuation allowance was $7.0 million for both 2002 and 2001. Our utilization of federal income tax carryforwards is subject to limitation under Section 382 of the Internal Revenue Code. Our past sales and issuances of common stock have resulted in "ownership changes," as defined under Section 382, and may result in limitations on our ability to use of some portion of the net operating loss carryforwards.

12. Restructuring of Operations

In August 2002, we restructured our operations to reduce expenses and focus resources on key product development programs. In connection with the August restructuring, we reduced our research and administrative staff by approximately 45 personnel (25%) and incurred severance expenses of $441,000. In December 2002, we began further restructuring our operations to reduce expenses and focus our resources on our cystic fibrosis, arthritis and AIDS prophylaxis product development programs. In connection with the December restructuring, we reduced our research and administrative staff by approximately 40 personnel (30%) effective February 14, 2003 and incurred severance expenses of $284,000.

In addition, we have been pursuing opportunities to reduce and consolidate fixed operating costs and to consolidate our operations in Seattle, WA. As a result, we have recorded a restructuring charge of $1.6 million associated with our Bothell facility, which we have exited. The liability represents costs that will continue to be incurred for its remaining term, and is computed as the fair value of the remaining lease rentals reduced by estimated sublease rentals. We used a credit-adjusted risk-free interest rate to compute the discount rate used for our estimate of the fair value. We used current rent rates to determine the amount of sublease rentals that could be reasonably obtained for the facility. These costs are reflected as restructure charges in the accompanying

Consolidated Statement of Operations for the year ended December 31, 2002. The Bothell facility lease contained periodic rent escalations; therefore, we have previously recorded deferred rent for the difference between the monthly rental payment and the average of monthly rental payments over the term of the lease. As of December 31, 2002, the deferred rent liability of $1.5 million has been reclassified to accrued restructure costs. We expect to incur additional restructure charges during 2003 primarily related to facility consolidation that will be reported in the results of operations in 2003, primarily associated with exiting our Sharon Hill facility in February 2003. Because certain restructure charges are computed using assumptions, periodic adjustments may be necessary as we obtain additional information. We expect to complete the restructure activities of the December 2002 organizational restructure plan by the end of 2003.

The tables below present our total estimated restructuring charges and a reconciliation of the associated liability:

Restructure charges	Incurred in 2002	Estimated future charges	Total expected to be incurred
Employee termination benefits	$ 725,000	$ 5,000	$ 730,000
Contract termination costs	1,601,000	151,000	1,752,000
Other associated costs	—	25,000	25,000
Total	$2,326,000	$181,000	$2,507,000

Reconciliation	Beginning liability	Incurred in 2002	Paid in 2002	Reclassification of Deferred rent	Ending liability
Employee termination benefits	$—	$ 725,000	$(441,000)	$ —	$ 284,000
Contract termination costs	—	1,601,000	—	1,539,000	3,140,000
Total	$—	$2,326,000	$(441,000)	$1,539,000	$3,424,000

13. Condensed Quarterly Financial Information (unaudited)

The following tables present our unaudited quarterly results for 2002 and 2001. The loss incurred during 2002 reflects restructure charges of $441,000 during the third quarter and $1.9 million during the fourth quarter as discussed in Note 12. We believe that the following information reflects all normal recurring adjustments for a fair presentation of the information for the periods presented. The operating results for any quarter are not necessarily indicative of results for any future period.

	Quarter Ended			
	March 31, 2002	June 30, 2002	September 30, 2002	December 31, 2002
Revenue	$ 5,370,000	$ 4,593,000	$ 4,822,000	$ 4,548,000
Loss from operations	(6,226,000)	(6,271,000)	(4,511,000)	(5,733,000)
Net loss	(6,406,000)	(6,437,000)	(4,834,000)	(6,090,000)
Basic and diluted net loss per common share	(0.15)	(0.15)	(0.11)	(0.12)

	Quarter Ended			
	March 31, 2001	June 30, 2001	September 30, 2001	December 31, 2001
Revenue	$ 3,805,000	$ 4,339,000	$ 5,538,000	$ 5,198,000
Loss from operations	(6,981,000)	(6,276,000)	(7,293,000)	(8,054,000)
Net loss	(6,243,000)	(5,865,000)	(6,992,000)	(8,070,000)
Basic and diluted net loss per common share	(0.14)	(0.13)	(0.16)	(0.18)

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

None.

PART III

Item 10. Directors and Executive Officers of Registrant

The information required by this Item with respect to our directors is incorporated by reference to the section captioned "Election of Directors" in the proxy statement for our annual meeting of shareholders to be held on May 8, 2003.

The information required by this Item with respect to our executive officers is incorporated by reference to the section captioned "Executive Officers" in the proxy statement for our annual meeting of shareholders to be held on May 8, 2003.

Item 11. Executive Compensation

The information required by this Item with respect to executive compensation is incorporated by reference to the section captioned "Executive Compensation" in the proxy statement for our annual meeting of shareholders to be held on May 8, 2003.

Item 12. Security Ownership of Certain Beneficial Owners and Management

The information required by this Item with respect to beneficial ownership is incorporated by reference from the section captioned "Principal Shareholders" and "Securities Authorized for Issuance Under Equity Compensation Plans" in the proxy statement for our annual meeting of shareholders to be held on May 8, 2003.

Item 13. Certain Relationships and Related Transactions

The information required by this Item with respect to certain relationships and related-party transactions is incorporated by reference to the sections captioned "Executive Compensation—Change of Control Arrangements" and "Executive Compensation—Arrangements with Management" in the proxy statement for our annual meeting of shareholders to be held on May 8, 2003.

Item 14. Controls and Procedures

Evaluation of disclosure controls and procedures. H. Stewart Parker, our Chief Executive Officer, and Todd E. Simpson, our Chief Financial Officer, have evaluated the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-14(c) and 15d-14(c)) within 90 days prior to filing this report. Based on their evaluation, Ms. Parker and Mr. Simpson have concluded that our disclosure controls and procedures are effective in design and operation to allow us to properly record, process, summarize and report financial data in periodic reports we submit to the Securities and Exchange Commission.

Changes in internal controls. There were no significant changes in the Company's internal controls or in other factors that could significantly affect these controls subsequent to the date of Ms. Parker's and Mr. Simpson's evaluation.

PART IV

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

1. Financial Statements

The following consolidated financial statements are submitted in Part II, Item 8 of this annual report:

2. Financial Statement Schedules

All financial statement schedules have been omitted because the required information is either included in the consolidated financial statements or the notes thereto or is not applicable.

3. Exhibits

3.1	Restated Articles of Incorporation (Exhibit 3.1)	(L)
3.2	Amended and Restated Bylaws (Exhibit 3.2)	(D)
4.1	Rights Agreement, dated as of October 17, 1996, between Targeted Genetics and ChaseMellon Shareholder Services (Exhibit 2.1)	(C)
4.2	First Amendment of Rights Agreement, dated July 21, 1999, between Targeted Genetics and ChaseMellon Shareholder Services (Exhibit 1.9)	(J)
4.3	Second Amendment to Rights Agreement, dated September 25, 2002, between Targeted Genetics and Mellon Investor Services L.L.C. (formerly known as ChaseMellon Investor Services L.L.C.) (Exhibit 10.1)	(S)
4.4	Third Amendment to Rights Agreement, dated January 23, 2003, between Targeted Genetics and Mellon Investor Services LLC	
10.1	Form of Indemnification Agreement between Targeted Genetics and its officers and directors (Exhibit 10.1)	(K)
10.2	Form of Senior Management Employment Agreement between the registrant and its executive officers (Exhibit 10.2)	(D)
10.3	Gene Transfer Technology License Agreement, dated as of February 18, 1992, between Immunex Corporation and Targeted Genetics* (Exhibit 10.3)	(K)
10.4	PHS Patent License Agreement—Non-Exclusive, dated as of July 13, 1993, between National Institutes of Health Centers for Disease Control and Targeted Genetics* (Exhibit 10.4)	(K)
10.5	Patent License Agreement, dated as of December 25, 1993, between The University of Florida Research Foundation, Inc. and Targeted Genetics* (Exhibit 10.5)	(K)
10.6	PHS Patent License Agreement—Exclusive, dated as of March 10, 1994, between National Institutes of Health Centers for Disease Control and Targeted Genetics* (Exhibit 10.10)	(E)
10.7	License Agreement, dated as of March 28, 1994, between Targeted Genetics and the University of Michigan* (Exhibit 10.13)	(E)
10.8	Patent and Technology License Agreement, effective as of March 1, 1994, between the Board of Regents of the University of Texas M.D. Anderson Cancer Center and RGene Therapeutics, Inc.* (Exhibit 10.29)	(A)
10.9	First Amended and Restated License Agreement, effective as of October 12, 1995, between The University of Tennessee Research Corporation and RGene Therapeutics, Inc.* (Exhibit 10.30)	(A)
10.10	Amendment to First Amended and Restated License Agreement, dated as of June 19, 1996, between The University of Tennessee Research Corporation and RGene Therapeutics, Inc.* (Exhibit 10.1)	(B)
10.11	Second Amendment to First Amended and Restated License Agreement, dated as of April 17, 1998, between The University of Tennessee Research Corporation and RGene Therapeutics, Inc.* (Exhibit 10.16)	(G)
10.12	License Agreement, dated as of March 15, 1997, between the Burnham Institute and Targeted Genetics* (Exhibit 10.23)	(E)
10.13	Exclusive Sublicense Agreement, dated June 9, 1999, between Targeted Genetics and Alkermes, Inc. (Exhibit 10.36)	(I)
10.14	Master Agreement, dated as of November 23, 1998, between Targeted Genetics and Medeva Pharmaceuticals, Inc.* (Exhibit 1.1)	(H)
10.15	License and Collaboration Agreement, dated as of November 23, 1998, between Targeted Genetics and Medeva Pharmaceuticals, Inc.* (Exhibit 1.2)	(H)

10.16	Supply Agreement, dated as of November 23, 1998, between Targeted Genetics and Medeva Pharmaceuticals, Inc.* (Exhibit 1.3)	(H)
10.17	Credit Agreement, dated as of November 23, 1998, between Targeted Genetics, Medeva Pharmaceuticals, Inc. and Medeva PLC* (Exhibit 1.5)	(H)
10.18	Funding Agreement, dated as of July 21, 1999, among Targeted Genetics, Elan International Services, Ltd., and Elan Corporation, plc (Exhibit 1.3)	(J)
10.19	Subscription, Joint Development and Operating Agreement, dated as of July 21, 1999, among Elan Corporation, plc, Elan International Services, Ltd., Targeted Genetics and Targeted Genetics Newco, Ltd. * (Exhibit 1.4)	(J)
10.20	Convertible Promissory Note, dated July 21, 1999, issued by Targeted Genetics to Elan International Services, Ltd. (Exhibit 1.5)	(J)
10.21	License Agreement dated July 21, 1999, between Targeted Genetics Newco, Ltd. and Targeted Genetics * (Exhibit 1.6)	(J)
10.22	License Agreement, dated July 21, 1999, between Targeted Genetics Newco, Ltd. and Elan Pharmaceutical Technologies, a division of Elan Corporation, plc * (Exhibit 1.7)	(J)
10.23	Office Lease, dated as of October 7, 1996, between Benaroya Capital Company, LLC and Targeted Genetics (Exhibit 10.26)	(D)
10.24	Canyon Park Building Lease, dated as of June 30, 2000, between Targeted Genetics and CarrAmerica Corporation (Exhibit 10.1)	(L)
10.25	Olive Way Building Lease, dated as of November 20, 1993, as amended, between Targeted Genetics and Ironwood Apartments, Inc. (successor in interest to Metropolitan Federal Savings and Loan Association) (Exhibit 10.29)	(K)
10.26	First Lease Amendment, dated May 12, 1997, between Targeted Genetics and Benaroya Capital Company, LLC (Exhibit 10.1)	(R)
10.27	Second Lease Amendment, dated February 25, 2000, between Targeted Genetics and Benaroya Capital Company, LLC (Exhibit 10.2)	(R)
10.28	Third Lease Amendment, dated April 19, 2000, between Targeted Genetics and Benaroya Capital Company, LLC (Exhibit 10.3)	(R)
10.29	Fourth Lease Amendment, dated March 28, 2001, between Targeted Genetics and Benaroya Capital Company, LLC (Exhibit 10.4)	(R)
10.30	1992 Restated Stock Option Plan (Exhibit 99.1)	(F)
10.31	Stock Option Plan for Nonemployee Directors (Exhibit 10.34)	(E)
10.32	1999 Restated Stock Option Plan, as amended January 23, 2001 (Exhibit 10.2)	(Q)
10.33	2000 Genovo Inc. Roll-Over Stock Option Plan (Exhibit 99.1)	(O)
10.34	Agreement and Plan of Merger dated as of August 8, 2000, among Targeted Genetics, Inc., TGC Acquisition Corporation and Biogen, Inc.* (Exhibit 2.1)	(M)
10.35	Development and Marketing Agreement, dated as of August 8, 2000, between Targeted Genetics and Biogen, Inc.* (Exhibit 10.1)	(O)
10.36	Funding Agreement dated as of August 8, 2000, between Targeted Genetics and Biogen, Inc. (Exhibit 10.2)	(O)
10.37	Product Development Agreement, dated as of November 9, 2000, between Targeted Genetics and Genetics Institute, Inc. * (Exhibit 10.1)	(P)
10.38	Supply Agreement, dated as of November 9, 2000, between Targeted Genetics and Genetics Institute, Inc.* (Exhibit 10.2)	(P)

10.39	Industrial Collaboration Agreement, dated as of February 1, 2000, between the International Aids Vaccine Initiative, Children's Research Institute and Targeted Genetics* (Exhibit 10.1)	(T)
10.40	Settlement and Termination Agreement, dated as of December 19, 2002, between Celltech Pharmaceuticals Inc., Medeva Limited and Targeted Genetics	
10.41	Amendment No. 1 to Product, Development and Supply Agreement, dated February 24, 2003, between Genetics Institute LLC (formerly known as Genetics Institute, Inc.) and Targeted Genetics*	
10.42	Amendment No. 1 to Industrial Collaboration Agreement, dated as of March 14, 2003, between the International Aids Vaccine Initiative, Children's Research Institute and Targeted Genetics*	
21.1	Subsidiaries of Targeted Genetics	
23.1	Consent of Ernst & Young LLP, Independent Auditors	
99.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	
99.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	

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* Portions of these exhibits have been omitted based on a grant of or application for confidential treatment from the SEC. The omitted portions of these exhibits have been filed separately with the SEC.

(A) Incorporated by reference to the designated exhibit included with Targeted Genetics' Registration Statement on Form S-1 (No. 333-03592) filed on April 16, 1996, as amended.

(B) Incorporated by reference to the designated exhibit included with Targeted Genetics' Quarterly Report on Form 10-Q (No. 0-23930) for the period ended June 30, 1996, filed on August 12, 1996.

(C) Incorporated by reference to Targeted Genetics' Registration Statement on Form 8-A filed on October 22, 1996.

(D) Incorporated by reference to the designated exhibit included with Targeted Genetics' Annual Report on Form 10-K (No. 0-23930) for the year ended December 31, 1996, filed on March 12, 1997.

(E) Incorporated by reference to the designated exhibit included with Targeted Genetics' Annual Report on Form 10-K (No. 0-23930) for the year ended December 31, 1997, filed on March 31, 1998.

(F) Incorporated by reference to the designated exhibit included with Targeted Genetics' Registration Statement on Form S-8 (No. 333-58907), filed on July 10, 1998.

(G) Incorporated by reference to the designated exhibit included with Targeted Genetics' Annual Report on Form 10-K (No. 0-23930) for the year ended December 31, 1998, filed on March 10, 1999.

(H) Incorporated by reference to the designated exhibit included with Targeted Genetics' Current Report on Form 8-K (No. 0-23930) filed on January 6, 1999.

(I) Incorporated by reference to the designated exhibit included with Targeted Genetics' Quarterly Report on Form 10-Q (No. 0-23930) for the period ended June 30, 1999, filed on August 5, 1999.

(J) Incorporated by reference to the designated exhibit included with Targeted Genetics' Current Report on Form 8-K (No. 0-23930) filed August 4, 1999.

(K) Incorporated by reference to the designated exhibit included with Targeted Genetics' Annual Report on Form 10-K (No. 0-2390) for the year ended December 31, 1999, filed on March 23, 2000.

(L) Incorporated by reference to Targeted Genetics' Quarterly Report on Form 10-Q (No. 0-23930) for the period ended June 30, 2000.

(M) Incorporated by reference to the designated exhibit included with Targeted Genetics' Current Report on Form 8-K (No. 0-23930) filed on August 23, 2000.

(N) Incorporated by reference to the designated exhibit included with Targeted Genetics Current Report on Form 8-K (No. 0-23930) filed on September 13, 2000.

(O) Incorporated by reference to the designated exhibit included with Targeted Genetics' Registration Statement on Form S-8 (No. 333-48220), filed on October 19, 2000.

(P) Incorporated by reference to the designated exhibit included with Targeted Genetics Current Report on Form 8-K (No. 0-23930) filed on February 21, 2001.

(Q) Incorporated by reference to Targeted Genetics' Quarterly Report on Form 10-Q (No. 0-23930) for the period ended March 31, 2001, filed on May 11, 2001.

(R) Incorporated by reference to Targeted Genetics' Quarterly Report on Form 10-Q (No. 0-23930) for the period ended June 30, 2001, filed on August 14, 2001.
(S) Incorporated by reference to the designated exhibit included with Targeted Genetics' Current Report on Form 8-K (No. 0-23930) filed October 11, 2002.
(T) Incorporated by reference to the designated exhibit included with Targeted Genetics' Quarterly Report on Form 10-Q for the period ended September 30, 2002.

(c) *Reports on Form 8-K*

On October 8, 2002, Targeted Genetics filed a Current Report on Form 8-K to announce the preliminary data from its Phase II Cystic Fibrosis clinical trials and to announce the sale of common stock to Biogen, Inc. pursuant to the exercise of a put right.

On October 11, 2002, Targeted Genetics filed a Current Report on Form 8-K in connection with the sale of 5,804,673 shares (the "Biogen Shares") of Targeted Genetics common stock to Biogen, Inc. on September 25, 2002, and to announce that Targeted Genetics had entered into the Second Amendment to the Rights Agreement between Targeted Genetics and Mellon Investor Services LLC. This amendment made the provisions of the Rights Agreement inapplicable to the sale of the Biogen Shares.

On December 4, 2002, Targeted Genetics filed a Current Report on Form 8-K to announce that it had received notification from Celltech Group plc of their decision to terminate a collaborative agreement between the companies in support of Targeted Genetics' cystic fibrosis program.

On December 18, 2002, Targeted Genetics filed a Current Report on Form 8-K to announce that it was restructuring its operations to concentrate resources on key product development programs and business development activities and to extend its operating capital.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized in the city of Seattle, state of Washington, on March 26, 2003.

TARGETED GENETICS CORPORATION

By: /s/ H. STEWART PARKER

President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints H. Stewart Parker and Todd E. Simpson, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file, any and all amendments to this report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue thereof.

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

Signature	Title	Date
/s/ H. STEWART PARKER H. Stewart Parker	President, Chief Executive Officer and Director (Principal Executive Officer)	March 26, 2003
/s/ TODD E. SIMPSON Todd E. Simpson	Vice President, Finance and Administration and Chief Financial Officer, Secretary and Treasurer (Principal Financial and Accounting Officer)	March 26, 2003
/s/ JEREMY L. CURNOCK COOK Jeremy L. Curnock Cook	Chairman of the Board	March 26, 2003
/s/ JACK L. BOWMAN Jack L. Bowman	Director	March 26, 2003
/s/ JOSEPH M. DAVIE, PH.D., M.D. Joseph M. Davie, Ph.D., M.D.	Director	March 26, 2003
/s/ LOUIS P. LACASSE Louis P. Lacasse	Director	March 26, 2003
/s/ NELSON L. LEVY, PH.D., M.D. Nelson L. Levy, Ph.D., M.D.	Director	March 26, 2003
/s/ MARK P. RICHMOND, PH.D. Mark P. Richmond, Ph.D.	Director	March 26, 2003

Certification

I, H. Stewart Parker, certify that:

1. I have reviewed this annual report on Form 10-K of Targeted Genetics Corporation;

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

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

   b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

   c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

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

   a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

March 26, 2003
Date

/s/ H. STEWART PARKER
H. Stewart Parker
President and Chief Executive Officer
(Principal Executive Officer)

Certification

I, Todd E. Simpson, certify that:

1. I have reviewed this annual report on Form 10-K of Targeted Genetics Corporation;

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

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

   b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

   c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

March 26, 2003
Date

/s/ TODD E. SIMPSON
Todd E. Simpson
Vice President, Finance and Administration, Chief Financial Officer, Secretary and Treasurer
(Principal Financial and Accounting Officer)

BOARD OF DIRECTORS

Jeremy Curnock Cook
Executive Chairman
Bioscience Managers Limited

Jack L. Bowman
Former Company Group Chairman
Johnson & Johnson

Joseph M. Davie, Ph.D., M.D.
Former Senior Vice President, Research
Biogen, Inc.

Louis P. Lacasse
President
GeneChem Management, Inc.

Nelson L. Levy, Ph.D., M.D.
Chairman and Chief Executive Officer
CoreTechs Corporation

H. Stewart Parker
President, Chief Executive Officer
Targeted Genetics Corporation

Mark P. Richmond, Ph.D., D.Sc.
Former Director of Research
Glaxo plc

MANAGEMENT

H. Stewart Parker
President, Chief Executive Officer

Barrie J. Carter, Ph.D.
Executive Vice President
Chief Scientific Officer

Todd E. Simpson
Vice President, Finance and Administration
Chief Financial Officer

Pervin Anklesaria, Ph.D.
Vice President, Product Development

Richard W. Peluso, Ph.D.
Vice President, Process Sciences and Manufacturing

B.G. Susan Robinson
Vice President, Business Development

Jonathan K. Wright, J.D.
Corporate Counsel

David M. Schubert
President
CellExSys

Kim Wieties Clary, Ph.D.
Senior Director, Intellectual Property

David J. Poston
Senior Director, Finance

Tim Andrews
Director, Operations

Haim Burstein, Ph.D.
Director, Product Discovery

Alison E. Heald, M.D.
Director, Clinical Affairs

Ralph W. Paul, Ph.D.
Director, Technology Discovery

Rae Saltzstein
Director, Regulatory Affairs and Quality

Ryan Takeya
Director, Manufacturing

Barbara Thorne, Ph.D.
Director, Process Development

CORPORATE HEADQUARTERS

TARGETED GENETICS
1100 Olive Way, Suite 100
Seattle, Washington 98101
Telephone 206.623.7612
www.targetedgenetics.com

TRANSFER AGENT AND REGISTRAR

MELLON INVESTOR SERVICES
85 Challenger Road
Ridgefield Park, New Jersey 07660
Telephone 1.800.522.6645

SHAREHOLDER INQUIRIES

Inquiries regarding the company and its activities may be directed to the communications department at 206.521.7392. Communications concerning stock and transfer requirements, lost certificates and changes of address should be directed to the transfer agent.

LEGAL COUNSEL

ORRICK, HERRINGTON & SUTCLIFFE LLP
Seattle, Washington

INDEPENDENT AUDITORS

ERNST & YOUNG LLP
Seattle, Washington

CORPORATE INFORMATION

News releases and SEC filings are available on the Internet at www.targetedgenetics.com.

STOCK LISTING

Targeted Genetics' common stock is traded on the Nasdaq SmallCap Market under the symbol TGEN.

COMMON STOCK

As of March 5, 2003, there are approximately 19,000 holders of Targeted Genetics' common stock. Targeted Genetics has never paid dividends and the company does not anticipate paying dividends in the foreseeable future.

ANNUAL MEETING

The annual meeting of shareholders will be held at 9:00 a.m. on Thursday, May 8, 2003, at the Washington Athletic Club, 1325 Sixth Avenue, Seattle, Washington.

This Annual Report contains forward-looking statements. Forward-looking statements are based on the opinions and estimates of management at the time the statements are made and are subject to known and unknown risks and uncertainties and inaccurate assumptions that could cause actual results to differ materially from those expected or implied by the forward-looking statements. Our actual results could differ materially from those anticipated in the forward-looking statements for many reasons, including the risks described under "Factors Affecting Our Operating Results, Our Business and Our Stock Price" in our Annual Report on Form 10-K for the year ended December 31, 2002, and in the filings we make with the Securities and Exchange Commission from time to time. You should not place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report.

TARGETED GENETICS CORPORATION

1100 Olive Way, Suite 100 / Seattle, Washington 98101

www.targetedgenetics.com