HGS

Human Genome Sciences

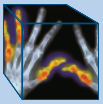
Annual Report 2004

A science-based company

Advancing gene-based medicine

Developing tomorrow's treatments

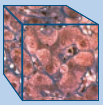
The mission of Human Genome Sciences is to discover, develop, manufacture and market drugs that address unmet medical needs, with a primary focus on gene-based protein and antibody products.



LymphoStat-B™

Diseases targeted: Rheumatoid arthritis, systemic lupus erythematosus and certain other autoimmune diseases

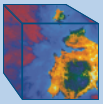
Status: Currently in Phase 2 clinical development for rheumatoid arthritis and systemic lupus erythematosus



Albuferon™

Disease targeted: Chronic hepatitis C

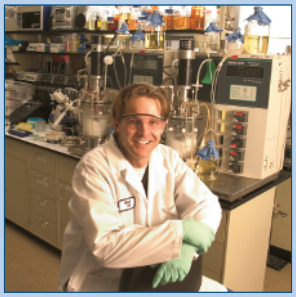
Status: Currently in Phase 2 clinical development



TRAIL Receptor Antibodies

Diseases targeted: A broad range of cancers, including solid tumors and tumors of hematopoietic origin

Status: Currently in Phase 1 and Phase 2 clinical development



Michael Laird, Ph.D., Industrial Molecular Biology Lab

"We use the power of microbial genetics and molecular biology to maximize the production yields of therapeutic protein and antibody candidates."

Jilcia Johnson, Purification Lab

"We develop processes to ensure that the proteins and antibodies we manufacture meet our standards for purity."

Donna Forsht and Bernardo de Los Reyes, Cell Culture Lab

"We grow the cell cultures that express the proteins and antibodies that HGS is developing. Cell cultures are transferred into production fermentors, where they can be grown under optimum conditions for production."

Left: Argeris (Jerry) N. Karabelas, Ph.D., Chairman of the Board
H. Thomas Watkins, Chief Executive Officer

To Our Shareholders:

2004 was a year of considerable accomplishment and progress for Human Genome Sciences (HGS). We sharpened our focus on the product candidates that have the highest therapeutic and commercial potential. We realigned resources to reflect our emphasis on moving toward commercialization. We initiated and, as of the end of the first quarter of 2005, completed the enrollment of six Phase 2 clinical trials. We entered two Investigational New Drugs (INDs) into Phase 1 trials—HGS-TR2J for cancer and CCR5 mAb for HIV/AIDS. We also reported the results of a number of clinical studies, each important to the continuing progress of our compounds in development.

In October 2004, we completed an agreement with GlaxoSmithKline (GSK) for the development and commercialization of Albugon™ (albumin-GLP-1), a compound created by HGS scientists and brought to late-stage preclinical development for potential use in the treatment of diabetes. Under our agreement, GSK acquired exclusive worldwide rights to Albugon for all human therapeutic and preventive uses. HGS is entitled to clinical development and commercial milestone payments that could amount to as much as $183 million, plus additional milestones for other indications developed. We also are entitled to royalties on any product sales, and we will manufacture Albugon for GSK's Phase 1 and Phase 2 clinical trials. We view the Albugon agreement as a strong validation of the potential of our albumin-fusion technology, and as a model for future agreements for the development and commercialization of our pre-clinical compounds.

On April 6, 2005, we were pleased to announce that LymphoStat-B™ met the primary efficacy and safety end-points in a Phase 2 clinical trial in patients with rheumatoid arthritis. LymphoStat-B significantly reduced the signs and symptoms of rheumatoid arthritis. The results also added substantively to the evidence of this drug candidate's safety and biological activity. We look forward to the full presentation of these data at an appropriate scientific meeting later this year, and to the availability this Fall of data from our Phase 2 trial of LymphoStat-B in systemic lupus erythematosus. In the near future, we will meet with our clinical experts, regulatory authorities and our potential partner, GSK, to discuss the appropriate next steps in the development of LymphoStat-B in the rheumatoid arthritis indication.

On April 14, 2005, we reported the results of a Phase 2 clinical trial of Albuferon™ in patients with chronic

hepatitis C who are naive to interferon-alpha treatments. The results show that Albuferon exhibited robust antiviral activity and produced dose-dependent reductions in hepatitis C viral load. The drug was well tolerated, with a pharmacokinetic profile that supports dosing at intervals of two to four weeks. These data will help us identify an optimal range of doses for a larger Phase 2b combination study of Albuferon and ribavirin that we plan to initiate later in 2005 in interferon alpha-naive patients. In November 2004, we initiated dosing in a separate Phase 2 trial of Albuferon, in combination with ribavirin, in patients with chronic hepatitis C who have failed to respond to previous interferon alpha-based treatment regimens. We are excited about the potential of Albuferon to help patients with chronic hepatitis C.

In the oncology area, we continue to pursue development of agonistic antibodies to TRAIL receptors 1 and 2. In 2005, we expect to have results from three Phase 2 clinical trials of HGS-ETR1 to evaluate its potential for use in the treatment of non-small cell lung cancer, colorectal cancer and non-Hodgkin's lymphoma. All three trials are fully enrolled, and initial dosing has been completed. In 2005, we also plan to advance HGS-ETR2 to Phase 2 development.

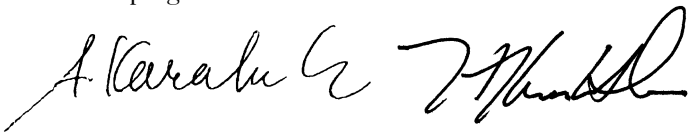
Our company's financial position remains strong. During 2004, through a focused program to streamline operations, consolidate facilities and reduce staff to reflect current needs, we reduced our 2004 expense by more than $40 million from the original budget and substantially reduced our anticipated five-year expense growth rate. By consolidating facilities, we also freed up $76 million in cash and reduced our total balance sheet cash restriction associated with facilities financings to $219 million.

2004 was also a year of change in the senior leadership of our company. William A. Haseltine, Ph.D., our Founder and former Chairman and Chief Executive Officer, retired in October 2004. Argeris (Jerry) N. Karabelas, Ph.D., was named Chairman of the Board of Directors effective with Dr. Haseltine's retirement. H. Thomas Watkins joined the company as Chief Executive Officer in November 2004. Craig A. Rosen, Ph.D., who was named President and Chief Scientific Officer in March 2005, and David C. Stump, Executive Vice President, Drug Development, will form the senior scientific leadership of HGS.

William Haseltine is a pioneer in genomic medicine. He founded Human Genome Sciences based on a vision of the power of genomics to revolutionize medicine and improve human health. He built a talented organization, a strong management team and a strong Board of Directors. Dr. Haseltine inspired our creativity and our search for discovery through the early years of our company's development, and he leaves Human Genome Sciences well prepared for the next stage of our growth. We are grateful for his many contributions and for his years of leadership.

As we continue to move toward commercialization, the mission of our company is to discover, develop, manufacture and market drugs that address unmet medical needs, with a primary focus on gene-based protein and antibody products. Our employees are energized by a passion to create new therapies and to bring those therapies to the patients who need them. Our job, working with our senior management team and our Board, is to focus all of the energy of our organization on achieving this goal as rapidly as possible.

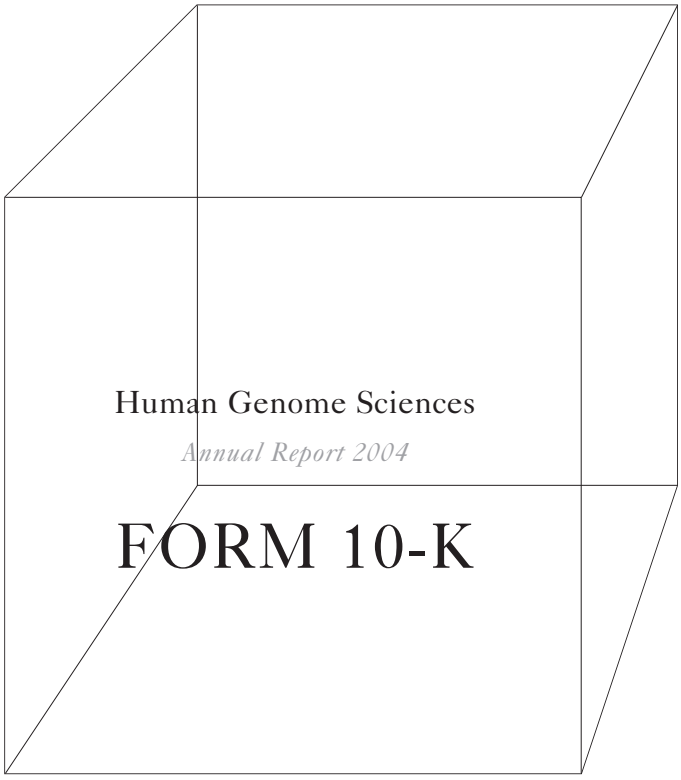
We thank you for your support and look forward to continued progress in the future.



Argeris (Jerry) N. Karabelas, Ph.D.
Chairman of the Board

H. Thomas Watkins
Chief Executive Officer

April 15, 2005



Human Genome Sciences

Annual Report 2004

FORM 10-K

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

FORM 10-K

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

For the fiscal year ended December 31, 2004 Commission File Number 0-22962

HUMAN GENOME SCIENCES, INC.

(Exact name of registrant)

Delaware	22-3178468
(State of organization)	(I.R.S. employer identification number)

14200 Shady Grove Road, Rockville, Md. 20850-7464
(address of principal executive offices and zip code)

(301) 309-8504
(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act: NONE
Securities registered pursuant to Section 12(g) of the Act:
Common stock, par value $0.01 per share

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 the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☑

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

The number of shares of the registrant's common stock outstanding on January 31, 2005 was 130,618,047. As of June 30, 2004, the aggregate market value of the common stock held by non-affiliates of the registrant based on the closing price reported on the National Association of Securities Dealers Automated Quotations System was approximately $1,086,285,426.*

DOCUMENTS INCORPORATED BY REFERENCE

Portions of Human Genome Sciences, Inc.'s Notice of Annual Stockholder's Meeting and Proxy Statement, to be filed within 120 days after the end of the registrant's fiscal year, are incorporated by reference into Part III of this Annual Report.

* Excludes 36,794,671 shares of common stock deemed to be held by officers and directors and stockholders whose ownership exceeds five percent of the shares outstanding at June 30, 2004. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant, or that such person is controlled by or under common control with the registrant.

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PART I

ITEM 1. BUSINESS

This annual report on Form 10-K contains forward-looking statements, within the meaning of the Securities Exchange Act of 1934 and the Securities Act of 1933, that involve risks and uncertainties. In some cases, forward-looking statements are identified by words such as "believe," "anticipate," "expect," "intend," "plan," "will," "may" and similar expressions. You should not place undue reliance on these forward-looking statements, which speak only as of the date of this report. All of these forward-looking statements are based on information available to us at this time, and we assume no obligation to update any of these statements. Actual results could differ from those projected in these forward-looking statements as a result of many factors, including those identified in the section titled "Factors That May Affect Our Business," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere. We urge you to review and consider the various disclosures made by us in this report, and those detailed from time to time in our filings with the Securities and Exchange Commission, that attempt to advise you of the risks and factors that may affect our future results.

Overview

Human Genome Sciences is a biopharmaceutical company with a pipeline of novel protein and antibody drugs directed toward large markets that have significant unmet medical need. Our goal is to build a global biopharmaceutical company that discovers, develops, manufactures and markets gene-based protein and antibody drugs to treat and cure disease.

We are conducting clinical trials with a number of our products. Our current focus is to advance clinical trials in two main therapeutic areas: immunology/infectious disease and oncology. Additional products are in clinical development by companies with which we are collaborating.

We have developed and continue to enhance the resources necessary to achieve our goal of becoming a fully integrated global biopharmaceutical company, including:

- A drug development organization with the expertise necessary to design and implement well focused, high quality clinical trials of multiple compounds;
- Manufacturing capability for the production of protein and antibody drugs for preclinical studies, clinical trials, and the initial commercialization of our products;
- A scientific and discovery base, including expertise in the discovery of novel protein and antibody drugs, as well as genomics, proteomics and informatics capabilities;
- Protein formulation technology, including the albumin fusion technology we use to create long-acting protein drugs;
- A significant patent estate;
- A skilled and experienced management team and board of directors;
- Employees who are creative, well trained, hard-working and capable; and
- A strong balance sheet.

We have expanded our manufacturing facilities to allow us to produce larger quantities of protein and antibody drugs for clinical development. We are also in the final construction phase of a large-scale manufacturing facility to increase our capacity for protein and antibody drug production. We are strengthening our commercial operations staff, and our intent is to add marketing and sales staff as needed as our products approach commercialization.

We have strategic partnerships with a number of leading pharmaceutical and biotechnology companies to leverage our strengths and to gain access to complementary technologies and sales and marketing infrastructure. Some of these partnerships provide us, and have provided us, with research funding, licensing fees,

milestone payments and royalty payments as products are developed and commercialized. In some cases, we also are entitled to certain co-promotion, co-development, revenue sharing and other product rights.

We are a Delaware corporation headquartered at 14200 Shady Grove Road, Rockville, Maryland 20850-7464. Our telephone number is (301) 309-8504. Our website is www.hgsi.com. Information contained on our website is not a part of, and is not incorporated into, this annual report on Form 10-K. Our filings with the SEC are available without charge on our website as soon as reasonably practicable after filing.

Strategy

Our goal is to build a global biopharmaceutical company that discovers, develops, manufactures and markets gene-based protein and antibody drugs to treat and cure disease. Our strategy consists of the following key elements:

- *Concentrate on new protein and antibody drugs and on long-acting versions of existing protein drugs.* We concentrate our internal product development efforts on novel human protein and antibody drugs discovered through genomics-based research, and on new long-acting versions of existing protein drugs created using our albumin fusion technology. Novel human protein and antibody drugs derived from our gene discoveries account for the majority of our current product pipeline. We rely on collaborations for the development of other products discovered using our genomics-based technology, including additional protein and antibody drugs, gene therapy products, small molecule drugs, and diagnostic products.
- *Develop, manufacture and commercialize our gene-based products on our own and with our strategic partners.* The new drugs we intend to develop are designed to meet unmet medical needs representing significant markets. We will select a limited number of products to develop, manufacture and market either by ourselves or with partners. We also intend to license certain products to strategic partners in exchange for upfront payments, product milestone payments, royalties on sales, and other rights.
- *Pursue strategic acquisitions.* We may pursue strategic acquisitions to augment our capabilities, to provide access to complementary technologies, and to expand our portfolio of new drug candidates in therapeutic categories we have identified as strategic areas of concentration.
- *Expand our technology platform to accelerate our product development activities.* We will continue to invest resources to expand and enhance our technology platform. We also may establish additional collaborations with leading biotechnology companies to gain access to complementary technologies for our product development efforts.
- *Continue to expand our understanding of medically useful genes.* We have created a set of integrated skills that allow us to understand the natural function of new genes. We test the effects of the proteins encoded by these genes on human cells whose behavior we wish to change for medical benefit. Proteins selected for further study are made and purified, then subjected to continued evaluation.
- *Capitalize on our intellectual property portfolio.* We pursue patents to protect our intellectual property and have developed a significant intellectual property portfolio. We intend to capitalize on our portfolio. As of March 1, 2005, we had 432 issued U.S. patents covering genes, proteins and antibodies, and had filed U.S. patent applications covering many more human genes, the proteins they encode, antibodies, and proprietary technologies.

Products

We have discovered a large number of medically useful genes. All but one of our drugs that are currently in clinical trials are derived from genomics-based research. The other drug in clinical trials is an albumin fusion protein — a novel long-acting form of an existing therapeutic protein that we have modified to improve its pharmacological properties by using our albumin fusion technology.

Our drugs in clinical development are: LymphoStat-B™ (human monoclonal antibody to B-lymphocyte stimulator, BLyS™) for the treatment of lupus and rheumatoid arthritis; Albuferon™ (albumin-interferon

alpha) for the treatment of chronic hepatitis C; HGS-ETR1 (agonistic human monoclonal antibody to TRAIL receptor 1), HGS-ETR2 (agonistic human monoclonal antibody to TRAIL receptor 2), HGS-TR2J (agonistic human monoclonal antibody to TRAIL receptor 2) for the treatment of solid and hematopoietic cancers; CCR5 mAb (human monoclonal antibody to the CCR5 receptor) for the treatment of HIV/AIDS; and ABthrax™ (human monoclonal antibody to *Bacillus anthracis* protective antigen) for the treatment of anthrax infection.

Our partners have advanced a number of products derived from our technology to clinical development. GlaxoSmithKline (GSK) has entered several small-molecule drugs into clinical development that were discovered by GSK using our technology, including 480848, an inhibitor of Lp-PLA2 (lipoprotein-associated phospholipase A2) for the control and treatment of cardiovascular disease, and 462795, an inhibitor of cathepsin K for the treatment of osteoporosis. Corautus Genetics has entered VEGF-2 gene therapy into clinical trials for the treatment of severe cardiovascular disease.

We also have additional products in discovery and preclinical drug development. For example, we licensed Albugon™, a novel long-acting form of glucagon-like peptide-1 (GLP-1) for potential use in treating diabetes, to GSK under an agreement whereby GSK has acquired exclusive worldwide rights to develop and commercialize Albugon for all human and therapeutic applications (announced in October 2004 and described below under "Collaborative Arrangements").

Clinical Programs

The Human Genome Sciences clinical development pipeline includes drugs to treat such diseases as cancer, lupus, rheumatoid arthritis, and hepatitis C. Our partners are conducting clinical trials of additional drugs to treat cardiovascular and metabolic diseases.

Genomics-Derived Human Monoclonal Antibody Drugs

LymphoStat-B (belimumab)

LymphoStat-B is a fully human monoclonal antibody designed to inhibit the biological activity of B-lymphocyte stimulator, or BLyS. Preclinical studies indicate that higher than normal levels of BLyS may trigger autoimmune diseases by stimulating production of autoantibodies — antibodies that attack and destroy the body's own healthy tissues. Over-production of autoantibodies may be counteracted by reducing BLyS levels with LymphoStat-B. We are developing LymphoStat-B as a potential treatment for autoimmune diseases, such as systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). LymphoStat-B has received a Fast Track Product designation from the FDA for the treatment of systemic lupus erythematosus, and has been selected for inclusion in the FDA's Continuous Marketing Application Pilot 2 Program. The Pilot 2 program provides for frequent scientific feedback and interactions based on a prospectively defined agreement between the FDA and participating companies.

In July 2004, we completed the enrollment, randomization and initiation of dosing for separate Phase 2 clinical trials of LymphoStat-B in RA and SLE. Each trial is designed to evaluate safety, tolerability and efficacy. A total of 283 patients with active moderate-to-severe rheumatoid arthritis who have failed prior treatment have been enrolled in the RA trial. A total of 449 patients with active systemic lupus erythematosus have been enrolled in the SLE trial. It is anticipated that the results of both of the Phase 2 studies of LymphoStat-B will be available in 2005, with the RA results expected in the Spring and the SLE results expected in the Fall. Based on the Phase 2 results, we plan to reach go/no go decisions regarding Phase 3 development of the compound in both indications. Assuming that the data emerging from the Phase 2 study in RA are sufficiently positive, we could initiate a Phase 3 clinical trial of LymphoStat-B in patients with rheumatoid arthritis in the second half of 2005.

HGS-ETR1 (mapatumumab)

HGS-ETR1 is a novel anticancer drug that specifically recognizes, binds to and activates the TRAIL (tumor necrosis factor-related apoptosis-inducing ligand) receptor-1 protein. This protein was discovered by

Human Genome Sciences and is found on the surface of a number of solid tumor and hematopoietic cancer cells.

In June and September 2004, we reported the interim results of two ongoing Phase 1 clinical trials of HGS-ETR1. The interim results demonstrate the safety and tolerability of HGS-ETR1 in patients with advanced solid tumors or non-Hodgkin's lymphoma, and support further evaluation of HGS-ETR1 in Phase 2 clinical trials, both as a single agent and in combination with chemotherapy. Preliminary evidence of biological activity was reported.

In November 2004, we completed the enrollment and initial dosing of patients in an ongoing Phase 2 clinical trial of HGS-ETR1 to evaluate its efficacy, safety and tolerability in patients with advanced non-small cell lung cancer. In February 2005 and March 2005, respectively, we announced the completion of enrollment and initial dosing of patients in separate Phase 2 clinical trials of HGS-ETR1 for the treatment of colorectal cancer and non-Hodgkin's lymphoma. Each of the trials is designed to evaluate the efficacy, safety and tolerability of HGS-ETR1 in patients with refractory or relapsed malignancies. In 2005, we plan to complete all three of the ongoing Phase 2 clinical trials of HGS-ETR1. In the second half of 2004, we also initiated two Phase 1b clinical trials to evaluate the safety and tolerability of HGS-ETR1 in combination with chemotherapeutic agents (with gemcitabine and cisplatin and with paclitaxel and carboplatin). Both studies are in patients with advanced solid malignancies. Based on the Phase 2 and Phase 1b data, we plan to reach go/no go decisions regarding single-agent and chemotherapy combination development of HGS-ETR1 as a treatment for cancer.

TRAIL-R2 mAbs (HGS-ETR2 and HGS-TR2J)

HGS-ETR2 and HGS-TR2J are novel anticancer drugs that specifically recognize and bind to the TRAIL receptor-2 protein. The TRAIL receptor-2 protein was originally identified by Human Genome Sciences, and is found on the surface of a number of solid tumor and hematopoietic cancer cells.

In September 2004, we reported the interim results of an ongoing Phase 1 clinical trial of HGS-ETR2. The interim results demonstrate that HGS-ETR2 can be administered safely and repetitively to patients with advanced solid tumors, and support continued dose-escalation of HGS-ETR2 in these patients. Stable disease was observed in some patients. In 2005, we plan to initiate Phase 2 clinical trials of HGS-ETR2 as a single agent, and to initiate Phase 1b clinical trials of HGS-ETR2 in combination with chemotherapeutic agents.

We began dosing patients for a Phase 1 clinical trial of HGS-TR2J in August 2004. The primary objectives of the study are to assess safety and tolerability. Pharmacokinetics and disease response also are being evaluated. Based on the results of the current Phase 1 clinical trial, we will make a decision regarding further clinical development of TR2J.

CCR5 mAb (CCR5mAb004)

CCR5 mAb is entering Phase 1 clinical development as a treatment for HIV/AIDS. We received clearance of this IND (Investigational New Drug) from the FDA in December 2004, and we now plan to proceed with a randomized, placebo-controlled, dose-escalation, multi-center Phase 1 clinical trial to evaluate the safety, tolerability and pharmacology of CCR5 mAb in patients who are infected with HIV-1.

The CCR5 receptor is a co-receptor on the cell surface that, together with CD4, mediates the binding of HIV-1 and its entry into the cell. Research has shown that the CCR5 receptor is the primary co-receptor for enabling HIV-1 transmission and replication from the early stages of disease through progression to AIDS. Preclinical studies demonstrate that CCR5 mAb binds specifically and with high affinity to human CCR5, prevents HIV-entry, demonstrates no agonistic activity or effector functions, and has a prolonged serum half-life.

ABthrax™ (raxibacumab)

ABthrax is a novel drug developed by Human Genome Sciences for the prevention and treatment of anthrax infections. ABthrax is a human monoclonal antibody that blocks the binding to cell surfaces of

Bacillus anthracis protective antigen, the key facilitator of anthrax infection. ABthrax has received a Fast Track Product designation from the FDA for its potential use in preventing and treating anthrax infections. In March 2004, we reported the results of a Phase 1 clinical trial of ABthrax in 105 healthy adult volunteers. The results demonstrate that ABthrax is safe and well tolerated, and achieves the blood levels predicted by relevant animal models as necessary to afford significant protection from the lethal effects of the anthrax toxin. In addition, in accordance with the FDA guidance that emerged following the Bioterrorism Act of 2002, we have conducted preclinical studies in multiple relevant animal models of inhalational anthrax, which demonstrate that ABthrax administered either prior to or following anthrax spore challenge increases survival significantly. Preclinical studies also demonstrate the dose-related efficacy of ABthrax in both prevention and treatment of anthrax infections. In October 2004, we submitted a proposal in response to a U.S. government Request for Proposals (RFP) for the "Acquisition of Therapeutic Products for Treatment of Inhalational Anthrax Disease for the Strategic National Stockpile." Further development of ABthrax will depend on a government commitment to purchase the product.

Albumin Fusion Protein Drugs

Albuferon (albumin-interferon alpha)

Albuferon is a novel long-acting form of interferon alpha. Recombinant interferon-alpha is approved for the treatment of hepatitis C, hepatitis B, and a broad range of cancers. Human Genome Sciences modified interferon alpha to improve its pharmacological properties by using the Company's albumin fusion technology. We are developing Albuferon as a potential treatment for chronic hepatitis C.

In November 2004, we reported the results of a Phase 1/2 clinical trial of Albuferon in treatment-experienced adults with chronic hepatitis C. The data, which were presented on 119 patients treated in the study, demonstrate that Albuferon is well tolerated, has a prolonged half-life, and is biologically active and able to reduce viral load with dose-dependent magnitude and durability. Immunogenicity data show that the vast majority of Albuferon antibody titers were low ($<$100 ng/mL), consistent with rates reported for pegylated interferons, and that there is no apparent correlation between the emergence of these antibodies and adverse events, antiviral response or pharmacokinetics. Albuferon exhibits a median half-life of 140 hours, supporting dosing at intervals of 2-4 weeks. This compares to a reported mean elimination half-life of 80 hours (50-140 hours) for Pegasys and 40 hours (22-60 hours) for PEG-Intron.

In November 2004, we began dosing patients in a Phase 2 study of Albuferon in combination with ribavirin to evaluate the safety, tolerability and efficacy of Albuferon in patients with chronic hepatitis C who have failed to respond to previous interferon alpha-based treatment regimens. In February 2005, we announced the completion of enrollment and dosing in a Phase 2 clinical trial of Albuferon to evaluate its safety, tolerability, pharmacology and optimal dosing in patients with chronic hepatitis C who are naïve to interferon-alpha treatments. In 2005, we plan to complete the ongoing Phase 2 clinical trial in patients who are naïve to interferon-alpha treatments, and plan to complete an interim safety analysis of data from the ongoing Phase 2 trial of Albuferon in combination with ribavirin in interferon-experienced patients. We also plan to initiate and complete the enrollment of a Phase 2b clinical trial of Albuferon in combination with ribavirin in patients who are naïve to interferon-alpha treatments.

Genomics-Derived Small Molecule Drugs

GSK Lp-PLA2 Inhibitor (480848, 659032, 677116)

The first genomics-derived small molecule drug to enter clinical trials was discovered by our partner, GlaxoSmithKline, using Human Genome Sciences' technology. 480848 is an inhibitor of lipoprotein-associated phospholipase A2 (Lp-PLA2). Lp-PLA2 is an enzyme associated with the formation of atherosclerotic plaques. In 2003, GlaxoSmithKline announced that it had completed a Phase 2 clinical trial of 480848. In November 2004, GSK indicated that it plans to advance 480848 to Phase 3 clinical trials for the treatment of cardiovascular disease in the coming months. Using our technology, GSK also has discovered two additional small-molecule inhibitors of Lp-PLA2, 659032 and 677116, which are in clinical development by GSK for the treatment of cardiovascular disease.

Under the terms of an agreement signed in 1993, as amended in 1996, Human Genome Sciences is entitled to receive clinical development milestone payments and royalties for compounds discovered by GSK through the use of our technology and intellectual property. In September 2001, we received a $1.0 million milestone payment from GlaxoSmithKline in connection with the initiation of Phase 1 clinical trials of 480848 to investigate its potential use in the treatment of cardiovascular disease. In February 2003 and March 2004, we received $1.0 million milestone payments from GSK in connection with the initiation of clinical trials of 659032 and 677116, respectively. We are entitled to receive an additional milestone payment if 480848, 659032, or 677116 moves through clinical development into registration, and we will receive royalties if a compound is commercialized. In addition, we have an option to co-promote an approved drug in North America and Europe.

GSK Cathepsin K Inhibitor (462795)

462795 is a genomics-derived small-molecule compound that inhibits the activity of cathepsin K, an enzyme that appears to be implicated in osteoporosis and certain other disorders causing bone degradation. 462795 was discovered by GlaxoSmithKline using Human Genome Sciences' technology. GlaxoSmithKline has entered 462795 into clinical trials to evaluate its potential use in the treatment of patients with osteoporosis.

Under the terms of the 1993 agreement, Human Genome Sciences received a $1.0 million milestone payment from GlaxoSmithKline in 2002, in connection with the initiation of clinical trials of 462795. We are entitled to receive an additional milestone payment if 462795 moves through clinical development into registration and will receive royalties if the compound is commercialized. In addition, we have an option to co-promote an approved drug in North America and Europe.

Gene Therapy

VEGF-2 (Vascular Endothelial Growth Factor-2)

VEGF-2 is a novel gene that was discovered and characterized by Human Genome Sciences. The VEGF-2 gene encodes the VEGF-2 protein, which scientists believe signals the body to grow new blood vessels. We licensed VEGF-2 to Corautus for use in the field of gene therapy. Corautus was formed in February 2003 from the merger of Vascular Genetics and GenStar Therapeutics. As of December 31, 2004, we owned approximately 11% of Corautus. VEGF-2 gene therapy is being developed for the treatment of cardiovascular disease.

Corautus has completed Phase 1/2 clinical trials of VEGF-2, and announced in July 2004 that it has received FDA clearance to begin Phase 2b clinical trials of VEGF-2 in patients with severe cardiovascular disease. Human Genome Sciences is entitled to receive up to a 10% royalty on net sales of any product brought to market by Corautus that is based on the VEGF-2 gene.

Preclinical Programs

Human Genome Sciences has a pipeline of compounds in preclinical development, including novel human protein and antibody drugs discovered through genomics-based research, and new long-acting versions of existing proteins created using our albumin fusion technology.

Research and Development Capabilities

Human Genome Sciences has developed core competencies in the discovery and understanding of human genes and their biological functions, and in the discovery and development of human protein and antibody drugs.

Gene and Protein Discovery Technology

We have created a set of skills that allow us to discover new genes and to understand their natural function. We have isolated a large collection of human genes in their useful messenger RNA form. A gene in

the form of messenger RNA can be used to make one protein that carries out a specific function in the human body. We have developed methods to make small quantities of proteins. We have developed automated systems to analyze the effects of these proteins on human cells and tissues. Collectively, these methods make up our Functional Proteomics Program. We select a set of genes that produce proteins that we predict should be located on the outside of human cells. Such proteins are called secreted proteins. We test the effects of the secreted proteins by placing each of them on an individual culture of a human cell whose behavior we wish to change for medical benefit. In the course of these experiments, we monitor many parameters of change in each cell culture at intervals. We have developed an informatics system to store and integrate the biological data points that result from these experiments. Proteins selected for further study are made and purified, then subjected to preclinical evaluation.

Human Antibody Discovery and Development

We have acquired rights to a variety of human antibody technologies. We use our own set of antibody targets arising from our collection of human secreted proteins. We have integrated these technologies into our internal research and development program. We also continue to collaborate with a number of leading antibody companies.

Many medical conditions are the result of an excess of a specific protein in the body. Some antibody drugs can inactivate such proteins and bring therapeutic benefits to patients. Such drugs are known as antagonistic antibodies. For example, LymphoStat-B, which is currently in Phase 2 trials for the treatment of systemic lupus erythematosus and rheumatoid arthritis, is an antagonistic human monoclonal antibody. All currently marketed antibody drugs are antagonistic antibodies. In certain medical conditions, it may be desirable to stimulate artificially a specific biological activity. Antibodies that stimulate biological activity are known as agonistic antibodies. Human Genome Sciences has three such drugs in clinical trials — HGS-ETR1 (TRAIL-R1 mAb), HGS-ETR2 (TRAIL-R2 mAb) and HGS-TR2J (TRAIL-R2 mAb). HGS-ETR1 is currently in Phase 2 clinical trials for the treatment of non-small cell lung cancer, colorectal cancer and non-Hodgkin's lymphoma. HGS-ETR1 recognizes the TRAIL receptor-1 protein, while HGS-ETR2 and HGS-TR2J recognize the TRAIL receptor-2 protein. Binding of the antibodies to their respective TRAIL receptor triggers cell death. HGS-ETR1, HGS-ETR2 and HGS-TR2J are agonistic human monoclonal antibodies that mimic the cancer-killing activity of the natural TRAIL ligand. We believe that they are the first human agonistic antibodies to enter clinical trials.

Albumin Fusion Technology

Our albumin fusion technology allows us to create long-acting forms of protein drugs by fusing the gene that expresses human albumin to the gene that expresses a therapeutically active protein. We are actively pursuing the development of albumin-fusion drugs based on therapeutic proteins already on the market, as well as albumin-fusion versions of therapeutic proteins that we are developing ourselves. For example: Albuferon results from the genetic fusion of human albumin and human interferon-alpha, and Albugon results from the genetic fusion of human albumin and glucagon-like peptide-1 (GLP-1). Based on preclinical and clinical results to date, we believe that albumin fusion proteins may provide long-acting treatment options that have efficacy and safety similar to or better than that of the existing protein drugs, with the potential additional benefit of considerably more convenient dosage schedules.

Albumin fusion technology also provides for efficient manufacture and purification of the product in our existing facilities.

Drug Development

For the past several years, we have concentrated on building drug development and regulatory expertise. We seek to gather, document and analyze clinical trial data in such a way that they can be submitted to regulatory authorities and used to support Biologics License Applications at the appropriate time. We have assembled experienced teams in key strategic areas of development, including:

- *Clinical Research.* The clinical research group is responsible for the design, planning and analysis of clinical trials, and matches novel biological molecules emerging from our protein and antibody discovery programs to unmet medical needs. The group includes our biostatistics team.
- *Clinical Operations.* The clinical operations group executes clinical trials and is responsible for managing clinical trial sites and ensuring that all proper procedures are followed during the collection of clinical data. The group includes our data management team.
- *Project Management.* Our project management team oversees the process of development of a drug from the earliest stages of research through the conduct of clinical development and regulatory filings.
- *Regulatory Affairs.* The regulatory affairs group manages communications with and submissions to regulatory authorities.
- *Drug Safety.* As our products advance in clinical testing, our medical affairs group collects and analyzes information on drug experience and safety, and ensures that accurate medical information is distributed.
- *Quality Assurance.* The quality assurance group ensures compliance with all regulatory requirements for the clinical development and manufacture of new products.
- *Bioanalytical Sciences.* The bioanalytical sciences group develops highly specialized assays that are used during monitoring of preclinical tests and clinical trials. Other assays help to ensure the quality and consistency of our products.
- *Manufacturing.* We have manufacturing capability for the production of protein and antibody drugs for our clinical trials, as well as for preclinical studies. We have expanded our manufacturing facilities as our development pipeline has progressed to allow us to produce larger quantities of protein and antibody drugs for clinical development. We are now in the construction phase of a large-scale manufacturing facility to support our increasing needs for protein and antibody drug production capacity related to the continuing progress of our product candidates and, eventually, the initial commercialization of our products.

Collaborative Arrangements

Forming strategic alliances with leading pharmaceutical and biotechnology companies is an element of our strategy. We currently have three major types of collaborations: *Human Gene Therapeutic Consortium, Product Collaborations and Technology Collaborations.*

Human Gene Therapeutic Consortium

Between 1993 and 1997, we entered into major collaborations with GlaxoSmithKline, Takeda, Schering-Plough, Sanofi-Synthelabo and Merck KGaA. We refer to these collaborations collectively as the Human Gene Therapeutic Consortium. The initial research term of these collaborations ended in June 2001, although certain aspects of these arrangements continue. Under these collaborations, we provided our drug discovery capabilities in exchange for access to our partners' drug development and commercialization expertise as well as research funding and long-term value creation through potential milestone and royalty payments. We also are entitled to certain co-promotion, co-development, revenue sharing and other product rights. The initial research term of these agreements expired on June 30, 2001. Our partners have informed us that they have been pursuing research programs involving many different genes for the creation of small molecule, protein

and antibody drugs. We cannot assure you that any of these programs will be continued or result in any approved drugs.

GlaxoSmithKline. We are entitled to receive royalty payments, based on net sales of certain products developed by GSK from any of our patents or technologies that fall within GSK's field, for any sales made by GSK or its licensees. We also are entitled to milestone payments in connection with the development of these products. We hold an option to co-promote any products sold by GSK in the U.S., Canada, Mexico and Europe, subject to the rights granted to Takeda and other collaborators. Our collaboration agreements with GSK include an option for GSK to co-develop and co-commercialize certain Human Genome Sciences products, including LymphoStat-B, HGS-ETR1 and HGS-ETR2 if we develop these products through Phase 2. GSK also would be entitled to share in license fees, milestone payments and royalty payments for certain products if we license the products to a third party.

Takeda. GlaxoSmithKline and Takeda entered into a license agreement relating to the development and sale of products in GSK's field based upon rights licensed from us. We are entitled to all royalty payments and one-half of the milestone payments due from Takeda to GSK under this license agreement on sales of products developed by Takeda. We entered into an option and license agreement with Takeda pursuant to which we granted Takeda an exclusive option to license rights under our patents and technology in the field of human health care, other than gene therapy, antisense and diagnostics, in order to make and sell up to three products in Japan. Pursuant to that agreement, Takeda has exercised its option to develop and commercialize TRAIL-R1 mAb in Japan.

Schering-Plough. In June 1996, we entered into a collaboration agreement under which Schering-Plough has the right to discover, develop and commercialize products using our technology and biological information developed by us and GSK. Schering-Plough was also granted an option to co-develop and co-commercialize up to two of our therapeutic protein products to which we have exclusive development and commercialization rights under our agreements with GSK. In 2000, Schering-Plough exercised one of its two options with the selection of a novel interferon discovered by us. We will receive milestones and royalty payments for any product developed from this protein. In 2002, we granted Schering-Plough exclusive rights to two human antigens in lieu of its remaining option. Schering-Plough is obligated to pay license fees, research payments and milestone payments in connection with the development of products. We also have a collaboration with Schering-Plough related to gene therapy by which Schering-Plough was granted a non-exclusive license to use our human gene technology to conduct research and an option to obtain an exclusive license to specific genes in the field of gene therapy.

Sanofi-Synthelabo. In June 1996, we entered into a collaboration agreement with Sanofi-Synthelabo under which Sanofi-Synthelabo has the right to discover, develop and commercialize products using our technology and biological information developed by us and GSK. Sanofi-Synthelabo is obligated to pay license fees, research payments and milestone payments in connection with the development of products. We share equally with GSK any license fees and product-development milestone payments made under our Human Gene Therapeutic Consortium, but we receive all royalty and research support payments under those agreements.

Merck KGaA. In July 1996, we entered into a collaboration agreement with Merck KGaA under which Merck KGaA has the right to discover, develop and commercialize products using our technology and biological information developed by us and GSK. Merck KGaA is obligated to pay license fees, research payments, and milestone payments in connection with the development of products. We share equally with GSK any license fees and product-development milestone payments made under our Human Gene Therapeutic Consortium, but we receive all royalty and research support payments under those agreements.

Product Collaborations

GlaxoSmithKline. In October 2004, we announced an agreement with GlaxoSmithKline under which GSK has acquired exclusive worldwide rights to develop and commercialize Albugon (albumin-GLP-1) for all human therapeutic and prophylactic applications. Albugon, a novel long-acting form of glucagon-like peptide-1 (GLP-1), was created using Human Genome Sciences' proprietary albumin fusion technology, and

was brought to late-stage preclinical development by our scientists for potential use in the treatment of diabetes. GLP-1 is a peptide hormone that acts to help maintain healthy blood sugar levels and to control appetite. The primary obstacle to the use of GLP-1 as a therapeutic for diabetes is its extremely short half-life of about five minutes in the body. Preclinical studies show that Albugon retains the anti-diabetic and other beneficial activities of GLP-1, but with a substantially prolonged half-life. Under the agreement, Human Genome Sciences is entitled to clinical development and commercial milestone payments that could amount to as much as $183.0 million, as well as additional milestones for other indications developed. We also will receive royalties on the annual net sales of any products developed and commercialized under the agreement. In 2004, we received an up-front fee and are recognizing this revenue ratably over the clinical development period, which is approximately seven years.

Kirin. In October 2002, we entered into a license agreement with the Pharmaceutical Division of Kirin Brewery Company, Ltd. relating to the development and commercialization of agonistic human antibodies to TRAIL receptor 2. Under the agreement, we will work together to identify and optimize the best candidate for clinical development. Kirin will develop and commercialize any resulting drug in Japan and Asia/Australasia. We will develop and commercialize any resulting drug in North America, Europe and the rest of the world.

Corautus. In February 2003, we obtained approximately an 18% equity interest in Corautus Genetics Inc., a publicly traded company that resulted from the merger of Vascular Genetics, Inc. (VGI) and GenStar Therapeutics Corporation. Corautus assumed the exclusive license in the field of gene therapy for our VEGF-2 gene, previously granted to VGI. As of December 31, 2004, we owned approximately 11% of Corautus.

diaDexus. During 2003, diaDexus announced that the FDA cleared its PLAC™ test for marketing as a diagnostic aid for use in helping predict an individual's risk for coronary heart disease. The PLAC test measures the level of lipoprotein-associated phospholipase A2 (Lp-PLA2) in human blood. The PLAC test was discovered through the use of our technology, and Human Genome Sciences is entitled to receive royalties on sales of the PLAC test. DiaDexus also received from GSK the right to develop products based on a large number of diagnostic targets identified by Human Genome Sciences. We will be entitled to royalties on the sale of any products developed from these targets. In 2003, we acquired exclusive, worldwide rights from diaDexus to develop and commercialize diagnostic immunohistochemical tests based on the TRAIL receptor-1 TRAIL receptor-2 proteins.

Genentech. In August 2003, we entered into an agreement with Genentech in which we granted to Genentech an exclusive, worldwide patent rights to develop and commercialize therapeutic biologic products for human use based on a human gene discovered by Human Genome Sciences that may have potential applications in immunology, oncology and neurology. Non-exclusive, worldwide rights for the development and commercialization of diagnostic and small molecule products for human use based on the same gene also were granted.

MedImmune. We entered into a collaboration and license agreement with MedImmune in July 1995, which we amended in March and December 1997. This agreement is related to the development of drugs based upon certain infectious agents sequenced by us or The Institute for Genomic Research (TIGR), or to which we hold licenses, including the creation of vaccines and immunotherapeutics for non-encapsulated *Streptococcus pneumoniae*. MedImmune sub-licensed the *Streptococcus pneumoniae* vaccine technology to GSK. We are entitled to a portion of the payments received by MedImmune under its sub-license. In 2003, we received a clinical development milestone payment from MedImmune relating to the initiation by GSK of clinical trials of a vaccine against *Streptococcus pneumoniae*. Through 2003, we have received $1.1 million from MedImmune.

Technology Collaborations

Antibodies and Peptides

Abgenix. In November 1999, we entered into a collaboration and license agreement with Abgenix relating to the field of fully human antibody drug candidates, which was amended in 2001. Pursuant to this

agreement, as amended, we licensed technology from Abgenix that we can use to generate fully human antibody drug candidates. We will independently develop and seek to commercialize antibody-based drugs from this collaboration. Abgenix also has an option to develop and commercialize products derived from our antigens. The research term of this agreement will expire on November 30, 2005. We and Abgenix will pay reciprocal milestone and royalty payments for products developed and commercialized. In May 2003, Human Genome Sciences announced that we had acquired an exclusive worldwide license from Abgenix to develop and commercialize a fully human monoclonal antibody to the CCR5 receptor. We received clearance from the FDA to initiate clinical development of CCR5 mAb in December 2004 and plan to initiate a Phase 1 clinical trial in patients infected with HIV-1 in the first half of 2005.

Cambridge Antibody Technology (CAT). In August 1999, we entered into an antibody license agreement with CAT for the development of fully human antibody therapeutics for up to three of our target human proteins. Pursuant to this agreement, we have entered into an exclusive license agreement for Lymphostat-B, which was discovered in collaboration with CAT. Under this 1999 agreement, we have paid CAT $2.3 million for one milestone and fees through the end of 2004. In February 2000, we entered into a broader agreement with CAT that provides us with the right to use their technology to develop and sell an unlimited number of fully human antibodies for therapeutic and diagnostic purposes. Under this same agreement, we made an equity investment in CAT. We have sold a portion of this equity investment and as of December 31, 2004, we owned approximately 3% of CAT. Under this 2000 agreement, we paid CAT $12.0 million for ten years of committed research support. We also plan to combine our resources to develop and sell a number of therapeutic antibody products. CAT has the right to select up to twenty-four of our proprietary antigens for preclinical development. We have the option to share clinical development costs and to share the profits equally with them on up to eighteen such products. CAT has rights to develop six such products on their own. We are entitled to clinical development milestone and royalty payments on those six products. We have exercised our option with respect to TRAIL receptor 1, TRAIL receptor 2 and ABthrax. Under the 2000 agreement, we have paid to CAT $4.5 million in milestone payments through the end of 2004.

Dyax. In March 2000, we entered into a license agreement with Dyax relating to Dyax's phage display and peptide technology, which was amended in 2001. Under the agreement, as amended, we have the right to use Dyax's phage display technology to develop an unlimited number of therapeutic and diagnostic products that we may sell or outlicense. We will provide milestone and royalty payments to Dyax on products we develop and sell or will share revenue we receive from outlicensees. The licensed technologies include Dyax's phage display technology to create peptide drugs, human monoclonal antibody drugs and *in vitro* diagnostic products. In addition, we have the right to require that Dyax perform research in the fields of protein separation and high-throughput screening technology. We also have rights to improvements in Dyax's phage display technology.

Medarex. In July 2001, we entered into a collaboration agreement with Medarex relating to the creation of fully human monoclonal antibodies. Under the agreement, Medarex plans to use its technology to create antibody leads that are specific for target proteins that we discovered. We have the option to license exclusively therapeutic and diagnostic antibody products and Medarex is entitled to receive license fees, milestone payments and royalties on any commercial sales of products resulting from the collaboration.

Other

Transgene. In February 1998, we entered into an agreement with Transgene relating to the field of human gene therapy, including gene therapy vaccines, to the extent that it will not conflict with our other collaboration agreements. Under this agreement, we granted Transgene the right to license exclusively up to 10 genes. We obtained a 10% equity interest in Transgene, which has subsequently been diluted down to approximately 6.0%, and certain co-development and co-marketing rights. Transgene selected two genes from our database, CTGF-2 and TIMP-4, as its first two exclusive gene therapy products. CTGF-2 stimulates the formation of blood vessels and could be an effective tool in the control of coronary artery disease. TIMP-4 prevents restenosis, which is the growth of blood-vessel obstruction following an angioplasty. Our collaboration with Transgene will end in 2008.

Patents and Proprietary Rights

We seek U.S. and foreign patent protection for the genes, proteins and antibodies that we discover, as well as patents on therapeutic and diagnostic products and processes, screening and manufacturing technologies, and other inventions based on genes, proteins and antibodies. We also seek patent protection or rely upon trade secret rights to protect certain technologies which may be used to discover and characterize genes, proteins and antibodies and which may be used to develop novel therapeutic and diagnostic products and processes. We believe that, in the aggregate, our patent applications, patents and licenses under patents owned by third parties are of material importance to our operations.

Important legal issues remain to be resolved as to the extent and scope of available patent protection for biotechnology products and processes in the U.S. and other important markets outside the U.S. We expect that litigation or administrative proceedings will likely be necessary to determine the validity and scope of certain of our and others' proprietary rights. We are currently involved in a number of administrative proceedings relating to the scope of protection of our patents and those of others, and are likely to be involved in additional proceedings that may affect directly or indirectly patents and patent applications related to our products or the products of our partners. Any such lawsuit or proceeding may result in a significant commitment of resources in the future. In addition, changes in, or different interpretations of, patent laws in the U.S. and other countries may result in patent laws that allow others to use our discoveries or develop and commercialize our products. We cannot assure you that the patents we obtain or the unpatented technology we hold will afford us significant commercial protection.

We have filed U.S. patent applications with respect to many human genes and their corresponding proteins. We have also filed U.S. patent applications with respect to all or portions of the genomes of several infectious and non-infectious microorganisms. As of March 1, 2005, we had 432 U.S. patents covering genes and proteins. Our remaining applications may not result in the issuance of any patents. Our applications may not be sufficient to meet the statutory requirements for patentability in all cases. In certain instances, we will be dependent upon our collaborators to file and prosecute patent applications.

Other companies or institutions have filed, and may in the future file, patent applications which attempt to patent genes similar to those covered in our patent applications, including applications based on our potential products. Any patent application filed by a third party may prevail over our patent applications, in which event the third party may require us to stop pursuing a potential product or to negotiate a royalty arrangement to pursue the potential product.

We also are aware that others, including universities and companies working in the biotechnology and pharmaceutical fields, have filed patent applications and have been granted patents in the U.S. and in other countries that cover subject matter potentially useful or necessary to our business. Some of these patents and patent applications claim only specific products or methods of making products, while others claim more general processes or techniques useful in the discovery and manufacture of a variety of products. The risk of additional patents and patent applications will continue to increase as the biotechnology industry expands. We cannot predict the ultimate scope and validity of existing patents and patents that have been or may be granted to third parties, nor can we predict the extent to which we may wish or be required to obtain licenses to such patents, or the availability and cost of acquiring such licenses. To the extent that licenses are required, the owners of the patents could bring legal actions against us to claim damages or to stop our manufacturing and marketing of the affected products.

Issued patents may not provide commercially meaningful protection against competitors and may not provide us with competitive advantages. Other parties may challenge our patents or design around our issued patents or develop products providing effects similar to our products. In addition, others may discover uses for genes, proteins or antibodies other than those uses covered in our patents, and these other uses may be separately patentable. The holder of a patent covering the use of a gene, protein or antibody for which we have a patent claim could exclude us from selling a product for a use covered by its patent.

We rely on trade secret protection to protect our confidential and proprietary information. We believe we have developed proprietary procedures for making libraries of DNA sequences and genes. We have not sought

patent protection for these procedures. We have developed a substantial database concerning genes we have identified. We have taken security measures to protect our data and continue to explore ways to further enhance the security for our data. However, we may not be able to meaningfully protect our trade secrets. While we have entered into confidentiality agreements with employees and academic collaborators, we may not be able to prevent their disclosure of these data or materials. Others may independently develop substantially equivalent information and techniques.

Competition

General. We face intense competition from a wide range of pharmaceutical, biotechnology and diagnostic companies, as well as academic and research institutions and government agencies. Some of these competitors have substantially greater financial, marketing, research and development and human resources. Most large pharmaceutical companies have considerably more experience in undertaking clinical trials and in obtaining regulatory approval to market pharmaceutical products.

Basis of Competition. Principal competitive factors in our industry include:

- the quality and breadth of an organization's technology;
- the skill of an organization's employees and its ability to recruit and retain skilled employees;
- an organization's intellectual property estate;
- the range of capabilities, from target identification and validation to drug discovery and development to manufacturing and marketing; and
- the availability of substantial capital resources to fund discovery, development and commercialization activities.

We believe that the quality and breadth of our technology platform, the skill of our employees and our ability to recruit and retain skilled employees, our patent portfolio, our capabilities for early stage research and drug discovery and our capital resources are competitive strengths. However, many large pharmaceutical and biotechnology companies have significantly larger intellectual property estates than we do, more substantial capital resources than we have, and greater capabilities and experience than we do in preclinical and clinical development, sales, marketing, manufacturing and regulatory affairs.

Products. We are aware of products in research or development by our competitors that address all of the diseases we are targeting. Any of these products may compete with our product candidates. Our competitors may succeed in developing their products before we do, obtaining approvals from the FDA or other regulatory agencies for their products more rapidly than we do, or developing products that are more effective than our products. These products or technologies might render our technology obsolete or noncompetitive. In addition, our albumin fusion protein products are designed to be long-acting versions of existing products. While we believe our albumin fusion protein products will be a more attractive alternative to the existing products, the existing product in many cases has an established market that may make the introduction of our product more difficult. Competition is based primarily on product efficacy, safety, timing and scope of regulatory approvals, availability of supply, marketing and sales capability, reimbursement coverage, price and patent position.

Government Regulation

Regulations in the U.S. and other countries have a significant impact on our research, product development and manufacturing activities and will be a significant factor in the marketing of our products. All of our products will require regulatory approval prior to commercialization. In particular, our products are subject to rigorous preclinical and clinical testing and other premarket approval requirements by the FDA and similar regulatory authorities in other countries. Various statutes and regulations also govern or influence the manufacturing, safety, labeling, storage, record keeping and marketing of our products. The lengthy process of seeking these approvals, and the subsequent compliance with applicable statutes and regulations, require the expenditure of substantial resources. Any failure by us to obtain, or any delay in obtaining, regulatory

approvals could materially adversely affect our ability to commercialize our products in a timely manner, or at all.

Preclinical Testing. Before a drug may be clinically tested in the U.S., it must be the subject of rigorous preclinical testing. Preclinical tests include laboratory evaluation of product chemistry and animal studies to assess the potential safety and efficacy of the product and its formulations. The results of these studies must be submitted to the FDA as part of an investigational new drug application, which is reviewed by the FDA before clinical testing in humans can begin.

Clinical Testing. Typically, clinical testing involves a three-phase process, which generally lasts four to seven years, and sometimes longer:

- Phase 1 clinical trials are conducted with a small number of subjects to determine the early safety profile and the pattern of drug distribution and metabolism.
- Phase 2 clinical trials are conducted with groups of patients afflicted with a specified disease in order to provide enough data to statistically evaluate preliminary efficacy and optimal dosages and to expand evidence of safety.
- Phase 3 clinical trials are large-scale, multicenter, comparative trials, which are designed to gather additional information for proper dosage and labeling of the drug and to demonstrate its overall safety and efficacy.

The FDA monitors the progress of each phase of testing, and may require the modification, suspension, or termination of a trial if it is determined to present excessive risks to patients. The clinical trial process may be accompanied by substantial delay and expense and there can be no assurance that the data generated in these studies will ultimately be sufficient for marketing approval by the FDA.

Marketing Approvals. Before a product can be marketed and sold, the results of the preclinical and clinical testing must be submitted to the FDA for approval. This submission will be either a new drug application or a biologic license application, depending on the type of drug. In responding to a new drug application or a biologic license application, the FDA may grant marketing approval, request additional information or deny the application if it determines that the application does not provide an adequate basis for approval. We cannot assure you that any approval required by the FDA will be obtained on a timely basis, or at all.

In addition, the FDA may condition marketing approval on the conduct of specific post-marketing studies to further evaluate safety and efficacy. Rigorous and extensive FDA regulation of pharmaceutical products continues after approval, particularly with respect to compliance with current good manufacturing practices, or cGMPs, reporting of adverse effects, advertising, promotion and marketing. Discovery of previously unknown problems or failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions, any of which could materially adversely affect our business.

Other Regulation. We are also subject to various laws and regulations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use and disposal of hazardous or potentially hazardous substances used in connection with our research, including radioactive compounds and infectious disease agents. We also cannot accurately predict the extent of regulations that might result from any future legislative or administrative action.

In addition, ethical, social and legal concerns about gene therapy, genetic testing and genetic research could result in additional regulations restricting or prohibiting the processes we or our suppliers may use. Federal and state agencies, congressional committees and foreign governments have expressed interest in further regulating biotechnology. More restrictive regulations or claims that our products are unsafe or pose a hazard could prevent us from commercializing our products.

Foreign Regulation. We must obtain regulatory approval by governmental agencies in other countries prior to commercialization of our products in those countries. Foreign regulatory systems may be just as rigorous, costly and uncertain as in the U.S.

Possible Pricing Restrictions. The levels of revenues and profitability of biopharmaceutical companies like ours may be affected by the continuing efforts of government and third party payers to contain or reduce the costs of health care through various means. For example, in certain foreign markets, pricing or profitability of therapeutic and other pharmaceutical products is subject to governmental control. In the U.S. there have been, and we expect that there will continue to be, a number of federal and state proposals to implement similar governmental control. While we cannot predict whether any legislative or regulatory proposals will be adopted, the adoption of such proposals could have a material adverse effect on our business, financial condition and profitability. In addition, in the U.S. and elsewhere, sales of therapeutic and other pharmaceutical products depend in part on the availability of reimbursement to the consumer from third party payers, such as government and private insurance plans. Third party payers are increasingly challenging the prices charged for medical products and services. We cannot assure you that any of our products will be considered cost effective or that reimbursement to the consumer will be available or will be sufficient to allow us to sell our products on a competitive and profitable basis.

Sources of Supply

Raw materials and other supplies required in our business are generally available from various suppliers in quantities adequate to meet our needs.

Manufacturing

We are able to manufacture multiple protein and antibody drugs for use in research and clinical activities. We produce and purify these protein and antibody drugs within process development and manufacturing facilities that now total approximately 333,000 square feet. We do not manufacture any products for commercial use and do not have any experience in manufacturing materials suitable for commercial use.

We are building our manufacturing organization and facilities with the intent of manufacturing our own commercial materials. Our long-range plan is to establish additional manufacturing capabilities to allow us to meet our commercial manufacturing requirements. We are currently expanding the capacity of our existing process development and manufacturing facility. In 2004, we completed construction and commissioning of approximately 28,200 square feet of manufacturing space at our Traville site. We are constructing a 291,000 square foot large-scale manufacturing facility to allow for the production of protein and antibody drugs for both clinical and commercial use. We plan to complete the construction of this facility in mid-2005 and to complete the validation process in 2006. The FDA must inspect and license these facilities to determine compliance with cGMP requirements for commercial production. We may not be able successfully to establish manufacturing capabilities or manufacture our products economically or in compliance with cGMPs and other regulatory requirements. For a description of the financing arrangements for these facilities, see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources."

In June 2004, we entered into an agreement with Diosynth Biotechnology, a unit of Akzo Nobel, for process development and the production of clinical supplies for an undisclosed therapeutic monoclonal antibody. While we are expanding our manufacturing capabilities, we may contract with additional third party manufacturers or develop products with partners and use the partners' manufacturing capabilities. If we use others to manufacture our products, we will depend on those parties to comply with cGMPs and other regulatory requirements, and to deliver materials on a timely basis. These parties may not perform adequately. Any failures by these third parties may delay our development of products or the submission of these products for regulatory approval.

Marketing

We do not have any marketed products. We have a strategic marketing group to analyze the commercial value of our product portfolio and the competitive environment. The strategic marketing group also analyzes patient needs and customer preferences with respect to our product development and planning. If we develop products that can be marketed, we intend to market the products either independently or together with collaborators or strategic partners. GlaxoSmithKline, Schering-Plough and others have co-marketing rights with respect to certain of our products. If we decide to market any products independently, we will incur significant additional expenditures and commit significant additional management resources to establish a sales force. For any products that we market together with partners, we will rely, in whole or in part, on the marketing capabilities of those parties. We may also contract with third parties to market certain of our products. Ultimately, we and our partners may not be successful in marketing our products.

Employees

In March 2004, as part of our overall effort to sharpen the company's focus on preparation for commercialization of our most promising drug candidates, we embarked on a cost reduction program that included streamlining of operations, consolidation of facilities and reduction of staff to reflect current needs. As of March 1, 2005, we had approximately 840 full-time employees. None of our employees is covered by a collective bargaining agreement and we consider relations with our employees to be good.

FACTORS THAT MAY AFFECT OUR BUSINESS

There are a number of important factors that could cause our actual results to differ materially from those that are indicated by forward-looking statements. Those factors include, without limitation, those listed below and elsewhere herein.

Because our business strategy is still largely untested, we cannot be certain that we will be able to commercialize any of our products or to what extent we will generate revenue.

We are not certain that we can implement our business strategy successfully because all of our products are still in the development stage. We initially set out to find as many genes as possible and are now using that information to develop medical and pharmacological products. We used automated high-speed technology to:

- rapidly identify the function of, and obtain proprietary rights to, a substantial number of genes; and
- select genes with the greatest potential for the treatment and diagnosis of human disease.

Nobody has tested our strategy. Other companies first target particular diseases and try to find cures for them through gene-based therapies. If our strategy does not result in the development of products that we can sell profitably, we will be unable to generate revenue.

If we are unable to commercialize products, we may not be able to recover our investment in our product development and manufacturing efforts.

We invested significant time and resources to isolate and study genes and determine their functions. We now devote most of our resources to developing proteins and antibodies for the treatment of human disease. We are also devoting substantial resources to the establishment of our own manufacturing capabilities, both to support clinical testing and eventual commercialization. We have made and are continuing to make substantial expenditures. Before we can commercialize a product, we must rigorously test the product in the laboratory and complete extensive human studies. We cannot assure you that expenses for testing and study will yield profitable products or even products approved for marketing by the FDA. We will incur substantial additional costs to continue these activities. If we are not successful in commercializing products, we may be unable to recover the large investment we have made in research, development and manufacturing facilities.

Because our product development efforts depend on new and rapidly-evolving technologies, we cannot be certain that our efforts will be successful.

To date, companies have developed and commercialized relatively few gene-based products. Our work depends on new, rapidly-evolving technologies and on the marketability and profitability of innovative products. Commercialization involves risks of failure inherent in the development of products based on innovative technologies and the risks associated with drug development generally. These risks include the possibility that:

- these technologies or any or all of the products based on these technologies will be ineffective or toxic, or otherwise fail to receive necessary regulatory clearances;
- the products, if safe and effective, will be difficult to manufacture on a large-scale or uneconomical to market;
- proprietary rights of third parties will prevent us or our collaborators from exploiting technologies or marketing products; and
- third parties will market superior or equivalent products.

Because we are currently a mid-stage development company, we cannot be certain that we can develop our business or achieve profitability.

We expect to continue to incur increasing losses and we cannot assure you that we will ever become profitable. We are in the mid-stage of development, and it will be a number of years, if ever, before we are likely to receive revenue from product sales or royalty payments. We will continue to incur substantial expenses relating to research and development efforts and human studies. The development of our products requires significant further research, development, testing and regulatory approvals. We may not be able to develop products that will be commercially successful or that will generate revenue in excess of the cost of development.

We are continually evaluating our business strategy, and may modify this strategy in light of developments in our business and other factors.

In the past, we have redirected the focus of our business from the discovery of genes to the development of medically useful products based on those genes. We continue to evaluate our business strategy and, as a result, may modify this strategy in the future. In this regard, we may, from time to time, focus our product development efforts on different products or may delay or halt the development of various products. In addition, as a result of changes in our strategy, we may also change or refocus our existing drug discovery, development, commercialization and manufacturing activities. This could require changes in our facilities and personnel and the restructuring of various financial arrangements. We cannot assure you that changes will occur or that any changes that we implement will be successful.

During the first quarter of 2004, we announced plans to sharpen our focus on our most promising drug candidates. We have reduced the number of drugs in early development and are focusing our resources on the drugs that address the greatest unmet medical needs with substantial growth potential. In order to reduce significantly our expenses, and thus enable us to dedicate more resources to the most promising drugs, we have reduced staff, are streamlining operations and are consolidating facilities.

Because we have limited resources for discovering and developing new early stage pre-clinical products, we may be unsuccessful in our efforts to do so.

Our ability to discover and develop new early stage pre-clinical products will depend on our internal research capability. Our internal research capability was substantially reduced as a result of our first quarter of 2004 reduction in staff. Although we continue to conduct discovery and development efforts on early stage products, our limited resources for discovering and developing early stage pre-clinical products may not be sufficient to discover new pre-clinical drug candidates.

PRODUCT DEVELOPMENT RISKS

Because we have limited experience in developing and commercializing products, we may be unsuccessful in our efforts to do so.

Our ability to develop and commercialize products based on proteins, antibodies and other compounds will depend on our ability to:

- develop products internally;
- complete laboratory testing and human studies;
- obtain and maintain necessary intellectual property rights to our products;
- obtain and maintain necessary regulatory approvals related to the efficacy and safety of our products;
- develop efficient production facilities meeting all regulatory requirements or enter into arrangements with third parties to manufacture our products on our behalf; and
- deploy sales and marketing resources effectively or enter into arrangements with third parties to provide these functions.

Although we are conducting human studies with respect to a number of products, we have limited experience with these activities and may not be successful in developing or commercializing these or other products.

Because clinical trials for our products are expensive and protracted and their outcome is uncertain, we must invest substantial amounts of time and money that may not yield viable products.

Conducting clinical trials is a lengthy, time-consuming and expensive process. Before obtaining regulatory approvals for the commercial sale of any product, we must demonstrate through laboratory, animal and human studies that such product is both effective and safe for use in humans. We will incur substantial additional expense for and devote a significant amount of time to these studies.

Before a drug may be marketed in the U.S., it must be the subject of rigorous preclinical testing. The results of these studies must be submitted to the FDA as part of an investigational new drug application, which is reviewed by the FDA before clinical testing in humans can begin. The results of preliminary studies do not predict clinical success. A number of potential drugs have shown promising results in early testing but subsequently failed to obtain necessary regulatory approvals. Data obtained from tests are susceptible to varying interpretations, which may delay, limit or prevent regulatory approval. Regulatory authorities may refuse or delay approval as a result of many other factors, including changes in regulatory policy during the period of product development.

Completion of clinical trials may take many years. The length of time required varies substantially according to the type, complexity, novelty and intended use of the product candidate. The FDA monitors the progress of each phase of testing, and may require the modification, suspension, or termination of a trial if it is determined to present excessive risks to patients. Our rate of commencement and completion of clinical trials may be delayed by many factors, including:

- our inability to manufacture sufficient quantities of materials for use in clinical trials;
- variability in the number and types of patients available for each study;
- difficulty in maintaining contact with patients after treatment, resulting in incomplete data;
- unforeseen safety issues or side effects;
- poor or unanticipated effectiveness of products during the clinical trials; or
- government or regulatory delays.

To date, data obtained from our clinical trials have been insufficient to demonstrate safety and efficacy under applicable FDA guidelines and are not sufficient to support an application for regulatory approval

without further studies. Studies conducted by us or by third parties on our behalf may not demonstrate sufficient effectiveness and safety to obtain the requisite regulatory approvals for these or any other potential products. Based on the results of a human study for a particular product candidate, regulatory authorities may not permit us to undertake any additional clinical trials for that product candidate. The clinical trial process may also be accompanied by substantial delay and expense and there can be no assurance that the data generated in these studies will ultimately be sufficient for marketing approval by the FDA.

We face risks in connection with our ABthrax product in addition to risks generally associated with drug development.

Our entry into the biodefense field with the development of ABthrax presents risks beyond those associated with the development of our other products. Numerous other companies and governmental agencies, including the U.S. Army, are known to be developing biodefense pharmaceuticals and related products to combat anthrax. These competitors may have financial or other resources greater than ours, and may have easier or preferred access to the likely distribution channels for biodefense products. In addition, since the primary purchaser of biodefense products is the U.S. government and its agencies, the success of ABthrax will depend on government spending policies and pricing restrictions. The funding of government biodefense programs is dependent, in part, on budgetary constraints, political considerations and military developments. Moreover, even if ABthrax is approved by the FDA, the revenues available for the sale of ABthrax could be significantly curtailed by the efforts of government payors to limit the selling price of ABthrax. In the case of the U.S. government, executive or legislative action could attempt to impose production and pricing requirements on us. Moreover, we do not know whether the U.S. government will purchase ABthrax, and if it does, the timing, extent and amount of such purchases.

Because neither we nor any of our collaboration partners have received marketing approval for any product candidate resulting from our research and development efforts, and because we may never be able to obtain any such approval, it is possible that we may not be able to generate any product revenue.

Neither we nor any of our collaboration partners have completed development of any product based on our genomics research. It is possible that we will not receive FDA marketing approval for any of our product candidates. Although a number of our potential products have entered clinical trials, we cannot assure you that any of these products will receive marketing approval. All the products being developed by our collaboration partners will also require additional research and development, extensive preclinical studies and clinical trials and regulatory approval prior to any commercial sales. In some cases, the length of time that it takes for our collaboration partners to achieve various regulatory approval milestones may affect the payments that we are eligible to receive under our collaboration agreements. We and our collaboration partners may need to successfully address a number of technical challenges in order to complete development of our products. Moreover, these products may not be effective in treating any disease or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining regulatory approval or prevent or limit commercial use.

RISKS FROM COLLABORATION RELATIONSHIPS AND STRATEGIC ACQUISITIONS

Our plan to use collaborations to leverage our capabilities and to grow in part through the strategic acquisition of other companies and technologies may not be successful if we are unable to integrate our partners' capabilities or the acquired companies with our operations or if our partners' capabilities do not meet our expectations.

As part of our strategy, we intend to continue to evaluate strategic partnership opportunities and consider acquiring complementary technologies and businesses. In order for our future collaboration efforts to be successful, we must first identify partners whose capabilities complement and integrate well with ours. Technologies to which we gain access may prove ineffective or unsafe. Our partners may prove difficult to work with or less skilled than we originally expected. In addition, any past collaborative successes are no indication of potential future success in this area. In order to achieve the anticipated benefits of an acquisition, we must integrate the acquired company's business, technology and employees in an efficient and effective manner. The successful combination of companies in a rapidly changing biotechnology and genomics industry

may be more difficult to accomplish than in other industries. The combination of two companies requires, among other things, integration of the companies' respective technologies and research and development efforts. We cannot assure you that this integration will be accomplished smoothly or successfully. The difficulties of integration are increased by the necessity of coordinating geographically separated organizations and addressing possible differences in corporate cultures and management philosophies. The integration of certain operations will require the dedication of management resources which may temporarily distract attention from the day-to-day operations of the combined companies. The business of the combined companies may also be disrupted by employee retention uncertainty and lack of focus during integration. The inability of management to integrate successfully the operations of the two companies, in particular, to integrate and retain key scientific personnel, or the inability to integrate successfully two technology platforms, could have a material adverse effect on our business, results of operations and financial condition.

Because we depend on our collaboration partners for revenue, we may not become profitable if we cannot increase the revenue from our collaboration partners or other sources.

We have received all of our revenue from payments made under our collaboration agreements with GlaxoSmithKline and, to a lesser extent, other agreements. The initial research term of the GlaxoSmithKline collaboration agreement and many of our other collaboration agreements expired in 2001. None of these collaboration agreements was renewed. We may not be able to enter into additional collaboration agreements. We are entitled to certain milestone and royalty payments from the existing collaborators, but may not receive payments if our collaborators fail to:

- develop marketable products;
- obtain regulatory approvals for products; or
- successfully market products based on our research.

If one of our collaborators pursues a product that competes with our products, there could be a conflict of interest and we may not receive the milestone or royalty payments that we expect.

Each of our collaborators is developing a variety of products, some with other partners. Our collaborators may pursue existing or alternative technologies to develop drugs targeted at the same diseases instead of using our licensed technology to develop products in collaboration with us. Our collaborators may also develop products that are similar to or compete with products they are developing in collaboration with us. If our collaborators pursue these other products instead of our products, we may not receive milestone or royalty payments.

FINANCIAL AND MARKET RISKS

Because of our substantial indebtedness, we may be unable to adjust our strategy to meet changing conditions in the future.

As of December 31, 2004, we had long-term obligations of approximately $505.1 million. We also had a future guarantee obligation of $175.5 million under the current terms of one facility lease. Our substantial debt and future guarantee will have several important consequences for our future operations. For instance:

- payments of interest on, and principal of, our indebtedness will be substantial, and may exceed then current revenues and available cash;
- we may be unable to obtain additional future financing for capital expenditures, acquisitions or general corporate purposes;
- we may be unable to withstand changing competitive pressures, economic conditions and governmental regulations; and
- we may be unable to make acquisitions or otherwise take advantage of significant business opportunities that may arise.

We have entered into a facility lease arrangement that is not required to be reflected on our balance sheet but that constitutes a significant financial obligation and possible risks.

In the second quarter of 2003, we entered into a facility lease with respect to our research and development and administrative facility. Under accounting principles generally accepted in the United States, this lease was treated as an operating lease. In the event we default on our obligation under the lease, we may be responsible for up to $200.0 million of the cost of the facility because of a guarantee we made in connection with the lease. This obligation is not required to be reflected as a liability on our balance sheet, but is described in footnotes to our financial statements. We are required to pledge marketable securities as security for our obligation under the lease and the related documents. As of December 31, 2004, we included approximately $215.2 million of restricted investments on our balance sheet, of which approximately $202.7 million was held as restricted investments providing collateral for our obligation with respect to this facility. We expect that we will include approximately $219.0 million in restricted investments on our balance sheet when the final payments are made with respect to this and other facility obligations. If the value of our pledged investments declines, because of an increase in interest rates or otherwise, we would need to pledge additional investments, which would further reduce our working capital. The rent under this lease is based on a floating interest rate, but the lessors at our request can lock in a fixed interest rate at an interest rate premium. To the extent the lessors do not lock in a fixed interest rate, if interest rates increase, our rent obligation would also increase. The lease has a term of seven years. If we desire to remain in the facility upon lease expiration, we would need to refinance or buy the facility at the financed project cost. We cannot assure you that refinancing will be available on comparable terms, if at all. Further, in the event the facility is sold, we have a guarantee obligation which makes us responsible to the extent that the value of the facility is less than the financed project cost and which will reach a maximum guarantee obligation of approximately $175.5 million if the value of the facility declined below approximately 15% of the financed project cost. While we believe that this lease provides a useful financing mechanism for the facility, adverse public perception of such lease arrangements and the associated risks may cause our stock price to decline. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Off-Balance Sheet Arrangements".

To pursue our current business strategy and continue developing our products, we are likely to need substantial additional funding in the future. If we do not obtain this funding on acceptable terms, we may not be able to continue to grow our business and generate enough revenue to recover our investment in our product development effort.

Since inception, we have expended, and will continue to expend, substantial funds to continue our research and development programs. We are likely to need additional financing to fund our operating expenses and capital requirements. We may not be able to obtain additional financing on acceptable terms. If we raise additional funds by issuing equity securities, the new securities may dilute the interests of our existing stockholders or contain restrictive financial covenants.

Our need for additional funding will depend on many factors, including, without limitation:

- the amount of revenue, if any, that we are able to obtain from any approved products, and the time and costs required to achieve those revenues;
- the timing, scope and results of preclinical studies and clinical trials;
- the size and complexity of our programs;
- the time and costs involved in obtaining regulatory approvals;
- the cost of launching our products;
- the costs of commercializing our products, including marketing, promotional and sales costs;
- our ability to establish and maintain collaboration partnerships;
- competing technological and market developments;

- the costs involved in filing, prosecuting and enforcing patent claims; and
- scientific progress in our research and development programs.

If we are unable to raise additional funds, we may, among other things:

- delay, scale back or eliminate some or all of our research and development programs;
- delay, scale back or eliminate some or all of our commercialization activities;
- lose rights under existing licenses;
- relinquish more of, or all of, our rights to product candidates on less favorable terms than we would otherwise seek; and
- be unable to operate as a going concern.

Because our stock price has been and will likely continue to be volatile, the market price of our common stock may be lower or more volatile than you expected.

Our stock price, like the stock prices of other biotechnology companies, has been highly volatile. Since January 1, 2004, the closing price of our common stock has been as low as $8.54 per share and as high as $14.55 per share. The market price of our common stock could fluctuate widely because of:

- future announcements about our company or our competitors, including the results of testing, technological innovations or new commercial products;
- negative regulatory actions with respect to our potential products or regulatory approvals with respect to our competitors' products;
- changes in government regulations;
- developments in our relationships with our collaboration partners;
- developments affecting our collaboration partners;
- announcements relating to health care reform and reimbursement levels for new drugs, particularly oncology drugs;
- our failure to acquire or maintain proprietary rights to the gene sequences we discover or the products we develop;
- litigation; and
- public concern as to the safety of our products.

The stock market has experienced extreme price and volume fluctuations that have particularly affected the market price for many emerging and biotechnology companies. These fluctuations have often been unrelated to the operating performance of these companies. These broad market fluctuations may cause the market price of our common stock to be lower or more volatile than you expected.

Our insurance policies are expensive and protect us only from some business risks, which will leave us exposed to significant, uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. We currently maintain general liability, property, auto, workers' compensation, products liability and directors' and officers' insurance policies. We do not know, however, if we will be able to maintain existing insurance with adequate levels of coverage. For example, the premiums for our directors' and officers' insurance policy have increased over time, and this type of insurance may not be available on acceptable terms or at all. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our cash position and results of operations.

INTELLECTUAL PROPERTY RISKS

If patent laws or the interpretation of patent laws change, our competitors may be able to develop and commercialize our discoveries.

Important legal issues remain to be resolved as to the extent and scope of available patent protection for biotechnology products and processes in the U.S. and other important markets outside the U.S. We expect that litigation or administrative proceedings will likely be necessary to determine the validity and scope of certain of our and others' proprietary rights. We are currently involved in a number of administrative proceedings relating to the scope of protection of our patents and those of others. Any such litigation or proceeding may result in a significant commitment of resources in the future and could force us to do one or more of the following: cease selling or using any of our products that incorporate the challenged intellectual property, which would adversely affect our revenue; obtain a license from the holder of the intellectual property right alleged to have been infringed, which license may not be available on reasonable terms, if at all; and redesign our products to avoid infringing the intellectual property rights of third parties, which may be time-consuming or impossible to do. In addition, changes in, or different interpretations of, patent laws in the U.S. and other countries may result in patent laws that allow others to use our discoveries or develop and commercialize our products. We cannot assure you that the patents we obtain or the unpatented technology we hold will afford us significant commercial protection.

If our patent applications do not result in issued patents, our competitors may obtain rights to and commercialize the discoveries we attempted to patent.

Our pending patent applications, including those covering full-length genes and their corresponding proteins, may not result in the issuance of any patents. Our applications may not be sufficient to meet the statutory requirements for patentability in all cases or may be the subject of interference proceedings by the Patent and Trademark Office. These proceedings determine the priority of inventions and, thus, the right to a patent for technology in the U.S. We are involved in interference proceedings and may be involved in other interference proceedings in the future. We are also involved in opposition proceedings in connection with foreign patent filings and may be involved in other opposition proceedings in the future.

If others file patent applications or obtain patents similar to ours, then the Patent and Trademark Office may deny our patent applications, or others may restrict the use of our discoveries.

We are aware that others, including universities and companies working in the biotechnology and pharmaceutical fields, have filed patent applications and have been granted patents in the U.S. and in other countries that cover subject matter potentially useful or necessary to our business. Some of these patents and patent applications claim only specific products or methods of making products, while others claim more general processes or techniques useful in the discovery and manufacture of a variety of products. The risk of third parties obtaining additional patents and filing patent applications will continue to increase as the biotechnology industry expands. We cannot predict the ultimate scope and validity of existing patents and patents that may be granted to third parties, nor can we predict the extent to which we may wish or be required to obtain licenses to such patents, or the availability and cost of acquiring such licenses. To the extent that licenses are required, the owners of the patents could bring legal actions against us to claim damages or to stop our manufacturing and marketing of the affected products. We believe that there will continue to be significant litigation in our industry regarding patent and other intellectual property rights. If we become involved in litigation, it could consume a substantial portion of our resources.

Because issued patents may not fully protect our discoveries, our competitors may be able to commercialize products similar to those covered by our issued patents.

Issued patents may not provide commercially meaningful protection against competitors and may not provide us with competitive advantages. Other parties may challenge our patents or design around our issued patents or develop products providing effects similar to our products. In addition, others may discover uses for genes, proteins or antibodies other than those uses covered in our patents, and these other uses may be separately patentable. The holder of a patent covering the use of a gene, protein or antibody for which we have a patent claim could exclude us from selling a product for a use covered by its patent.

We rely on our collaboration partners to seek patent protection for the products they develop based on our research.

A significant portion of our future revenue may be derived from royalty payments from our collaboration partners. These partners face the same patent protection issues that we and other biotechnology firms face. As a result, we cannot assure you that any product developed by our collaboration partners will be patentable, and therefore, revenue from any such product may be limited, which would reduce the amount of any royalty payments. We also rely on our collaboration partners to effectively prosecute their patent applications. Their failure to obtain or protect necessary patents could also result in a loss of royalty revenue to us.

If we are unable to protect our trade secrets, others may be able to use our secrets to compete more effectively.

We may not be able to meaningfully protect our trade secrets. We rely on trade secret protection to protect our confidential and proprietary information. We believe we have acquired or developed proprietary procedures and materials for the production of proteins. We have not sought patent protection for these procedures. We have developed a substantial database concerning genes we have identified. While we have entered into confidentiality agreements with employees and academic collaborators, we may not be able to prevent their disclosure of these data or materials. Others may independently develop substantially equivalent information and processes.

REGULATORY RISKS

Because we are subject to extensive and changing government regulatory requirements, we may be unable to obtain government approval of our products in a timely manner.

Regulations in the U.S. and other countries have a significant impact on our research, product development and manufacturing activities and will be a significant factor in the marketing of our products. All of our products will require regulatory approval prior to commercialization. In particular, our products are subject to rigorous preclinical and clinical testing and other premarket approval requirements by the FDA and similar regulatory authorities in other countries. Various statutes and regulations also govern or influence the manufacturing, safety, labeling, storage, record keeping and marketing of our products. The lengthy process of seeking these approvals, and the subsequent compliance with applicable statutes and regulations, require the expenditure of substantial resources. Any failure by us to obtain, or any delay in obtaining, regulatory approvals could materially adversely affect our ability to commercialize our products in a timely manner, or at all.

Marketing Approvals. Before a product can be marketed and sold, the results of the preclinical and clinical testing must be submitted to the FDA for approval. This submission will be either a new drug application or a biologic license application, depending on the type of drug. In responding to a new drug application or a biologic license application, the FDA may grant marketing approval, request additional information or deny the application if it determines that the application does not provide an adequate basis for approval. We cannot assure you that any approval required by the FDA will be obtained on a timely basis, or at all.

In addition, the FDA may condition marketing approval on the conduct of specific post-marketing studies to further evaluate safety and efficacy. Rigorous and extensive FDA regulation of pharmaceutical products continues after approval, particularly with respect to compliance with current good manufacturing practices, or cGMPs, reporting of adverse effects, advertising, promotion and marketing. Discovery of previously unknown problems or failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions, any of which could materially adversely affect our business.

Foreign Regulation. We must obtain regulatory approval by governmental agencies in other countries prior to commercialization of our products in those countries. Foreign regulatory systems may be just as rigorous, costly and uncertain as in the U.S.

Negative public opinion and increased regulatory scrutiny of gene therapy, genetic testing and genetic research could prevent us from commercializing our products.

Ethical, social and legal concerns about gene therapy, genetic testing and genetic research could result in additional regulations restricting or prohibiting the processes we or our suppliers may use. Federal and state agencies, congressional committees and foreign governments have expressed interest in further regulating biotechnology. More restrictive regulations or claims that our products are unsafe or pose a hazard could prevent us from commercializing our products.

Because we are subject to environmental, health and safety laws, we may be unable to conduct our business in the most advantageous manner.

We are subject to various laws and regulations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use and disposal of hazardous or potentially hazardous substances used in connection with our research, including radioactive compounds and infectious disease agents. We also cannot accurately predict the extent of regulations that might result from any future legislative or administrative action. Any of these laws or regulations could cause us to incur additional expense or restrict our operations.

OTHER RISKS RELATED TO OUR BUSINESS

Many of our competitors have substantially greater capabilities and resources and may be able to develop and commercialize products before we do.

We face intense competition from a wide range of pharmaceutical and biotechnology companies, as well as academic and research institutions and government agencies.

Principal competitive factors in our industry include:

- the quality and breadth of an organization's technology;
- the skill of an organization's employees and its ability to recruit and retain skilled employees;
- an organization's intellectual property estate;
- the range of capabilities, from target identification and validation to drug discovery and development to manufacturing and marketing; and
- the availability of substantial capital resources to fund discovery, development and commercialization activities.

Many large pharmaceutical and biotechnology companies have significantly larger intellectual property estates than we do, more substantial capital resources than we have, and greater capabilities and experience than we do in preclinical and clinical development, sales, marketing, manufacturing and regulatory affairs.

We are aware of products in research or development by our competitors that address all of the diseases we are targeting. Any of these products may compete with our product candidates. Our competitors may succeed in developing their products before we do, obtaining approvals from the FDA or other regulatory agencies for their products more rapidly than we do, or developing products that are more effective than our products. These products or technologies might render our technology or drugs under development obsolete or noncompetitive. In addition, our fusion protein products are designed to be longer-acting versions of existing products. The existing product in many cases has an established market that may make the introduction of our product more difficult.

If we lose or are unable to attract key management or other personnel, we may experience delays in product development.

We depend on our senior executive officers as well as key scientific and other personnel. If any key employee decides to terminate his or her employment with us, this termination could delay the commercialization of our products or prevent us from becoming profitable. Further, we have not purchased key-man life insurance on any of our executive officers or key personnel, and therefore may not have adequate funds to find

acceptable replacements for them. Competition for qualified employees is intense among pharmaceutical and biotechnology companies, and the loss of qualified employees, or an inability to attract, retain and motivate additional highly skilled employees required for the expansion of our activities, could hinder our ability to complete human studies successfully and develop marketable products.

If the health care system or reimbursement policies change, the prices of our potential products may be lower than expected and our potential sales may decline.

The levels of revenues and profitability of biopharmaceutical companies like ours may be affected by the continuing efforts of government and third party payers to contain or reduce the costs of health care through various means. For example, in certain foreign markets, pricing or profitability of therapeutic and other pharmaceutical products is subject to governmental control. In the U.S. there have been, and we expect that there will continue to be, a number of federal and state proposals to implement similar governmental control. While we cannot predict whether any legislative or regulatory proposals will be adopted, the adoption of such proposals could have a material adverse effect on our business, financial condition and profitability. In addition, in the U.S. and elsewhere, sales of therapeutic and other pharmaceutical products depend in part on the availability of reimbursement to the consumer from third party payers, such as government and private insurance plans. Third party payers are increasingly challenging the prices charged for medical products and services. We cannot assure you that any of our products will be considered cost effective or that reimbursement to the consumer will be available or will be sufficient to allow us to sell our products on a competitive and profitable basis.

We may be unable successfully to establish a manufacturing capability and may be unable to obtain required quantities of our products economically.

We do not manufacture any products for commercial use and do not have any experience in manufacturing materials suitable for commercial use. We currently are having facilities constructed to establish additional manufacturing capabilities to allow us to meet our increasing clinical development needs and future commercial manufacturing requirements. The FDA must inspect and license these facilities to determine compliance with cGMP requirements for commercial production. We may not be able successfully to establish manufacturing capabilities or manufacture our products economically or in compliance with cGMPs and other regulatory requirements.

While we are expanding our manufacturing capabilities, we have contracted and may in the future contract with third party manufacturers or develop products with collaboration partners and use the collaboration partners' manufacturing capabilities. If we use others to manufacture our products, we will depend on those parties to comply with cGMPs, and other regulatory requirements and to deliver materials on a timely basis. These parties may not perform adequately. Any failures by these third parties may delay our development of products or the submission of these products for regulatory approval.

Because we currently have only a limited marketing capability, we may be unable to commercialize our products.

We do not have any marketed products. If we develop products that can be marketed, we intend to market the products either independently or together with collaborators or strategic partners. GlaxoSmithKline and others have co-marketing rights with respect to certain of our products. If we decide to market any products independently, we will incur significant additional expenditures and commit significant additional management resources to establish a sales force. For any products that we market together with partners, we will rely, in whole or in part, on the marketing capabilities of those parties. We may also contract with third parties to market certain of our products. Ultimately, we and our partners may not be successful in marketing our products.

Because we depend on third parties to conduct some of our laboratory testing and human studies, we may encounter delays in or lose some control over our efforts to develop products.

We are dependent on third-party research organizations to design and conduct some of our laboratory testing and human studies. If we are unable to obtain any necessary testing services on acceptable terms, we

may not complete our product development efforts in a timely manner. If we rely on third parties for laboratory testing and human studies, we may lose some control over these activities and become too dependent upon these parties. These third parties may not complete testing activities on schedule or when we request.

Our certificate of incorporation, bylaws and rights plan could discourage acquisition proposals, delay a change in control or prevent transactions that are in your best interests.

Provisions of our certificate of incorporation and bylaws, as well as Section 203 of the Delaware General Corporation Law, may discourage, delay or prevent a change in control of our company that you as a stockholder may consider favorable and may be against your best interest. We have also adopted a rights plan, or "poison pill," that may discourage, delay or prevent a change in control. Our certificate of incorporation and bylaws contain provisions that:

- authorize the issuance of up to 20,000,000 shares of "blank check" preferred stock that could be issued by our board of directors to increase the number of outstanding shares and discourage a takeover attempt;
- classify the directors of our board with staggered, three-year terms, which may lengthen the time required to gain control of our board of directors;
- limit who may call special meetings of stockholders; and
- establish advance notice requirements for nomination of candidates for election to the board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

ITEM 2. PROPERTIES

We currently lease and occupy approximately 1,018,000 square feet of laboratory, manufacturing and office space in Rockville, Maryland. Our space includes approximately 376,000 square feet of laboratory space, approximately 333,000 of manufacturing and manufacturing support space predominantly secured through long-term leases and approximately 309,000 square feet of office space. During 2005, we plan to exit from approximately 110,000 square feet of space, substantially all of which is laboratory space.

In addition, we are constructing a 291,000 square foot large-scale manufacturing facility that we expect to occupy in 2005.

For additional discussion of the financing of one of our leases, see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Off-Balance Sheet Arrangements."

We anticipate that existing commercial real estate or the available land located at our laboratory and office campus will enable us to continue to expand our operations in close proximity to one another. We believe that our properties are generally in good condition, well maintained, suitable and adequate to carry on our business.

ITEM 3. LEGAL PROCEEDINGS

We are not a party to any material pending legal proceedings, other than ordinary routine litigation incidental to our business.

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 the fiscal year ended December 31, 2004.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER'S MATTERS

Our common stock has been traded on the NASDAQ National Market System under the symbol HGSI since December 2, 1993. The following table presents the quarterly high and low closing prices as quoted by NASDAQ.

2003	**High**	**Low**
First Quarter	$ 9.36	$ 6.34
Second Quarter	$16.30	$ 8.51
Third Quarter	$16.36	$12.26
Fourth Quarter	$15.47	$11.81
2004	**High**	**Low**
First Quarter	$14.55	$11.37
Second Quarter	$14.10	$10.34
Third Quarter	$13.05	$ 8.54
Fourth Quarter	$12.02	$ 9.49

As of January 31, 2005, there were approximately 820 holders of record of our common stock. We have never declared or paid any cash dividends. We do not anticipate declaring or paying cash dividends for the foreseeable future, in part because existing contractual agreements prohibit such dividends. Instead, we will retain our earnings, if any, for the future operation and expansion of our business.

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

We present below our selected consolidated financial data for the years ended December 31, 2004, 2003 and 2002, and as of December 31, 2004 and 2003, which have been derived from the audited consolidated financial statements included elsewhere herein and should be read in conjunction with such consolidated financial statements and the accompanying notes. We present below our selected financial data for the years ended December 31, 2001 and 2000, and as of December 31, 2002, 2001 and 2000, which have been derived from audited financial statements not included herein. The results of operations of prior periods are not necessarily indicative of results that may be expected for any other period. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business." Per share amounts have been restated to reflect two two-for-one stock splits, paid in the form of stock dividends on January 28, 2000 and on October 5, 2000.

	Years Ended December 31,				
	2004	2003	2002	2001	2000
	(In thousands, except per share and ratio data)				
Statement of Operations Data:					
Revenue — research and development collaborative contracts	$ 3,831	$ 8,168	$ 3,568	$ 12,818	$ 22,068
Costs and expenses:					
Research and development:					
Direct expenditures	219,549	191,483	191,162	146,276	91,456
Charge for construction design changes	—	—	14,238	—	—
Purchased in-process research and development	—	—	—	—	134,050
Total research and development	219,549	191,483	205,400	146,276	225,506
General and administrative	35,728	43,608	44,175	38,714	27,083
Charge for restructuring	15,408	—	—	—	—
Total costs and expenses	270,685	235,091	249,575	184,990	252,589
Income (loss) from operations	(266,854)	(226,923)	(246,007)	(172,172)	(230,521)
Net investment income	21,523	41,599	58,449	81,228	46,008
Gain on extinguishment of debt	2,433	—	—	—	—
Charge for impaired investments	—	—	(32,158)	(22,314)	—
Debt conversion expenses	—	—	—	(3,894)	(50,818)
Income (loss) before taxes and cumulative effect of change in accounting principle (1)	(242,898)	(185,324)	(219,716)	(117,152)	(235,331)
Provision for income taxes	—	—	—	—	225
Net income (loss) before cumulative effect of change in accounting principle (1)	(242,898)	(185,324)	(219,716)	(117,152)	(235,556)
Cumulative effect of change in accounting principle (2)	—	—	—	—	(8,250)
Net income (loss) (1)	$ (242,898)	$ (185,324)	$ (219,716)	$ (117,152)	$(243,806)

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA, CONTINUED

	Years Ended December 31,				
	2004	2003	2002	2001	2000
	(In thousands, except per share and ratio data)				
Statement of Operations Data:					
Net income (loss) per share before cumulative effect of change in accounting principle, basic and diluted (1) (3)	$ (1.87)	$ (1.44)	$ (1.71)	$ (0.92)	$ (2.12)
Cumulative effect of change in accounting principle (2) (3)	—	—	—	—	(0.08)
Net income (loss) per share, basic and diluted (1) (3)	$ (1.87)	$ (1.44)	$ (1.71)	$ (0.92)	$ (2.20)
Pro forma amounts assuming the accounting change is applied retroactively:					
Net income (loss) (4)					$(235,556)
Net income (loss) per share, basic and diluted (3) (4)					$ (2.12)
Other Data:					
Ratio of earnings to fixed charges	—	—	—	—	—
Coverage deficiency (1)	$ (242,898)	$ (185,324)	$ (219,716)	$ (117,152)	$(235,331)

	As of December 31,				
	2004	2003	2002	2001	2000
	(In thousands)				
Balance Sheet Data:					
Cash, cash equivalents, short-term and restricted investments (5)	$ 952,686	$1,262,458	$1,491,740	$1,689,311	$1,774,640
Total assets (6)	1,249,385	1,466,204	1,662,187	1,865,004	1,948,525
Total debt and capital lease, less current portion (6)	505,131	503,664	503,281	503,970	533,146
Accumulated deficit	(1,129,769)	(886,871)	(701,547)	(481,831)	(364,679)
Total stockholders' equity	656,047	903,333	1,100,553	1,304,463	1,362,955

(1) For 2004, amounts include a net charge of $12,975, or $0.10 per share, arising from a charge for restructuring of $15,408, or $0.12 per share, that is partially offset by a gain on extinguishment of debt of $2,433, or $0.02 per share. For 2002, amounts include charges aggregating $46,396, or $0.36 per share, arising from a charge for an impaired investment and a charge for construction design changes of $32,158, or $0.25 per share, and $14,238, or $0.11 per share, respectively. For 2001, amounts include charges aggregating $26,208, or $0.20 per share, arising from a charge for an impaired investment and debt conversion expenses of $22,314, or $0.17 per share, and $3,894, or $0.03 per share, respectively. For 2000, amounts include charges aggregating $184,868, or $1.67 per share, arising from purchased in-process research and development and debt conversion expenses of $134,050, or $1.21 per share, and $50,818, or $0.46 per share, respectively.

(2) The cumulative effect of change in accounting principle is a one-time, non-cash charge relating to our implementation of Staff Accounting Bulletin No. 101 ("SAB 101"). SAB 101 was issued by the Securities and Exchange Commission (SEC) in December 1999. SAB 101 provided guidance related to revenue recognition policies based on interpretations and practices followed by the SEC. The impact of our implementation of SAB 101 was to defer revenue recognition for certain portions of the revenue we previously recognized under our collaborative agreements into future accounting periods. The SEC issued Staff Accounting Bulletin No. 104 ("SAB 104") in December 2003. SAB 104 superseded SAB 101 but the revenue recognition principles of SAB 101 remain largely unchanged by the issuance of SAB 104.

(3) 2000 amounts restated to reflect two two-for-one stock splits paid in the form of a stock dividend on January 28, 2000 and on October 5, 2000.

(4) Pro forma presentation of the accounting change is not applicable for 2004, 2003, 2002 and 2001 as the change was implemented in 2000, retroactive to January 1, 2000.

(5) "Cash, cash equivalents, short-term and restricted investments" for 2004, 2003, 2002, 2001 and 2000 includes $215,236, $280,776, $205,352, $144,901 and $12,332, respectively, of restricted investments relating to certain operating leases.

(6) "Total assets" for 2004, 2003, 2002, 2001 and 2000 includes $215,236, $280,776, $205,352, $144,901 and $12,332, respectively, of restricted investments relating to certain operating leases. "Total debt and capital lease, less current portion" for 2004, 2003 and 2002 does not include any operating lease obligations under various facility and equipment lease arrangements. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources" for additional discussion.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

Human Genome Sciences is a biopharmaceutical company with a pipeline of novel protein and antibody drugs directed toward large markets that have significant unmet medical need. Our goal is to build a global biopharmaceutical company that discovers, develops, manufactures and markets gene-based protein and antibody drugs to treat and cure disease.

We are conducting clinical trials with a number of our products. Our current focus is to advance clinical trials in two main therapeutic areas: immunology/infectious disease and oncology. Additional products are in clinical development by companies with which we are collaborating.

We have developed and continue to enhance the resources necessary to achieve our goal of becoming a fully integrated global biopharmaceutical company. We have expanded our manufacturing facilities to allow us to produce larger quantities of protein and antibody drugs for clinical development. We are also in the final construction phase of a large-scale manufacturing facility to increase our capacity for protein and antibody drug production. We are strengthening our commercial operations staff, and our intent is to add marketing and sales staff as needed as our products approach commercialization.

We have strategic partnerships with a number of leading pharmaceutical and biotechnology companies to leverage our strengths and to gain access to complementary technologies and sales and marketing infrastructure. Some of these partnerships provide us, and have provided us, with research funding, licensing fees, milestone payments and royalty payments as products are developed and commercialized. In some cases, we also are entitled to certain co-promotion, co-development, revenue sharing and other product rights.

We have not received any significant product sales revenue or royalties from product sales and any significant revenue from product sales or from royalties on product sales in the next several years is uncertain. To date, all of our revenue relates to payments made under our collaboration agreements with GlaxoSmithKline and, to a lesser extent, other agreements. The initial research term associated with the GlaxoSmithKline collaboration agreement and many of our other collaboration agreements expired in 2001 and those agreements will only generate additional milestone and royalty payments if our collaborators successfully develop drugs based on our technology. We may not receive any of these payments and may not be able to enter into additional collaboration agreements.

We expect that any significant revenue or income for at least the next several years may be limited to investment income, payments under various collaboration agreements to the extent milestones are met, payments from the sale of product rights and other payments from other collaborators and licensees under existing or future arrangements, to the extent that we enter into any future arrangements. We expect to continue to incur substantial expenses relating to our research and development efforts, as we focus on clinical trials required for the development of therapeutic protein, antibody and fusion protein product candidates. As a result, we expect to incur continued and significant losses over the next several years unless we are able to realize additional revenues under existing or new collaboration agreements. The timing and amounts of such revenues, if any, cannot be predicted with certainty and will likely fluctuate sharply. Results of operations for any period may be unrelated to the results of operations for any other period. In addition, historical results should not be viewed as indicative of future operating results.

Critical Accounting Policies and the Use of Estimates

A "critical accounting policy" is one that is both important to the portrayal of our financial condition and results and that requires management's most difficult, subjective or complex judgments. Such judgments are often the result of a need to make estimates about the effect of matters that are inherently uncertain. The preparation of our financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ

Critical Accounting Policies and the Use of Estimates (continued)

materially from those estimates. See Note B of the Notes to our Consolidated Financial Statements for further discussion.

We currently believe the following accounting policies to be critical:

We carry our cash, cash equivalents, investments, other assets, accounts payable and certain other accrued liabilities at their respective fair values. We periodically evaluate the fair values of our investments to determine whether any declines in the fair value of investments represent an other-than-temporary impairment. This evaluation consists of a review of several factors and is subjective in nature. If management determines that such an impairment exists we would recognize an impairment charge. Because we may determine that market or business conditions may lead us to sell a short-term investment prior to maturity, we classify our short-term investments as "available-for-sale." Investments in securities that are classified as available-for-sale and have readily determinable fair values are measured at fair market value in the balance sheets, and unrealized holding gains and losses for these investments are reported as a separate component of stockholders' equity until realized. If we held investments that were classified as "held-to-maturity" securities, these would be carried at amortized cost rather than at fair market value. If we held investments that were classified as "trading" securities, these would be carried at fair market value, with a corresponding adjustment to earnings for any change in fair market value.

We lease various real properties under operating leases that generally require us to pay taxes, insurance and maintenance. One of our operating leases is commonly referred to as a "synthetic lease." A synthetic lease is a form of off-balance sheet financing under which an unrelated third party funds 100% of the costs for the acquisition and/or construction of the property and leases the asset to the lessee. Under this lease, we provide a residual value guarantee which guarantees the lessor that the residual value of the leased asset will be at least equal to a specified amount at lease termination. We have determined that the entity that owns the property has sufficient substance such that it can be treated as an unrelated entity to us and, accordingly, does not require consolidation into our financial statements. Further, we have determined that the terms of the property lease qualify it as an operating lease under generally accepted accounting principles. Accordingly, this synthetic lease is treated as an operating lease for accounting purposes. Changes in the equity participation of the third parties or our obligation under the agreement could affect the classification of this lease from operating to capital. In that event, we would include both the cost and debt associated with the property on our consolidated balance sheet.

We recognize revenue from non-refundable up-front license fees where we have continuing involvement to provide access to our technology ratably over the period of obligation in accordance with the guidance provided in the SEC's Staff Accounting Bulletin No. 104 ("SAB 104"). SAB 104 supersedes Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements*. We recognize deferred revenues related to these obligations on a straight-line basis over the life of the obligation. Our revenues with Transgene, S.A. ("Transgene"), are being recognized on a straight-line basis over the shorter of the ten-year term of the agreement or prorated upon the selection of genes by Transgene. Our up-front license fee with GlaxoSmithKline ("GSK") in connection with our Albugon product ("GSK Albugon Agreement") is being recognized ratably over the estimated approximately seven-year clinical development period. Our other revenues in 2004 have been recognized in full upon receipt as we have no continuing obligation.

Revenue associated with performance milestones is recognized upon achievement of the milestones, as defined in the applicable agreement.

Research and development expenses primarily include related salaries, outside services, materials and supplies, and allocated facility costs. Such costs are charged to research and development expense as incurred. Our drug development expenses include accruals for clinical site and clinical research organization ("CRO") costs. We make estimates of the costs incurred to date but not yet invoiced in relation to clinical site costs and CRO costs. Estimates must be made and used in determining the accrued balance in any accounting period. Actual results could differ from those estimates under different assumptions.

Critical Accounting Policies and the Use of Estimates (continued)

We have stock option plans under which options to purchase shares of our common stock may be granted to employees, consultants and directors at a price no less than the fair market value on the date of grant. We account for grants to employees in accordance with the provisions of APB No. 25, *Accounting for Stock Issued to Employees* ("APB No. 25"). Under APB No. 25, compensation expense is based on the difference, if any, on the date of the grant between the fair value of our stock and the exercise price of the option and is recognized ratably over the vesting period of the option. Because our options must be granted with an exercise price equal to the quoted market value of our common stock at the date of grant, we recognize no stock compensation expense at the time of the grant in accordance with APB No. 25. If we were to adopt the fair value based method set forth in Statement of Financial Accounting Standards ("SFAS") No. 123, *Accounting for Stock-Based Compensation* ("SFAS No. 123"), we would recognize compensation expense based upon the fair value at the grant date for awards under the plans. We have provided pro forma disclosures in the notes to our consolidated financial statements of our net loss and net loss per share as if we used the fair value method. As discussed more fully in Note B of the Notes to our Consolidated Financial Statements, as a result of the issuance of SFAS No. 123(R) in December 2004, we expect to begin to expense the fair value of our options in the third quarter of 2005. The amount of compensation expense recognized using the fair value method requires us to exercise judgment and make assumptions relating to the factors that determine the fair value of our stock option grants. We account for equity instruments issued to non-employees in accordance with SFAS No. 123 and Emerging Issues Task Force Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling Goods or Services.*

We have engaged in restructuring actions and activities associated with expense reduction measures and operational improvement initiatives, which require us to make significant estimates in several areas including severance and other employee separation costs, the realizable values of assets deemed redundant or excess and the ability to generate sublease income which involves judgment as to our ability to terminate lease obligations at the amounts we have estimated. The amounts we have accrued represent our best estimate of the obligations we expect to incur in connection with these actions, but could be subject to change due to various factors including market conditions and the outcome of negotiations with third parties. Should the actual amounts differ from our estimates, the amount of restructuring charges could be materially impacted.

Results of Operations

Years Ended December 31, 2004 and 2003

Revenues. We had revenues of $3.8 million and $8.2 million for the years ended December 31, 2004 and December 31, 2003, respectively. The 2004 revenues consisted primarily of the recognition of $2.6 million from our collaboration with Transgene and a $1.0 million milestone payment from GSK relating to our 1996 agreement with GlaxoSmithKline (formerly SmithKline Beecham Corporation) ("1996 GSK Agreement"). We also recognized $0.2 million of the $5.0 million up-front license fee from GSK relating to the GSK Albugon Agreement. The 2003 revenues consisted of the recognition of an aggregate of $4.6 million in revenue received from Pfizer, Inc. ("Pfizer"), Genentech and MedImmune, Inc. ("MedImmune"); $2.6 million recognized from our collaboration with Transgene; and a $1.0 million milestone payment from GSK under the 1996 GSK Agreement.

Expenses. Research and development expenses increased to $219.5 million for the year ended December 31, 2004, from $191.5 million for the year ended December 31, 2003. We track our research and development expenditures by type of cost incurred — research, drug development, manufacturing and clinical development costs.

Our research costs decreased to $28.2 million for the year ended December 31, 2004 from $34.3 million for the year ended December 31, 2003. This decrease is due primarily to reduced general research activity and staff in the study of preclinical therapeutic protein and antibody drug candidates.

Our drug development costs, where we evaluate ways to develop or improve our product candidates and production processes, decreased to $49.9 million for the year ended December 31, 2004 from $56.5 million for

Results of Operations (continued)

Years Ended December 31, 2004 and 2003 (continued)

the year ended December 31, 2003. This decrease is due primarily to decreased process development activities for ABthrax and other projects, partially offset by increased activity for LymphoStat-B.

Our manufacturing costs increased to $82.5 million for the year ended December 31, 2004 from $60.0 million for the year ended December 31, 2003. This increase is due primarily to the increased production activities for TR2-J and payments made to a third-party manufacturer to provide materials in support of our increased LymphoStat-B clinical activities.

Our clinical development costs increased to $58.9 million for the year ended December 31, 2004 from $40.7 million for the year ended December 31, 2003. This increase is due primarily to the cost of continuing ongoing trials from 2003 for LymphoStat-B as well as initiating new trials in 2004.

The research and development expenditures noted above are categorized by functional area. We evaluate and prioritize our activities according to functional area, rather than on a per-project basis. For this reason, we do not maintain a formal accounting system that captures or allocates all costs, both direct and indirect, on a per-project basis. Therefore, we do not believe that our available project-by-project information would form a reasonable basis for disclosure to investors.

The charge for restructuring of $15.4 million for the year ended December 31, 2004 related to our first quarter of 2004 decision to sharpen our focus on our most promising drug candidates. In order to reduce significantly future expenses, and thus enable us to dedicate more resources to the most promising drugs, we reduced staff, streamlined operations and consolidated facilities. The charge consisted of $7.7 million for the consolidation of facilities, $5.2 million related to the recent retirement of our former Chairman and CEO and $2.5 million for employee severance benefits. See Note M of the Notes to the Consolidated Financial Statements for additional discussion.

General and administrative expenses decreased to $35.7 million for the year ended December 31, 2004 from $43.6 million for the year ended December 31, 2003. This decrease is due primarily to lower facility costs achieved through the consolidation of space and reduced marketing research costs.

Investment income decreased to $40.6 million for the year ended December 31, 2004 from $64.3 million for the year ended December 31, 2003, due to lower average cash and short-term investment balances and reduced yield due to declining interest rates in our portfolio. Investment income also includes realized net gains on our short-term and restricted investments of $4.6 million and $8.7 million for 2004 and 2003, respectively, along with a realized net gain of approximately $0.2 million relating to sale of our equity investments in Ciphergen Biosystems, Inc. (“Ciphergen”), Cambridge Antibody Technology Ltd. (“CAT”) and Transgene during 2004. Investment income also includes a realized gain of approximately $1.1 million on the sale of a portion of our equity investment in Ciphergen during 2003. See Note C of the Notes to Consolidated Financial Statements for additional discussion. The yield on our investments was 3.7% for the year ended December 31, 2004, as compared to 4.6% for the year ended December 31, 2003. Our average cash balance decreased during 2004 as a result of our net loss and capital expenditures in 2004. We believe investment income will continue to be lower than the prior year as our short-term investments mature and are reinvested at rates lower than previously obtained.

Interest expense decreased for the year ended December 31, 2004 compared to the year ended December 31, 2003, primarily due to $3.8 million and $1.0 million, respectively, of interest capitalized on the construction of the large-scale manufacturing facility. Assuming the cost of the manufacturing facility reaches approximately $234.9 million when construction is complete in 2005, total capitalized interest for all years could approximate $11.0 million at the time the facility is placed in-service. Total interest expense, before capitalized interest, was $22.9 million and $23.7 million for the years ended December 31, 2004 and 2003, respectively. In October 2004, a significant portion of our subordinated convertible notes was repurchased following the issuance of new subordinated convertible notes bearing a lower interest rate. As a result of this

Results of Operations (continued)

Years Ended December 31, 2004 and 2003 (continued)

activity, we believe interest expense will be approximately $4.8 million lower in 2005 than in 2004, excluding the impact of capitalized interest.

In 2004, we completed the private placement of $280.0 million of convertible subordinated notes. We used the net proceeds to repurchase an aggregate principal amount of $278.2 million of notes for an aggregate purchase price of $272.9 million. In 2004, we recorded a gain on the extinguishment of this debt of $2.4 million, net of unamortized debt refinancing costs associated with the repurchased debt.

Net Income (Loss). We recorded a net loss of $242.9 million, or $1.87 per share, for the year ended December 31, 2004, compared to a net loss of $185.3 million, or $1.44 per share, for the year ended December 31, 2003. The increased loss for 2004 compared to 2003 reflects an increase in direct research and development expenditures, a decrease in net investment income, and a charge for restructuring, partially offset by a decrease in general and administrative expenses and a gain on extinguishment of debt.

Excluding the charge for restructuring of $15.4 million, or $0.12 per share, and the gain on extinguishment of debt of $2.4 million, or $0.02 per share, our pro forma net loss of $229.9 million, or $1.77 per share, for the year ended December 31, 2004 would have compared to a net loss of $185.3 million, or $1.44 per share, for the year ended December 31, 2003 with the increased loss due primarily to increased direct research and development expenditures and reduced net investment income. These pro forma financial measures are not prepared in accordance with generally accepted accounting principles ("GAAP"). We refer to these non-GAAP financial measures in making operational decisions because they provide meaningful supplemental information regarding our operational performance and facilitate comparisons to our historical operating results.

Years Ended December 31, 2003 and 2002

Revenues. We had revenues of $8.2 million and $3.6 million for the years ended December 31, 2003 and December 31, 2002, respectively. The 2003 revenues consisted of the recognition of an aggregate of $4.6 million received from Pfizer, Genentech and from MedImmune; $2.6 million from our collaboration with Transgene; and a $1.0 million milestone payment relating to our 1996 GSK Agreement. The 2002 revenues consisted of the recognition of $2.6 million from our collaboration with Transgene and a $1.0 million milestone payment from GSK under the 1996 GSK Agreement.

Expenses. Research and development expenses decreased to $191.5 million for the year ended December 31, 2003 from $205.4 million for the year ended December 31, 2002, including a $14.2 million charge for construction design changes to the large-scale manufacturing facility in 2002. Excluding the $14.2 million charge, research and development expenses increased slightly to $191.5 million for the year ended December 31, 2003 from $191.2 million for the year ended December 31, 2002.

Our research costs decreased to $34.3 million for the year ended December 31, 2003 from $45.9 million for the year ended December 31, 2002. This decrease is due primarily to reduced activity in gene discovery and in the study of preclinical therapeutic protein drug candidates, including a decrease of $5.4 million in services and license fees to Dyax Corporation and a decrease of $4.0 million in collaboration payments to Cambridge Antibody Technology.

Our drug development costs, where we evaluate ways to develop or improve our product candidates and production processes, increased to $56.5 million for the year ended December 31, 2003 from $53.7 million for the year ended December 31, 2002. This increase is due primarily to increased process development activities for ABthrax and LymphoStat-B.

Our manufacturing costs increased to $60.0 million for the year ended December 31, 2003 from $56.7 million for the year ended December 31, 2002. This increase is due to the increased production for several product candidates and quality assurance activities within our process development and manufacturing facilities needed to support our increased clinical activities.

Results of Operations (continued)

Years Ended December 31, 2003 and 2002 (continued)

Our clinical development costs increased to $40.7 million for the year ended December 31, 2003 from $34.9 million for the year ended December 31, 2002. This increase is due primarily to the cost of continuing ongoing trials from 2002 as well as initiating new trials in 2003. The increased activity related primarily to LymphoStat-B and ABthrax.

The research and development expenditures noted above are categorized by functional area. We evaluate and prioritize our activities according to functional area, rather than on a per-project basis. For this reason, we do not maintain a formal accounting system that captures or allocates all costs, both direct and indirect, on a per-project basis. Therefore, we do not believe that our available project-by-project information would form a reasonable basis for disclosure to investors.

The charge for construction design changes of $14.2 million for the year ended December 31, 2002 related to our 2002 decision to modify the initial design of the large-scale manufacturing facility mentioned above.

General and administrative expenses decreased to $43.6 million for the year ended December 31, 2003 from $44.2 million for the year ended December 31, 2002. This decrease is due primarily to a $8.4 million decrease in legal expenses associated with filing and prosecuting patent applications relating to genes and proteins we discovered, mostly offset by a $6.4 million increase in facility and other costs relating primarily to the move of many of our laboratories and offices to a new facility.

Investment income decreased to $64.3 million for the year ended December 31, 2003 from $82.2 million for the year ended December 31, 2002, due to lower average cash and short-term investment balances and reduced yield due to declining interest rates. Investment income also includes realized net gains on our short-term and restricted investments of $8.7 million and $7.2 million for 2003 and 2002, respectively, along with a realized gain of approximately $1.1 million on the sale of approximately 69% of our equity investment in Ciphergen during the third quarter of 2003. See Note C of the Notes to Consolidated Financial Statements for additional discussion. The yield on our investments was 4.6% for the year ended December 31, 2003, as compared to 5.2% for the year ended December 31, 2002. Our average cash balance decreased during 2003 as a result of our net loss and capital expenditures in 2003.

Interest expense decreased for the year ended December 31, 2003 compared to the year ended December 31, 2002 due to interest capitalized in 2003 of $1.0 million on the construction of our large-scale manufacturing facility. Total interest expense, before capitalized interest, was $23.7 million for the year ended December 31, 2003.

The charge for impaired investment of $32.2 million for the year ended December 31, 2002 related to the reduction made to the carrying value in our equity investment in CAT. During the third quarter of 2002, we reduced the carrying value of this investment to $13.0 million from $45.2 million due to the significant decline in market value of CAT's shares that we believed may not be temporary. See Note C of the Notes to Consolidated Financial Statements for additional discussion.

Net Income (Loss). We recorded a net loss of $185.3 million, or $1.44 per share, for the year ended December 31, 2003, compared to a net loss of $219.7 million, or $1.71 per share, for the year ended December 31, 2002. The decreased loss for 2003 compared to 2002 reflects the absence of both a charge for construction design and a charge for impaired investment and an increase in revenue, partially offset by a decrease in net investment income.

Excluding the charge for construction design changes of $14.2 million, or $0.11 per share, and the charge for impaired investment of $32.2 million, or $0.25 per share, incurred in 2002, our net loss of $185.3 million, or $1.44 per share, for the year ended December 31, 2003 would have compared to a pro forma net loss of $173.3 million, or $1.35 per share, for the year ended December 31, 2002 with the increased loss due primarily to reduced net investment income partially offset by increased revenue. These pro forma financial measures are not prepared in accordance with GAAP. We refer to these non-GAAP financial measures in making

Results of Operations (continued)

Years Ended December 31, 2003 and 2002 (continued)

operational decisions because they provide meaningful supplemental information regarding our operational performance and facilitate comparisons to our historical operating results.

Liquidity and Capital Resources

We had working capital of $670.1 million at December 31, 2004 as compared to $943.9 million at December 31, 2003. The decrease in working capital is primarily due to our net loss and our capital expenditures during 2004. Our capital expenditures for 2004 included approximately $107.1 million for the construction of a large-scale manufacturing facility that we anticipate completing during 2005 at a total cost of approximately $234.9 million.

We expect to continue to incur substantial expenses relating to our research and development efforts, which may increase relative to historical levels as we focus on development and clinical trials required for the development of our active product candidates.

The amounts of expenditures that will be needed to carry out our business plan are subject to numerous uncertainties, which may adversely affect our liquidity and capital resources. We are proceeding with numerous clinical trials. We have several Phase 1 and Phase 2 trials underway and expect to initiate additional trials in the future. Completion of these trials may extend several years or more, but the length of time generally varies considerably according to the type, complexity, novelty and intended use of the drug candidate. We estimate that the completion periods for our Phase 1, Phase 2 and Phase 3 trials could span one year, one to two years and two to four years, respectively. The duration and cost of our clinical trials are a function of numerous factors such as the number of patients to be enrolled in the trial, the amount of time it takes to enroll them, the length of time they must be treated and observed, and the number of clinical sites and countries for the trial.

Liquidity and Capital Resources (continued)

Our drug development expenses are impacted by the clinical phase of our drug candidates. Our expenses increase as our drug candidates move to later phases of clinical development. The status of our clinical projects is as follows:

Product Candidate[1]	Indication	Clinical Trial Status[2] as of December 31, 2004	2003	2002
ACTIVE CANDIDATES:				
Antibodies:				
LymphoStat-B	Rheumatoid Arthritis	Phase 2	Phase 2	—
LymphoStat-B	Systemic Lupus Erythmatosus	Phase 2	Phase 2	Phase 1
HGS-ETR1	Cancer	Phase 2	Phase 1	Phase 1
HGS-ETR2	Cancer	Phase 1	Phase 1	—
HGS-TR2J	Cancer	Phase 1	—	—
CCR5 mAb	HIV	(3)	—	—
ABthrax	Anthrax	(4)	Phase 1	—
Albumin Fusion Proteins:				
Albuferon	Hepatitis C	Phase 2	Phase 1	Phase 1
INACTIVE CANDIDATES:				
Therapeutic Proteins:				
BlyS	Immunodeficiency	(5)	Phase 1	Phase 1
Mirostipen	Cancer	(5)	Phase 2	Phase 2
Repifermin	Mucositis	(5)	Phase 2	Phase 2
Repifermin	Wound Healing	(5)	Phase 2	Phase 2
Albumin Fusion Proteins:				
Albuleukin	Cancer	(5)	Phase 1	Phase 1
Albutropin	Growth deficiency	(5)	(5)	Phase 1
Other:				
LymphoRad^{131}	Cancer	Phase 1 (6)	Phase 1	Phase 1

(1) Includes only those candidates for which an Investigational New Drug application has been filed with the FDA

(2) Clinical Trial Status defined as when patients are being dosed

(3) IND filed in 2004; patient dosing anticipated to begin in 2005

(4) Further clinical development pending and dependent on U.S. Government commitment to purchase

(5) Clinical development discontinued in 2004 or prior

(6) Further clinical development anticipated to be discontinued in 2005

We identify our potential drug candidates by conducting numerous preclinical studies. We may conduct multiple clinical trials to cover a variety of indications for each drug candidate. Based upon the results from our trials, we may elect to discontinue clinical trials for certain indications or certain drugs in order to concentrate our resources on more promising drug candidates.

We are advancing many drug candidates, antibodies and albumin fusion proteins, in part to diversify the risks associated with our research and development spending. In addition, our manufacturing plants have been designed to enable multi-product manufacturing capability. Accordingly, we believe our future financial commitments, including those for preclinical, clinical or manufacturing activities, are not substantially dependent on any single drug candidate. Should we be unable to sustain a multi-product drug pipeline, our dependence on the success of one or a few drug candidates would increase.

Liquidity and Capital Resources (continued)

We must receive FDA clearance to advance each of our products into and through each phase of clinical testing. Moreover, we must receive FDA regulatory approval to launch any of our products commercially. In order to receive such approval, the FDA must conclude that our clinical data establish safety and efficacy and that our products and the manufacturing facilities meet all FDA requirements. We cannot be certain that we will establish sufficient safety and efficacy data to receive regulatory approval for any of our drugs or that our drugs and the manufacturing facilities will meet all FDA requirements.

In addition, part of our business plan includes collaborating with others. For example, GSK is developing products discovered by GSK as part of our collaboration with them. We have no control over the progress of GSK's development plans. While we have received an aggregate of $3.0 million from GSK in connection with development milestones met by GSK during 2004, 2003 and 2002 relating to our 1996 GSK Agreement, we cannot forecast with any degree of certainty the likelihood of receiving future milestone or royalty payments. We also cannot forecast with any degree of certainty whether any of our current or future collaborations will affect our drug development efforts and therefore, our capital and liquidity requirements.

Because of the uncertainties discussed above, the costs to advance our research and development projects are difficult to estimate and may vary significantly. We expect that our existing funds and investment income will be sufficient to fund our operations for at least the next twelve months.

Our future capital requirements and the adequacy of our available funds will depend on many factors, primarily including the scope and costs of our clinical development programs, the scope and costs of our manufacturing and process development activities and the magnitude of our discovery R&D program. There can be no assurance that any additional financing required in the future will be available on acceptable terms, if at all.

Depending upon market and interest rate conditions, we are exploring, and, from time to time, may take actions to strengthen further our financial position. In this regard, in the fourth quarter of 2004, we refinanced certain of our convertible subordinated debt and reduced our required restricted investments by approximately $76.0 million through the exit of one of our lease financings. We may further modify our lease financings and may further repurchase or restructure some or all of our outstanding convertible debt instruments in the future depending upon market and other conditions.

We have certain contractual obligations, including one which is not recorded on our balance sheets, which may have a future effect on our financial condition, changes in financial condition, results of operations, liquidity, capital expenditures or capital resources that is material to investors. See "Off-Balance Sheet Arrangements" below for additional discussion. Our operating leases, along with our unconditional purchase obligations, are not recorded on our balance sheets.

Liquidity and Capital Resources (continued)

These contractual obligations as of December 31, 2004 are summarized as follows:

	Payments Due by Period (dollars in millions)				
Contractual Obligations	Total	One year or less	Two to three years	Four to five years	After five years
Long-term debt	$504.8	$ —	$224.8	$ —	$280.0
Capital lease obligation	0.7	0.4	0.3	—	—
Operating leases	124.8	17.8	32.6	22.2	52.2
Rental obligation for facility lease with residual value guarantee (1) (2)	28.7	5.3	10.6	10.6	2.2
Unconditional purchase obligations (3)	13.4	13.4	—	—	—
Other long-term liabilities reflected on our balance sheets (4)	—	—	—	—	—
Total contractual cash obligations (5)	$672.4	$36.9	$268.3	$32.8	$334.4

(1) Certain of our current or future lease payments are based upon currently applicable interest rates. See additional discussion of this facility lease below.

(2) One of our operating leases contains a residual value guarantee described below.

(3) Our unconditional purchase obligations relate primarily to commitments for capital expenditures, consisting primarily of manufacturing space build-out and equipment. The amounts exclude anticipated, but not yet obligated costs, estimated at approximately $71.3 million associated with the completion of construction of our construction of our large-scale manufacturing facility.

(4) Because we cannot forecast with any degree of certainty whether any of our current collaborations will require us to make future milestone or royalty payments, we have excluded these amounts from the above table.

(5) For additional discussion of our debt obligations, including any "make-whole" premiums and lease commitments, see Notes H and I of the Notes to the Consolidated Financial Statements.

As of December 31, 2004, we had net operating loss carry forwards for federal income tax purposes of approximately $1.1 billion, which expire, if unused, by the year 2024. We also have available research and development tax credit and other tax credit carry forwards of approximately $41.0 million, the majority of which will expire, if unused, by the year 2024.

Our unrestricted and restricted funds may be invested in U.S. Treasury securities, government agency obligations, high grade corporate debt securities and various money market instruments rated "A" or better. Such investments reflect our policy regarding the investment of liquid assets, which is to seek a reasonable rate of return consistent with an emphasis on safety, liquidity and preservation of capital.

Off-Balance Sheet Arrangements

As of December 31, 2004, we have one lease agreement for a research and development and administrative facility (the "Traville lease") which has been structured as a synthetic lease and is accounted for as an operating lease. This structure provides us with cost-effective financing and future financing flexibility. None of our directors, officers or employees has any financial interest with regard to this lease arrangement.

The Traville lease has a term of approximately seven years beginning in 2003 and relates to a research and development and administrative facility located on the Traville site in Rockville, Maryland. The total financed cost of the Traville lease facility is $200.0 million. Construction of the Traville facility was substantially completed during 2003. Our rent obligation approximates the lessor's debt service costs plus a return on the lessor's equity investment. The rent under this lease is currently based on the rate for short-term commercial paper, but the lessor can lock in a fixed interest rate at any time at our request. To the extent the

Off-Balance Sheet Arrangements (continued)

lessor does not lock in a fixed interest rate, if interest rates increase, our rent obligations would also increase. If interest rates decrease, our rent obligations would decrease. The current floating rate was approximately 2.2% as of December 31, 2004.

Our restricted investments with respect to the Traville lease and other leases for the existing process development and manufacturing facility are expected to reach approximately $219.0 million. These restricted investments will serve as collateral for the duration of the leases. We will be required to restrict investments for the duration of the lease equal to 102% of the full amount of the $200.0 million financed project cost for the Traville lease, or $204.0 million, upon the payment of the remaining construction period obligations. Also, in connection with the Traville lease, we must maintain minimum levels of unrestricted cash, cash equivalents and marketable securities and certain debt ratios. In addition, we are required to maintain up to a maximum of $15.0 million in restricted investments with respect to the process development and manufacturing facility leases. Our restricted investments for all of these leases aggregated $215.2 million as of December 31, 2004 compared to $280.8 million as of December 31, 2003. The decrease in restricted investments is due primarily to our exit from a 2001 lease agreement for a research facility located at 9800 Medical Center Drive, near our Traville facility in Rockville, Maryland (the "9800 MCD lease"), which had been also structured as an operating lease. In connection with our exit from this facility, we obtained a release of both our restricted investments of approximately $76.0 million and our residual value guarantee of $64.6 million and we received cash of approximately $16.6 million. Also, to facilitate the transition from this space, we entered into a two-year operating sublease for this facility with the new lessee of this facility. This lease obligation is included in our operating leases in our contractual obligations table.

Under the Traville lease, we have the option to purchase the property during and at the end of the lease term for approximately $200.0 million. Alternatively, we can cause the property to be sold to third parties. We are contingently liable for the residual value guarantee associated with this property in the event the net sale proceeds are less than the original financed cost of the facility. We are contingently liable for the residual value guarantee associated with the Traville lease of approximately $175.5 million. See Note I of the Notes to the Consolidated Financial Statements for additional discussion.

We have entered into various equipment leases with rental payments aggregating $59.3 million over the lease terms which range from five to seven years. We must either purchase the equipment at the end of the initial term at the greater of fair market value or 20% of original cost or, in some cases, extend the term of the lease for an additional year. We have accounted for these leases as operating leases. Minimum annual rentals are approximately $10.2 million.

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995

Certain statements contained in "Business" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The forward-looking statements are based on our current intent, belief and expectations. These statements are not guarantees of future performance and are subject to certain risks and uncertainties that are difficult to predict. Actual results may differ materially from these forward-looking statements because of our unproven business model, our dependence on new technologies, the uncertainty and timing of clinical trials, our ability to develop and commercialize products, our dependence on collaborators for services and revenue, our substantial indebtedness and lease obligations, our changing requirements and costs associated with planned facilities, intense competition, the uncertainty of patent and intellectual property protection, our dependence on key management and key suppliers, the uncertainty of regulation of products, the impact of future alliances or transactions and other risks described in this filing and our other filings with the Securities and Exchange Commission. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of today's date. We undertake no obligation to update or revise the information contained in this announcement whether as a result of new information, future events or circumstances or otherwise.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We do not have operations of a material nature that are subject to risks of foreign currency fluctuations, nor do we use derivative financial instruments in our operations or investment portfolio. Our investment portfolio may only be comprised of low-risk U.S. Treasuries, government agency obligations, high-grade debt having at least an "A" rating and various money market instruments. The short-term nature of these securities, which currently have an average term of approximately 17 months, significantly decreases the risk of a material loss caused by a market change. We believe that a hypothetical 100 basis point adverse move (increase) in interest rates along the entire interest rate yield curve would adversely affect the fair value of our cash, cash equivalents and short-term and restricted investments by approximately $13.8 million, or approximately 1.5% of the aggregate fair value of $952.7 million, at December 31, 2004. For these reasons, and because these securities are generally held to maturity, we believe we do not have significant exposure to market risks associated with changes in interest rates related to our debt securities held as of December 31, 2004. We believe that any market change related to our investment securities held as of December 31, 2004 is not material to our consolidated financial statements. However, given the short-term nature of these securities, a general decline in interest rates will adversely affect the interest earned from our portfolio as securities mature and are replaced with securities having a lower interest rate. As of December 31, 2004, the yield on comparable two-year investments was approximately 3.1%, as compared to our current portfolio yield of approximately 3.2%.

As of December 31, 2004, the market values of our equity investments in Transgene, CAT and Corautus Genetics Inc. ("Corautus") were approximately $4.9 million, $13.7 million and $8.5 million, respectively. Our investments in Transgene and Corautus are subject to equity market risk. Our investment in CAT is denominated in pounds sterling and is subject to both foreign currency risk as well as equity market risk.

The facility lease we entered into during 2003 requires us to maintain minimum levels of restricted investments as collateral for this facility. By 2005, our maximum restricted investments for this lease could be approximately $204.0 million. Together with the requirement to maintain up to approximately $15.0 million in restricted investments with respect to our process development and manufacturing facility leases, our overall level of restricted investments will reach $219.0 million. Although the market value for these investments may rise or fall as a result of changes in interest rates, we will be required to maintain this level of restricted investments in both a rising or declining interest rate environment.

The rent under the Traville lease is based on a floating interest rate. We can direct the lessor to lock in a fixed interest rate. As of December 31, 2004, such a fixed rate for six years would be approximately 4.2% compared to the floating rate as of December 31, 2004 of approximately 2.2%. If interest rates increase, our rent obligations would also increase, which would result in an increase in our operating expenses.

Changes in interest rates do not affect interest expense incurred on the Company's convertible subordinated notes because they bear interest at fixed rates.

During 2002, we established a wholly-owned subsidiary, Human Genome Sciences Europe GmbH ("HGS Europe"), that will manage our clinical trials and clinical research collaborations in European countries. Although HGS Europe's activities are denominated primarily in euros, we believe the foreign currency fluctuation risks for 2005 to be immaterial to our operations as a whole. In February 2005, we established a wholly-owned subsidiary, Human Genome Sciences Pacific Pty Ltd. ("HGS Pacific") that will sponsor our clinical trials in the Asia\Pacific region. We currently do not anticipate HGS Pacific to have any operational activity and therefore we do not believe we will have any foreign currency fluctuation risks for 2005 with respect to HGS Pacific.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this item is set forth on pages F-1–F-35.

ITEM 9. CHANGES AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, including our principal executive and principal financial officers, has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2004. Our disclosure controls and procedures are designed to provide reasonable assurance that the information required to be disclosed in this annual report on Form 10-K has been appropriately recorded, processed, summarized and reported. Based on that evaluation, our principal executive and principal financial officers have concluded that our disclosure controls and procedures are effective at the reasonable assurance level.

Changes in Internal Control

Our management, including our principal executive and principal financial officers, has evaluated any changes in our internal control over financial reporting that occurred during the year ended December 31, 2004, and has concluded that there was no change that occurred during the year ended December 31, 2004 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management Report on Internal Control Over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Securities Exchange Act of 1934, as amended, as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the management of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2004. In making this assessment, the Company's management used the criteria

ITEM 9A. CONTROLS AND PROCEDURES (continued)

set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework.

Based on our assessment, management believes that, as of December 31, 2004, the Company's internal control over financial reporting is effective based on those criteria.

The Company's independent auditors have issued an audit report on our assessment of the Company's internal control over financial reporting which follows herein.

ITEM 9B. OTHER INFORMATION

None.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Board of Directors and Stockholders
Human Genome Sciences, Inc.
Rockville, Maryland

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

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

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

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

In our opinion, management's assessment that Human Genome Sciences, Inc. maintained effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on the COSO criteria. Also, in our opinion, Human Genome Sciences, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Human Genome Sciences, Inc. as of December 31, 2004 and 2003, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2004 and our report dated February 17, 2005 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

McLean, Virginia
February 17, 2005

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

We incorporate herein by reference the information concerning directors and executive officers in our Notice of Annual Stockholders' Meeting and Proxy Statement to be filed within 120 days after the end of our fiscal year (the "2005 Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

We incorporate herein by reference the information concerning executive compensation to be contained in the 2005 Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

We incorporate herein by reference the information concerning security ownership of certain beneficial owners and management to be contained in the 2005 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

We incorporate herein by reference the information concerning certain relationships and related transactions to be contained in the 2005 Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

We incorporate herein by reference the information concerning certain relationships and related transactions to be contained in the 2005 Proxy Statement.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this Annual Report:

(1) Index to Consolidated Financial Statements

	Page Number
Report of Ernst & Young LLP, Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets at December 31, 2004 and 2003	F-3
Consolidated Statements of Operations for the years ended December 31, 2004, 2003 and 2002	F-4
Consolidated Statements of Stockholders' Equity for the years ended December 31, 2004, 2003 and 2002	F-5
Consolidated Statements of Cash Flows for the years ended December 31, 2004, 2003 and 2002	F-6
Notes to Consolidated Financial Statements	F-8

(2) Financial Statement Schedules

Financial statement schedules are omitted because they are not required.

(3) Exhibits

Exhibit No.	
3.1*	Certificate of Incorporation of the Registrant (Filed as Exhibit 3.1 to the Registrant's Form 10-K for the fiscal year ended December 31, 1993, Exhibit 3.3 to the Form 10-K for the fiscal year ended December 31, 1997, Exhibit 3.1 to the Form 8-K filed December 16, 1999 and Exhibit 3.1 to the Form 10-Q filed July 31, 2001).
3.2*	By-laws of the Registrant (Filed as Exhibit 3.2 to the Registrant's Form 10-Q filed August 3, 2000).
4.1*	Form of Common Stock Certificate (Filed as Exhibit 4.1 to the Registrant's Form S-3 Registration Statement, as amended (Commission File No. 333-45272), filed September 6, 2000).
4.2*	Rights Agreement between the Registrant and American Stock Transfer & Trust Company, as Rights Agent, dated as of May 20, 1998 (Filed as Exhibit 4 to the Registrant's Form 8-K filed May 28, 1998).
4.3*	Indenture dated as of June 25, 1999 between the Registrant and The Bank of New York, as trustee, including the form of 5½% Convertible Subordinated Notes due 2006 (Filed as Exhibit 4.1 to the Registrant's Form 8-K filed June 28, 1999).
4.4*	Indenture dated as of February 1, 2000 between the Registrant and The Bank of New York, as trustee, including the form of 5% Convertible Subordinated Notes due 2007 (Filed as Exhibit 4.1 to the Registrant's Form 8-K filed February 2, 2000).
4.5*	Indenture dated as of March 10, 2000 between the Registrant and The Bank of New York, as trustee, including the form of 3¾% Convertible Subordinated Notes due 2007 (Filed as Exhibit 4.1 to the Registrant's Form 8-K filed March 13, 2000).
4.6*	Indenture dated as of October 4, 2004 between the Registrant and The Bank of New York, as trustee, including the form of 2¼% Convertible Subordinated Notes due 2011 (Filed as Exhibit 4.1 to the Registrant's Form 8-K filed October 4, 2004).
10.1*	Employment Agreement, dated February 25, 1997, with William A. Haseltine, Ph.D. (Filed as Exhibit 10.44 to the Registrant's Form 10-K for the fiscal year ended December 31, 1996).
10.2*	Retirement Agreement, dated March 24, 2004, with William A. Haseltine, Ph.D. (Filed as Exhibit 99.3 to the Registrant's Form 8-K filed March 26, 2004).

Exhibit No.	
10.3*	Employment Agreement, dated May 6, 2004, with Craig A. Rosen, Ph.D. (Filed as Exhibit 10.1 to the Registrant's Form 10-Q filed August 6, 2004).
10.4*	Employment Agreement, dated November 21, 2004, with H. Thomas Watkins (Filed as Exhibit 10.1 to the Registrant's Form 8-K filed November 23, 2004).
10.5	Form of Executive Agreement, dated December 21, 2004, individually with Steven C. Mayer, James H. Davis, Ph.D., David C. Stump, M.D. and Susan Bateson McKay.
10.6*	2000 Stock Incentive Plan, as amended (Filed as Exhibit A to the Registrant's Definitive Proxy Statement on Schedule 14A filed April 18, 2001 and Annexes A and B to the Registrant's Definitive Proxy Statement on Schedule 14A filed April 16, 2004).
10.7*	Amended and Restated 2000 Employee Stock Purchase Plan dated May 21, 2003 (Filed as Exhibit 10.7 to the Registrant's Form 10-Q file on August 11, 2003).
10.8*	Lease Agreement between Maryland Economic Development Corporation and Human Genome Sciences, Inc., dated December 1, 1997 (Filed as Exhibit 10.67 to the Registrant's Form 10-K for the fiscal year ended December 31, 1997).
10.9*	Lease Agreement between Maryland Economic Development Corporation and Human Genome Sciences, Inc. dated December 1, 1999 (Filed as Exhibit 10.43 to the Registrant's Form 10-K for the fiscal year ended December 31, 1999).
10.10*	Amended and Restated Participation Agreement and Appendix A to the Amended and Restated Participation Agreement between Human Genome Sciences, Inc., Wachovia Development Corporation and the other parties named therein dated June 30, 2003 (Filed as Exhibit 10.2 to the Registrant's Form 10-Q filed August 11, 2003).
10.11*	Amended and Restated Lease Agreement between Wachovia Development Corporation and Human Genome Sciences, Inc. dated June 30, 2003 (Filed as Exhibit 10.3 to the Registrant's Form 10-Q filed August 11, 2003).
10.12*	Amended and Restated Agency Agreement between Wachovia Development Corporation and Human Genome Sciences, Inc. dated June 30, 2003 (Filed as Exhibit 10.4 to the Registrant's Form 10-Q filed August 11, 2003).
10.13*	Amended and Restated Security Agreement between Wachovia Development Corporation and Wachovia Bank, National Association, and accepted and agreed to by Human Genome Sciences, Inc., dated June 30, 2003 (Filed as Exhibit 10.5 to the Registrant's Form 10-Q filed August 11, 2003).
10.14*	Amended and Restated Assignment of Liquid Collateral Agreement between Human Genome Sciences, Inc. and Wachovia Development Corporation dated June 30, 2003 (Filed as Exhibit 10.6 to the Registrant's Form 10-Q filed August 11, 2003).
10.15*	Omnibus Agreement between Maryland Economic Development Corporation, Wells Fargo Bank Northwest, National Association, Human Genome Sciences, Inc., Allfirst Bank, a division of M&T Bank and the other parties named therein dated June 26, 2003.
10.16*	Lease Agreement between Wells Fargo Bank Northwest, National Association as Trustee under Trust Agreement and Human Genome Sciences, Inc. dated October 25, 2001 (Filed as Exhibit 10.22 to the Registrant's Form 10-K for the fiscal year ended December 31, 2001 and amended by Exhibit 10.15 hereto).
10.17*	Cash Collateral Pledge Agreement between Human Genome Sciences, Inc., Allfirst Bank and Allfirst Trust Company National Association dated October 25, 2001 (Filed as Exhibit 10.23 to the Registrant's Form 10-K for the fiscal year ended December 31, 2001).
10.18*	Guarantee by Human Genome Sciences, Inc. as Guarantor in favor of Allfirst Bank, as Agent dated October 25, 2001 (Filed as Exhibit 10.24 to the Registrant's Form 10-K for the fiscal year ended December 31, 2001 and amended by Exhibit 10.15 hereto).
10.19*	Amendment No. 1 dated March 29, 2002 to Lease Agreement between Wells Fargo Bank Northwest, National Association as Trustee under Trust Agreement and Human Genome Sciences, Inc. dated October 25, 2001 (Filed as Exhibit 10.25 to the Registrant's Form 10-K for the fiscal year ended December 31, 2001).

Exhibit No.	
10.20*	Amendment No. 1 dated March 29, 2002 to Guarantee by Human Genome Sciences, Inc. as Guarantor in favor of Allfirst Bank, as Agent dated October 25, 2001 (Filed as Exhibit 10.26 to the Registrant's Form 10-K for the fiscal year ended December 31, 2001).
12.1	Ratio of Earnings to Fixed Charges.
21.1	Subsidiaries.
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
31.1	Rule 13a-14(a) Certification of Principal Executive Officer.
31.2	Rule 13a-14(a) Certification of Principal Financial Officer.
32.1	Section 1350 Certification of Chief Executive Officer.
32.2	Section 1350 Certification of Chief Financial Officer.

* Incorporated by reference.

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.

HUMAN GENOME SCIENCES, INC.

By: /s/ H. Thomas Watkins
H. Thomas Watkins
Chief Executive Officer

Dated: March 15, 2005

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

Signature	Title	Date
/s/ H. Thomas Watkins H. Thomas Watkins	Chief Executive Officer and Director	March 15, 2005
/s/ Craig A. Rosen, Ph.D. Craig A. Rosen, Ph.D.	President and Chief Scientific Officer and Director	March 15, 2005
/s/ Steven C. Mayer Steven C. Mayer	Executive Vice President and Chief Financial Officer (principal financial and accounting officer)	March 15, 2005
/s/ Argeris N. Karabelas, Ph.D. Argeris N. Karabelas, Ph.D.	Chairman of the Board	March 15, 2005
/s/ Betsy S. Atkins Betsy S. Atkins	Director	March 15, 2005
/s/ Richard J. Danzig Richard J. Danzig	Director	March 15, 2005
/s/ Jürgen Drews, M.D. Jürgen Drews, M.D.	Director	March 15, 2005
/s/ Kathryn E. Falberg Kathryn E. Falberg	Director	March 15, 2005
/s/ Augustine Lawlor Augustine Lawlor	Director	March 15, 2005
/s/ Max Link, Ph.D. Max Link, Ph.D.	Director	March 15, 2005
/s/ William D. Young William D. Young	Director	March 15, 2005

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Human Genome Sciences, Inc.
Rockville, Maryland

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

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

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

We have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Human Genome Sciences, Inc.'s internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations for the Treadway Commission and our report dated February 17, 2005 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

McLean, Virginia
February 17, 2005

HUMAN GENOME SCIENCES, INC.

CONSOLIDATED BALANCE SHEETS

	December 31, 2004	December 31, 2003
	(dollars in thousands, except share and per share amounts)	
Assets		
Current assets:		
Cash and cash equivalents	$ 24,075	$ 33,269
Short-term investments	713,375	948,413
Prepaid expenses and other current assets	5,678	6,297
Total current assets	743,128	987,979
Long-term investments	27,081	24,055
Property, plant and equipment (net of accumulated depreciation and amortization)	243,741	154,717
Restricted investments	215,236	280,776
Other assets	20,199	18,677
TOTAL ASSETS	$ 1,249,385	$1,466,204
Liabilities and Stockholders' Equity		
Current liabilities:		
Current portion of capital lease obligation	$ 328	$ 338
Accounts payable and accrued expenses	63,127	32,121
Accrued payroll and related taxes	6,229	9,060
Deferred revenues	3,309	2,568
Total current liabilities	72,993	44,087
Long-term debt	504,815	503,020
Capital lease obligation, net of current portion	316	644
Deferred revenues, net of current portion	9,210	7,703
Other liabilities	6,004	7,417
Total liabilities	593,338	562,871
Stockholders' equity:		
Preferred stock — $0.01 par value; shares authorized — 20,000,000; no shares issued	—	—
Common stock — $0.01 par value; shares authorized — 400,000,000; shares issued of 130,527,029 and 129,433,448 at December 31, 2004 and 2003, respectively	1,305	1,294
Additional paid-in capital	1,775,005	1,762,191
Accumulated other comprehensive income	9,506	26,719
Accumulated deficit	(1,129,769)	(886,871)
Total stockholders' equity	656,047	903,333
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 1,249,385	$1,466,204

The accompanying Notes to Consolidated Financial Statements are an integral part hereof.

HUMAN GENOME SCIENCES, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2004	2003	2002
	(dollars in thousands, except share and per share amounts)		
Revenue — research and development collaborative contracts	$ 3,831	$ 8,168	$ 3,568
Costs and expenses:			
Research and development:			
Direct expenditures	219,549	191,483	191,162
Charge for construction design changes	—	—	14,238
Total research and development	219,549	191,483	205,400
General and administrative	35,728	43,608	44,175
Charge for restructuring	15,408	—	—
Total costs and expenses	270,685	235,091	249,575
Income (loss) from operations	(266,854)	(226,923)	(246,007)
Investment income	40,553	64,297	82,195
Interest expense	(19,030)	(22,698)	(23,746)
Gain on extinguishment of debt	2,433	—	—
Charge for impaired investment	—	—	(32,158)
Income (loss) before taxes	(242,898)	(185,324)	(219,716)
Provision for income taxes	—	—	—
Net income (loss)	$ (242,898)	$ (185,324)	$ (219,716)
Basic and diluted net income (loss) per share	$ (1.87)	$ (1.44)	$ (1.71)
Weighted average shares of common stock outstanding, basic and diluted	130,041,071	129,112,670	128,591,153

The accompanying Notes to Consolidated Financial Statements are an integral part hereof.

HUMAN GENOME SCIENCES, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(dollars in thousands, except share amounts)

	Common Stock		Additional Paid-In Capital	Unearned Portion of Compensatory Stock Options	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Shares	Amount					
Balance — December 31, 2001	128,278,407	$1,283	$1,753,235	$ (294)	$ 32,070	$ (481,831)	$ 1,304,463
Comprehensive income (loss):							
Net loss	—	—	—	—	—	(219,716)	(219,716)
Unrealized gain on investments	—	—	—	—	11,285	—	11,285
Comprehensive income (loss)							(208,431)
Exercises of 495,207 and 76,937 options relating to employee stock option and stock purchase plans, respectively	572,144	6	4,250	—	—	—	4,256
Compensatory stock options issued	—	—	200	(200)	—	—	—
Compensatory stock options earned	—	—	—	265	—	—	265
Balance — December 31, 2002	128,850,551	1,289	1,757,685	(229)	43,355	(701,547)	1,100,553
Comprehensive income (loss):							
Net loss	—	—	—	—	—	(185,324)	(185,324)
Unrealized gain (loss) on investments	—	—	—	—	(16,636)	—	(16,636)
Comprehensive income (loss)							(201,960)
Exercises of 485,534 and 97,363 options relating to employee stock option and stock purchase plans, respectively	582,897	5	4,506	—	—	—	4,511
Compensatory stock options earned	—	—	—	229	—	—	229
Balance — December 31, 2003	129,433,448	1,294	1,762,191	—	26,719	(886,871)	903,333
Comprehensive income (loss):							
Net loss	—	—	—	—	—	(242,898)	(242,898)
Unrealized gain (loss) on investments	—	—	—	—	(17,220)	—	(17,220)
Cumulative translation adjustment	—	—	—	—	7	—	7
Comprehensive income (loss)							(260,111)
Exercises of 1,022,625 and 70,956 options relating to employee stock option and stock purchase plans, respectively	1,093,581	11	8,663	—	—	—	8,674
Stock option modification expense	—	—	4,151	(4,151)	—	—	—
Compensatory stock options earned	—	—	—	4,151	—	—	4,151
Balance — December 31, 2004	130,527,029	$1,305	$1,775,005	$ —	$ 9,506	$(1,129,769)	$ 656,047

The accompanying Notes to Consolidated Financial Statements are an integral part hereof.

HUMAN GENOME SCIENCES, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2004	2003	2002
	(dollars in thousands)		
Cash flows from operating activities:			
Net income (loss)	$(242,898)	$(185,324)	$(219,716)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Accrued interest on short-term investments	7,501	7,088	12,050
Depreciation and amortization	21,579	22,477	18,837
(Gain) Loss due to disposal of property, plant and equipment	(7,189)	456	214
Compensation expense related to stock options	4,151	229	265
Gain on extinguishment of long-term debt	(2,433)	—	—
Gain on sale of investments	(4,900)	(9,424)	(7,253)
Charge for impaired investment	—	—	32,158
Charge for construction design changes	—	—	14,238
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets	619	4,132	(281)
Other assets	5,195	1,558	5,948
Accounts payable and accrued expenses	8,471	(10,333)	(2,097)
Accrued restructuring charges	14,468	—	—
Accrued payroll and related taxes	(2,831)	1,149	2,311
Deferred revenues	2,248	(2,568)	(2,568)
Other liabilities	(4,843)	(644)	373
Net cash provided by (used in) operating activities	(200,862)	(171,204)	(145,521)
Cash flows from investing activities:			
Capital expenditures — property, plant and equipment	(109,589)	(67,801)	(58,704)
Proceeds from sale of property, plant and equipment	16,600	29,157	—
Purchase of investments	(417,536)	(702,894)	(548,018)
Proceeds from sale and maturities of investments	634,452	993,195	744,139
Net cash provided by investing activities	123,927	251,657	137,417
Cash flows from financing activities:			
Proceeds from long-term debt	271,483	—	—
Release of restricted investments	80,706	—	—
Restricted investments	(19,891)	(98,488)	(58,581)
Proceeds from sale of restricted investments	—	22,247	—
Proceeds from issuance of common stock	8,673	4,511	4,256
Extinguishment of long-term debt	(272,892)	—	—
Repayment of long-term debt	—	(448)	(444)
Payments on capital lease	(338)	(211)	(241)
Net cash provided by (used in) financing activities	67,741	(72,389)	(55,010)
Net (decrease) increase in cash and cash equivalents	(9,194)	8,064	(63,114)
Cash and cash equivalents — beginning of year	33,269	25,205	88,319
Cash and cash equivalents — end of year	$ 24,075	$ 33,269	$ 25,205
Supplemental disclosures of cash flow information:			
Cash paid during the year for:			
Interest	$ 22,760	$ 21,486	$ 21,574
Income taxes	$ —	$ —	$ —

The accompanying Notes to Consolidated Financial Statements are an integral part hereof.

SUPPLEMENTAL SCHEDULE OF NON-CASH FINANCING ACTIVITIES
(DOLLARS IN THOUSANDS):

During 2003, the Company terminated an existing capital lease for computer equipment with a remaining obligation and net book value of $269 and $254, respectively. Principal payments of $211 and $241 were made for 2003 and 2002, respectively. The Company also entered into a capital lease for computer equipment with an aggregate value of $982, with thirty-six monthly payments of $29 of principal and interest. Principal payments of $353 were made during 2004. No principal payments were made during 2003. In 2003, the Company tendered its equity interest in Vascular Genetics, Inc. (“VGI”), a privately-held company, in exchange for approximately an 18% equity interest, as of 2003, in Corautus Genetics Inc. (“Corautus”), a publicly-traded company that resulted from the merger of VGI and GenStar Therapeutics Corporation. As of the date of this exchange, the Company had no carrying value in its equity interest in VGI. Immediately following this transaction, the market value of the Company’s investment in Corautus was approximately $5,659.

The accompanying Notes to Consolidated Financial Statements are an integral part hereof.

(NOTE A) — The Company

Human Genome Sciences, Inc. (the "Company") was incorporated and commenced operations on June 26, 1992. The Company is a biopharmaceutical company with a pipeline of novel protein and antibody drugs directed toward large markets that have significant unmet medical need. The Company's goal is to build a global biopharmaceutical company that discovers, develops, manufactures and markets gene-based protein and antibody drugs to treat and cure disease.

The Company is conducting clinical trials with a number of its products. The Company's current focus is to advance clinical trials in two main therapeutic areas: immunology/infectious disease and oncology. Additional products are in clinical development by companies with which the Company is collaborating.

The Company has developed and continues to enhance the resources necessary to achieve its goal of becoming a fully integrated global biopharmaceutical company. The Company has expanded its manufacturing facilities to allow it to produce larger quantities of protein and antibody drugs for clinical development. The Company is also in the final construction phase of a large-scale manufacturing facility to increase its capacity for protein and antibody drug production. The Company is strengthening its commercial operations staff, and its intent is to add marketing and sales staff as needed as the Company's products approach commercialization.

The Company has strategic partnerships with a number of leading pharmaceutical and biotechnology companies to leverage its strengths and to gain access to complementary technologies and sales and marketing infrastructure. Some of these partnerships provide the Company, and have provided the Company, with research funding, licensing fees, milestone payments and royalty payments as products are developed and commercialized. In some cases, the Company also is entitled to certain co-promotion, co-development, revenue sharing and other product rights. The Company's revenues are currently derived from license fees and milestone payments under collaboration agreements. The Company does not yet generate any revenues from product sales. The Company, which operates primarily in the United States, believes it operates in a single business segment.

(NOTE B) — Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Such estimates are based on historical experience and on various other assumptions that the Company believes to be reasonable under the circumstances. Actual results could differ from these estimates under different assumptions or conditions.

Principles of Consolidation

The consolidated financial statements include the accounts of Human Genome Sciences, Inc. and its subsidiaries. All significant intercompany accounts and transactions have been eliminated.

Cash Equivalents and Short-term and Long-term Investments

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

The Company classifies its short-term and long-term investments as "available-for-sale." Investments in securities that are classified as available-for-sale and have readily determinable fair values are measured at fair

(NOTE B) — Summary of Significant Accounting Policies (continued)

Cash Equivalents and Short-Term and Long-Term Investments (continued)

market value in the balance sheets, and unrealized holding gains and losses for these investments are reported as a separate component of stockholders' equity until realized. Additionally, certain of the Company's investments are held as restricted investments. See Note C, Investments, for additional information.

Investment Risk

The Company has invested its cash in obligations of the U.S. Government, government agencies and in high-grade corporate debt securities and various money market instruments. The Company's investment policy limits investments to certain types of instruments issued by institutions with credit ratings of "A" or better, and places restrictions on maturities and concentrations in certain industries and by issuer.

Other-than-Temporary Impairment of Investments

Periodically, the Company evaluates whether any investments have incurred an other-than-temporary impairment, based on the criteria established in Statement of Financial Accounting Standards ("SFAS") No. 115, *Accounting for Certain Investments in Debt and Equity Securities* and Emerging Issues Task Force ("EITF") Issue No. 03-1 ("EITF No. 03-1"), *The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments*. This evaluation consists of a review of several factors, including but not limited to the length of time and extent that a security has been in an unrealized loss position, the existence of an event that would impair the issuer's future earnings potential, the near term prospects for recovery of the market value of a security and the intent and ability of the Company to hold the security until the market value recovers. If the Company determines that such an impairment exists, the Company will recognize a charge in the consolidated statement of operations equal to the amount of such impairment.

Depreciation and Amortization

Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the assets as follows:

Laboratory equipment	3 - 10 years
Computer equipment and software	3 - 5 years
Furniture and office equipment	3 - 5 years
Leasehold improvements	lesser of the lease term or the useful life

Impairment of Long-Lived Assets

Periodically, management determines whether any property and equipment or any other assets have been impaired based on the criteria established in SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*. In 2004, the Company recorded a charge relating to the property and equipment at one of its facilities. See Note M, Charge for Restructuring, for additional discussion.

Fair Value of Financial Instruments

The carrying amounts for the Company's cash and cash equivalents, investments, other assets, accounts payable and certain other accrued liabilities reflected in the consolidated balance sheets at December 31, 2004 and 2003 approximate their respective fair values. The fair value of the Company's investments is based on quoted market prices. See Note C, Investments, for additional discussion.

(dollars in thousands, except share and per share data)

(NOTE B) — Summary of Significant Accounting Policies (continued)

Fair Value of Financial Instruments (continued)

The fair value of the Company's long-term debt is based on quoted market prices. See Note H, Long-Term Debt, for additional discussion.

Stock-Based Compensation

The Company accounts for its stock-based compensation under the intrinsic value method in accordance with the provisions of APB Opinion No. 25, *Accounting for Stock Issued to Employees* ("APB No. 25") and has provided the pro forma disclosures of net loss and net loss per share in accordance with SFAS No. 123, *Accounting for Stock-Based Compensation* ("SFAS No. 123") using the fair value method. Under APB No. 25, compensation expense is based on the difference, if any, on the date of the grant between the fair value of the Company's stock and the exercise price of the option and is recognized ratably over the vesting period of the option. The Company accounts for equity instruments issued to non-employees in accordance with SFAS No. 123 and Emerging Issues Task Force Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling Goods or Services.* See Note J, Stockholders' Equity, for further information.

In accordance with SFAS No. 148, *Accounting for Stock-Based Compensation — Transition and Disclosure* ("SFAS 148"), the effect on net loss and net loss per share if the Company had applied the fair value recognition provisions of SFAS No. 123 to stock-based employee compensation is as follows:

	Year Ended December 31,		
	2004	2003	2002
Net income (loss), as reported	$(242,898)	$(185,324)	$(219,716)
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects	(110,562)	(109,152)	(118,897)
Add: Stock-based compensation included in net income (loss)	4,151	229	265
Pro forma net income (loss)	$(349,309)	$(294,247)	$(338,348)
Net income (loss) per share:			
Basic and diluted — as reported	$ (1.87)	$ (1.44)	$ (1.71)
Basic and diluted — pro forma	$ (2.69)	$ (2.28)	$ (2.63)

For the years ended December 31, 2004, 2003 and 2002, diluted net income (loss) per share is the same as basic net income (loss) per share as the inclusion of outstanding stock options and convertible debt would be antidilutive.

The effect of applying SFAS No. 123 on 2004, 2003 and 2002 pro forma net loss and net loss per share as stated above is not necessarily representative of the effects on reported net loss for future years due to, among other things, (1) the vesting period of the stock options and (2) the fair value of additional stock option grants in future years. See Note B, Summary of Significant Accounting Policies, Recent Accounting Pronouncements, for additional discussion of revisions to SFAS 123 effective in 2005.

(NOTE B) — Summary of Significant Accounting Policies (continued)

Revenue Recognition

Collaborative research and development agreements can provide for one or more of license fees, research payments, additional payments and milestone payments. Agreements with multiple components (“deliverables” or “items”) are evaluated to determine if the deliverables can be divided into more than one unit of accounting. An item can generally be considered a separate unit of accounting if all of the following criteria are met: (1) the delivered item(s) has value to the customer on a stand-alone basis; (2) there is objective and reliable evidence of the fair value of the undelivered item(s); and (3) if the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in control of the Company. Items which cannot be divided into separate units are combined with other units of accounting, as appropriate. Consideration received is allocated among the separate units based on their respective fair values or based on the residual value method and is recognized in full when the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the sales price is fixed or determinable; and (4) collectibility is probable. The Company deems service to have been rendered if no continuing obligation exists on the part of the Company. Revenue associated with performance milestones is recognized based upon the achievement of the milestones, as defined in the respective agreements. Revenue from non-refundable, up-front license fees where the Company has a continuing obligation is recognized ratably over the term of the continuing obligation. Payments received in advance of work performed are recorded as deferred revenue.

The Company recognizes nonrefundable fees related to certain arrangements monthly over the term of the related research collaboration agreement.

Research and Development

Research and development costs, including internal expenditures, as well as contracted research and development, are charged to expense as incurred. Research and development costs include salaries and related benefits, outside services, materials and supplies, building costs and allocations of certain support costs. Research and development direct expenditures were $219,549, $191,483 and $191,162 for 2004, 2003 and 2002, respectively.

Financing Costs Related to Long-term Debt

Costs associated with obtaining long-term debt are deferred and amortized over the term of the related debt.

Patent Application Costs

Patent application costs are charged to expense as incurred.

Capitalization of Interest

Interest costs associated with the construction of significant facilities are capitalized as part of the cost of the facilities using the Company’s weighted-average borrowing rate. Capitalized interest costs were $3,839 and $1,025 for 2004 and 2003, respectively. There were no capitalized interest costs for 2002.

Net Income (Loss) Per Share

The Company follows the provisions of SFAS No. 128, *Earnings Per Share,* which requires the Company to present basic and diluted earnings per share. The Company’s basic and diluted loss per share are calculated by dividing the net loss by the weighted average number of shares of common stock outstanding during all periods

(dollars in thousands, except share and per share data)

(NOTE B) — Summary of Significant Accounting Policies (continued)

Net Income (Loss) Per Share (continued)

presented. Options to purchase stock and convertible debt are included in diluted earnings per share calculations, unless the effects are anti-dilutive.

Comprehensive Income (Loss)

SFAS No. 130, *Reporting Comprehensive Income,* requires unrealized gains or losses on the Company's available-for-sale short-term securities and long-term investments and the activity for the cumulative translation adjustment to be included in other comprehensive income.

Comprehensive income (loss) amounted to:

	Year Ended December 31,		
	2004	2003	2002
Net income (loss)	$(242,898)	$(185,324)	$(219,716)
Net unrealized gains (losses):			
Short-term investments	(15,018)	(17,161)	13,264
Long-term investments	7,370	10,765	(28,754)
Restricted investments	(4,725)	(434)	1,817
Foreign currency translation	7	—	—
Subtotal	(12,366)	(6,830)	(13,673)
Reclassification adjustments for realized gains included in net loss	(4,847)	(9,806)	(7,200)
Impairment charge relating to investment in CAT	—	—	32,158
Total comprehensive income (loss)	$(260,111)	$(201,960)	$(208,431)

The effect of income taxes on items in other comprehensive income is $0 for all periods presented.

During the third quarter of 2004, the Company sold a total of 145,338 shares of Cambridge Antibody Technology Ltd. ("CAT"), a long-term investment, for total net proceeds of $1,357, and realized a loss of $20. The Company also sold 11,667 shares of Transgene, S.A., a long-term investment, for net proceeds of $111, and realized a loss of $8.

During the second quarter of 2004, the Company sold 246,275 shares of Cambridge Antibody Technology Ltd., for net proceeds of $2,266, and realized a loss of $68.

During the first quarter of 2004, the Company sold its remaining 66,767 shares of Ciphergen Biosystems, Inc., a long-term investment, for net proceeds of $662, and realized a gain of $352.

During the second quarter of 2003, the Company tendered its equity interest in Vascular Genetics, Inc. ("VGI"), a privately-held company, in exchange for approximately an 18% equity interest in Corautus, a publicly-traded company that resulted from the merger of VGI and GenStar Therapeutics Corporation. As of the date of this exchange, the Company had no carrying value in its equity interest in VGI. Immediately following this transaction, the market value of the Company's investment in Corautus was approximately $5,659. As a result, the Company recorded an unrealized gain equal to the market value for this long-term investment as of the date of this exchange.

(NOTE B) — Summary of Significant Accounting Policies (continued)

Comprehensive Income (Loss) (continued)

During the third quarter of 2002, the Company recorded an impairment charge relating to its investment in CAT in the amount of $32,158 due to the significant reduction in market value of CAT's shares that the Company believed may not be temporary and reversed the previously-recorded unrealized loss relating to this investment. As a result, the Company had an adjusted cost of $13,079, as determined by the current market value of CAT's publicly-traded common stock, and no unrealized loss as of the date of the charge. As of December 31, 2004, the Company's remaining investment in CAT had a market value of $13,691 and an unrealized gain of $4,323.

Related Parties

The Company's equity investments in Transgene, CAT and Corautus make them related parties with the Company. In 2004, 2003 and 2002, the Company recognized revenue of $2,568 each year relating to a 1998 collaboration agreement with Transgene. In 2004, 2003 and 2002, the Company amortized $1,200 each year for research support costs paid to CAT in connection with a 2000 collaboration agreement. In 2003 and 2002, the Company paid $1,000 and $4,000, respectively, to CAT, in connection with two collaboration agreements. The Company made no payments to CAT in 2004. The Company had no other material related party transactions during 2004, 2003 or 2002.

Recent Accounting Pronouncements

In March 2004, the Financial Accounting Standards Board ("FASB") ratified the recognition and measurement guidance and certain disclosure requirements for impaired securities as described in EITF No. 03-1. The recognition and measurement guidance has been applied to other-than-temporary impairment evaluations in reporting periods beginning after June 30, 2004. The adoption of EITF No. 03-1 did not have a material effect on the Company's results of operations, financial condition or liquidity.

In December 2004, the Financial Accounting Standards Board issued SFAS 123 (revised 2004), *Share-Based Payment* ("SFAS 123(R)"), which is a revision of SFAS No. 123. SFAS 123(R) supersedes APB No. 25 and amends SFAS No. 95, *Statement of Cash Flows.* Generally, the approach in SFAS 123(R) is similar to the approach described in SFAS 123. However, SFAS 123(R) *requires* all share-based payments to employees, including grants of employee stock options, to be recognized in the statement of operations based on their fair values. Pro forma disclosure is no longer an alternative.

SFAS 123(R) must be adopted no later than July 1, 2005. Early adoption will be permitted in periods in which financial statements have not yet been issued. The Company expects to adopt SFAS 123(R) on July 1, 2005.

SFAS 123(R) permits public companies to adopt its requirements using one of two methods:

A "modified prospective" method in which compensation cost is recognized beginning with the effective date (a) based on the requirements of SFAS 123(R) for all share-based payments granted after the effective date and (b) based on the requirements of SFAS 123 for all awards granted to employees prior to the effective date of SFAS 123(R) that remain unvested on the effective date.

A "modified retrospective" method which includes the requirements of the modified prospective method described above, but also permits entities to restate based on the amounts previously recognized under Statement 123 for purposes of pro forma disclosures either (a) all prior periods presented or (b) prior interim periods of the year of adoption.

(NOTE B) — Summary of Significant Accounting Policies (continued)

Recent Accounting Pronouncements (continued)

The Company expects to adopt SFAS 123(R) using the modified prospective method.

As permitted by SFAS 123, the Company currently accounts for share-based payments to employees using APB No. 25's intrinsic value method and, as such, generally recognizes no compensation cost for employee stock options. Accordingly, the adoption of SFAS 123(R)'s fair value method will have an impact on the Company's result of operations, although it will have no impact on the Company's overall financial position. The full impact of adoption of SFAS 123(R) cannot be predicted at this time because it will depend on levels of share-based payments granted in the future and on other factors such as stock price volatility and future employee exercise behavior. However, had the Company adopted SFAS 123(R) in prior periods, the impact of that standard would have approximated the impact of Statement 123 as described in the disclosure of pro forma net income and earnings per share in Note B to the Company's consolidated financial statements. Based upon the fair value of unvested options as of December 31, 2004, the Company believes that the expense to be recorded in its consolidated statements of operations for the last two quarters of 2005 will aggregate approximately $25,000, assuming no material stock option cancellations and excluding the expense associated with any 2005 stock option grants. SFAS 123(R) also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow as required under current literature. This requirement will reduce net operating cash flows and increase net financing cash flows in periods after adoption.

Because the Company has been in a net operating loss position, it has not been recording any benefits of excess tax deductions as an operating cash flow in its consolidated statements of cash flows.

Sources of Supply

The Company is currently able to obtain its chemicals and equipment from various sources, and therefore, has no dependence upon a single supplier. No assurance can be given that the Company will be able to continue to obtain commercial quantities at costs that are not economically prohibitive.

(dollars in thousands, except share and per share data)

(NOTE C) — Investments

Investments, including accrued interest, at December 31, 2004 and 2003 were as follows:

	December 31, 2004			
Available for Sale	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury and agencies	$ 204,062	$ 263	$(2,317)	$ 202,008
Corporate debt securities	513,063	1,921	(3,617)	511,367
Subtotal — Short-term investments	717,125	2,184	(5,934)	713,375
Investment in Transgene	3,298	1,564	—	4,862
Investment in CAT	9,368	4,323	—	13,691
Investment in Corautus	—	8,528	—	8,528
Subtotal — Long-term investments	12,666	14,415	—	27,081
Cash and cash equivalents	1,567	—	—	1,567
U.S. Treasury and agencies	88,237	130	(779)	87,588
Corporate debt securities	126,597	422	(938)	126,081
Subtotal — Restricted investments	216,401	552	(1,717)	215,236
Total	$ 946,192	$17,151	$(7,651)	$ 955,692

	December 31, 2003			
Available for Sale	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury and agencies	$ 315,090	$ 4,528	$ (473)	$ 319,145
Corporate debt securities	618,132	11,993	(857)	629,268
Subtotal — Short-term investments	933,222	16,521	(1,330)	948,413
Investment in Transgene	3,365	1,187	—	4,552
Investment in CAT	13,079	—	(1,472)	11,607
Investment in Ciphergen	311	452	—	763
Investment in Corautus	—	7,133	—	7,133
Subtotal — Long-term investments	16,755	8,772	(1,472)	24,055
Cash and cash equivalents	8,907	—	—	8,907
U.S. Treasury and agencies	110,982	1,612	(96)	112,498
Corporate debt securities	156,659	2,948	(236)	159,371
Subtotal — Restricted investments	276,548	4,560	(332)	280,776
Total	$1,226,525	$29,853	$(3,134)	$1,253,244

(dollars in thousands, except share and per share data)

(NOTE C) — Investments (continued)

The Company's gross unrealized losses and fair value of investments with unrealized losses were as follows:

	December 31, 2004					
	Loss Position For Less Than Twelve Months		Loss Position For Greater Than Twelve Months		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Treasury and agencies	$111,879	$1,507	$31,140	$ 810	$143,019	$2,317
Corporate debt securities	325,319	3,347	7,570	270	332,889	3,617
Subtotal — Short-term investments	437,198	4,854	38,710	1,080	475,908	5,934
U.S. Treasury and agencies	62,073	764	425	15	62,498	779
Corporate debt securities	77,699	885	2,683	53	80,382	938
Subtotal — Restricted investments	139,772	1,649	3,108	68	142,880	1,717
Total	$576,970	$6,503	$41,818	$1,148	$618,788	$7,651

	December 31, 2003					
	Loss Position For Less Than Twelve Months		Loss Position For Greater Than Twelve Months		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Treasury and agencies	$ 52,683	$ 473	$ —	$ —	$ 52,683	$ 473
Corporate debt securities	106,853	857	—	—	106,853	857
Subtotal — Short-term investments	159,536	1,330	—	—	159,536	1,330
Investment in CAT	—	—	11,607	1,472	11,607	1,472
Subtotal — Long-term investments	—	—	11,607	1,472	11,607	1,472
U.S. Treasury and agencies	23,393	96	—	—	23,393	96
Corporate debt securities	32,810	236	—	—	32,810	236
Subtotal — Restricted investments	56,203	332	—	—	56,203	332
Total	$215,739	$1,662	$11,607	$1,472	$227,346	$3,134

Short-term and Restricted investments — unrealized losses

The unrealized losses on the Company's investments in U.S. Treasury obligations and direct obligations of U.S. Government agencies were caused by increases in the general level of interest rates. Given the terms and provisions of these investments, it is not expected that these securities would be settled at a price less than the amortized cost of the Company's investments. Because the Company has the ability and intent to hold these investments until a recovery of fair value, which may be maturity, the Company does not believe these investments to be other-than-temporarily impaired as of December 31, 2004 and 2003.

The unrealized losses on the Company's investments in corporate debt securities were caused by increases in the general level of interest rates. The Company does not believe it is probable that it will be unable to collect

(dollars in thousands, except share and per share data)

(NOTE C) — Investments (continued)

Short-term and Restricted investments — unrealized losses (continued)

all amounts due according to the contractual terms of these investments. Therefore, it is not expected that all the securities would be settled at a price less than the amortized cost of the investments. Because the Company has the ability and intent to hold these investments until a recovery of fair value, which may be maturity, the Company does not believe these investments to be other-than-temporarily impaired as of December 31, 2004 and 2003.

Long-term investments — unrealized losses

The unrealized loss on the Company's investment in CAT, a biotechnology company, as of December 31, 2003 was due to a general decline in equity values that began in 2000. In 2002, the Company determined that its investment in CAT had incurred an other-than-temporary impairment, and accordingly, made an adjustment to the carrying value of this investment. While the fair value of CAT continued to decline during 2003, the Company evaluated the near-term prospects of CAT and given the Company's ability and intent to hold this investment for a reasonable period of time sufficient for a forecasted recovery of fair value, the Company did not consider this investment to be other-than-temporarily impaired as of December 31, 2003. During 2004, the fair value of CAT has increased such that the Company has an unrealized gain on its investment in CAT, based upon its adjusted carrying value, as of December 31, 2004.

The following table summarizes maturities of the Company's short-term and restricted investment securities at December 31, 2004:

	Short-term Investments		Restricted Investments	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Less than one year	$101,267	$101,578	$ 63,926	$ 64,071
Due in year two through year three	544,334	540,438	122,084	120,765
Due in year four though year five	57,656	57,318	30,391	30,400
Due after five years	13,868	14,041	—	—
Total	$717,125	$713,375	$216,401	$215,236

The Company's short-term investments include mortgage-backed securities with an aggregate cost of $127,900 and an aggregate fair value of $126,160 at December 31, 2004. The Company's restricted investments include mortgage-backed securities with an aggregate cost of $40,556 and an aggregate fair value of $40,037 at December 31, 2004. These securities have no single maturity date and, accordingly, have been allocated on a pro rata basis to each maturity range based on each maturity range's percentage of the total value.

The Company's restricted investments with respect to certain leases will reach a maximum of approximately $219,000. At December 31, 2004 and 2003, the Company had pledged $215,236 and $280,776, respectively, in connection with its leases, which is classified as Restricted investments on the consolidated balance sheets. As a result of the lease restructurings in June 2003 and December 2004, the Company no longer maintains any restricted investments with respect to the large-scale manufacturing facility and the research facility located at 9800 Medical Center Drive. See Note I, Commitments and Other Matters, for additional discussion. In addition, as described in Note H, Long-Term Debt, the Company had pledged $651 as of December 31, 2003 in connection with a 1994 loan agreement, which was fully repaid in 2003.

(dollars in thousands, except share and per share data)

(NOTE C) — Investments (continued)

Long-term investments — unrealized losses (continued)

The Company's gross proceeds, realized gains and realized losses from its investments are as follows:

	Year Ended December 31,		
	2004	2003	2002
Gross proceeds	$688,802	$814,492	$483,061
Realized gains	$ 6,543	$ 11,338	$ 7,782
Realized losses	$ (1,696)	$ (1,532)	$ (582)

Realized gains and losses relate to the Company's short-term, restricted and long-term investments are included in investment income in the consolidated statement of operations. The cost of the securities sold is based on the specific identification method.

See Note B, Summary of Significant Accounting Policies, Comprehensive Income, for additional discussion of the Company's investment activity.

(NOTE D) — Collaboration Agreements

Agreements with GlaxoSmithKline (formerly SmithKline Beecham Corporation)

In May 1993, the Company entered into a collaboration agreement as amended, providing GlaxoSmithKline ("GSK"), formerly SmithKline Beecham Corporation, a first right to develop and market products in human and animal healthcare ("GSK Products"), based upon human genes identified by the Company. In June 1996, this agreement was substantially amended (the "1996 GSK Agreement"). Under the 1996 GSK Agreement, the Company is entitled to (1) royalties on the net sales of certain GSK Products developed pursuant to the agreement, (2) product development progress payments and (3) the option to co-promote up to 20% of any product developed by GSK under the collaboration agreement. In each of 2004, 2003 and 2002, the Company received $1,000 from GSK in connection with development milestones met by GSK during the year. The Company has been informed that GSK is pursuing research programs involving specific genes for the creation of small molecule, protein and antibody drugs. The Company cannot provide any assurance that any of these programs will be continued or result in any approved drugs.

In October 2004, the Company entered into an agreement with GSK under which GSK acquired exclusive worldwide rights to develop and commercialize Albugon, a drug currently in late-stage preclinical development by the Company for potential use in the treatment of diabetes. The Company received an up-front fee and is recognizing this revenue ratably over the clinical development period, which is approximately seven years. The Company recognized $185 as revenue for the year ended December 31, 2004. The Company is also entitled to receive milestone payments and royalties under this agreement.

Other Collaboration Agreements related to the 1996 GSK Agreement

During 1995 and 1996, the Company entered into several other collaboration agreements related to the 1996 GSK Agreement. These included a 1995 Option and License Agreement with Takeda Chemical Industries, Ltd. ("Takeda") and a 1996 agreement among the Company, GSK, Schering Corporation and Schering-Plough Ltd., Sanofi-Synthelabo S.A., and Merck KGaA (collectively "Additional Collaboration Partners"). With respect to Takeda, during 2002, Takeda discontinued development of one product and exercised its option to develop and commercialize a second product in Japan. Takeda exercised no further options prior to June 30, 2004, the date at which the option period expired. The Company is entitled to royalties based on the sale of Takeda products covered by the Option and License Agreement and certain milestone payments. With

(NOTE D) — Collaboration Agreements (continued)

Other Collaboration Agreements related to the 1996 GSK Agreement (continued)

respect to the 1996 agreement among the Additional Collaboration Partners, the Company is entitled to license fees, research payments, milestone payments and royalties. The initial research term associated with this 1996 agreement expired in June 2001.

The Company has been informed that the Additional Collaboration Partners have been pursuing research programs involving specific genes for the creation of small molecule, protein and antibody drugs. The Company cannot provide any assurance that any of these programs will be continued or result in any approved drugs.

Other Collaborative and License Agreements

Since 1995, the Company has entered into a number of other agreements. These include a 1995 collaboration and license agreement with MedImmune, Inc., which was amended in 1996 and 1997, as well as collaborative agreements with Pioneer Hi-Bred International, Inc., Pharmacia & Upjohn Company, Schering-Plough Ltd. and F. Hoffman-La Roche, Ltd. In 2003, Pfizer Corporation (which acquired Pharmacia & Upjohn) and the Company amended the Pharmacia agreement. The Company received and recognized in full the license fee paid as a result of the amendment. The Company received no other payments and did not recognize any revenues in 2004, 2003 or 2002 pursuant to these other agreements.

In March 1998, the Company entered into a gene therapy collaboration agreement with Transgene, of Strasbourg, France. Under this agreement, the Company received a 10% equity interest in Transgene, valued at $25,679 based on the quoted market value of Transgene's common stock in exchange for giving Transgene the right to develop and co-market gene therapy products from ten genes selected by Transgene from the Company's database. The Company initially recorded its investment in Transgene at its market value, with a corresponding entry to deferred revenue. The Company is recognizing the $25,679 of revenue from this transaction over the shorter of the ten-year term of the agreement or prorated upon the selection of genes by Transgene. Deferred revenue remaining for Transgene was $7,703 and $10,271 as of December 31, 2004 and 2003, respectively. The Company recognized $2,568 as revenue in each of 2004, 2003 and 2002.

In August 1999, the Company entered into a collaborative agreement with Cambridge Antibody Technology Ltd. of Melbourn, United Kingdom to jointly pursue the development of fully human monoclonal antibody therapeutics. Under the agreement, CAT will conduct research to identify fully human monoclonal antibodies specific for the Company's proprietary proteins. CAT will receive milestone payments from the Company in connection with the development of any such antibodies as well as royalty payments on the Company's net sales of such licensed product following regulatory approval. During 2002, the Company paid CAT $1,500 for one milestone payment pursuant to this agreement. The agreement provides for additional payments to CAT for each product relating to the achievement of milestones corresponding to the regulatory approval process. In the event of the achievement of other milestones or successful product launch, the Company would be obligated to pay CAT additional compensation and royalties. Subject to early termination under certain circumstances, this agreement will expire on the later of the expiration date of certain CAT patents or ten years after the date of first commercial sale of a product licensed by the Company.

In December 1999, the Company entered into a collaborative agreement, which was amended in 2001, with Abgenix, Inc. ("ABX"), of Fremont, California to exchange technology to identify novel human antibody drug candidates for development and commercialization. The Company has the right to use ABX's proprietary technology to generate fully human antibody drug candidates. During 2003, the Company exercised its option to develop a fully human antibody and paid $100 to ABX in accordance with the terms of this agreement. During 2004, the Company paid ABX $400 for one milestone payment pursuant to this agreement. In

(NOTE D) — Collaboration Agreements (continued)

Other Collaborative and License Agreements (continued)

addition, ABX has a future option to develop and commercialize products derived from the Company's pool of novel human antibody drug candidates. Under this reciprocal agreement, depending upon which party's product moves through the regulatory approval process, the Company or ABX would be obligated to the other for milestone payments for each therapeutic product or each diagnostic product along with royalties in the event of a successful product launch. Subject to early termination under certain circumstances, this agreement will expire upon the satisfaction of each party's royalty obligations.

In February 2000, the Company entered into a second agreement with Cambridge Antibody Technology. The ten-year agreement provides the Company with rights to use CAT technology to develop and sell an unlimited number of fully human antibodies for therapeutic and diagnostic purposes. The Company also has rights to use CAT antibody technology for the use and sale of research tools, for which the Company will pay CAT a share of revenues received. The Company will also pay CAT clinical development milestones and royalties based on product sales. The Company and CAT may also plan to combine resources to develop and sell therapeutic antibody products. CAT has the right to select up to twenty-four of the Company's proprietary antigens for laboratory development. The Company has the option to share clinical development costs and to share the profits equally with CAT on up to eighteen such products. CAT has rights to develop six such products on its own. The Company is entitled to clinical development milestones and royalty payments on the products developed by CAT. Under this same agreement, the Company paid CAT $12,000 for future research support and made an equity investment in CAT. The Company has sold a portion of this equity investment and as of December 31, 2004, owned approximately 3% of CAT. In 2001, the Company exercised an option to enter into an exclusive development partnership with CAT relating to a fully human monoclonal antibody and paid $1,000 to CAT in accordance with the terms of this agreement. During 2002, the Company paid CAT an aggregate of $2,500 relating to the exercise of two options and one clinical milestone payment pursuant to this agreement. During 2003, the Company paid CAT an aggregate of $1,000 relating to two clinical milestones reached pursuant to this agreement. No milestone payments were made in 2004.

In March 2000, the Company entered into an agreement with Dyax Corporation ("Dyax"), which was amended in July 2001. The agreement, as amended, provides the Company with rights to use Dyax's technology for ten years to develop an unlimited number of therapeutic and diagnostic products which the Company may elect to market itself or to out-license. Concluding with the first quarter of 2003, Dyax had provided various research services in exchange for support payments made by the Company. In August 2003, the Company entered into an agreement with Genentech, Inc. ("Genentech") which granted Genentech exclusive, worldwide patent rights to develop and commercialize therapeutic biologic products for human use based on a human gene discovered by the Company. In 2003, the Company received a non-refundable license fee related to this agreement. In 2004, the Company received a license maintenance fee associated with this agreement.

In October 2003, the Company entered into a license agreement with diaDexus, Inc. ("diaDexus"). The agreement provides the Company with the right to use certain intellectual property rights in diagnostic product inventions. The Company paid diaDexus $350 during 2003. During 2003, diaDexus obtained FDA approval to begin marketing a diagnostic aid, which was discovered through the use of the Company's technology. The Company is entitled to receive royalties on sales of the diagnostic aid.

The Company has other ongoing technology collaborations and agreements as of December 31, 2004 with Kirin Brewery Company, Ltd., MDS Nordion, DakoCytomation Denmark A/S and others. During 2004, 2003 and 2002, the Company paid an aggregate of $2,123, $1,577 and $2,753, respectively, for research services to certain of these collaborators. While license or royalty payments may occur in the future in

(dollars in thousands, except share and per share data)

(NOTE D) — Collaboration Agreements (continued)

Other Collaborative and License Agreements (continued)

connection with these collaborations, no license or royalty payments were made or received during 2004, 2003 or 2002.

(NOTE E) — Property, Plant and Equipment

Property, plant and equipment are stated at cost and are summarized as follows:

	December 31,	
	2004	2003
Laboratory equipment	$ 61,033	$ 56,670
Leasehold improvements	32,148	39,216
Computer equipment and software	26,821	24,610
Land and improvements	22,982	22,492
Furniture and office equipment	4,571	3,833
Construction in progress	165,062	64,391
	312,617	211,212
Less: accumulated depreciation and amortization	(68,876)	(56,495)
	$243,741	$154,717

The Company entered into a capital lease for computer equipment in 2001. This capital lease was terminated in November 2003 and a new capital lease was entered into in December 2003. The new capital lease is included in the Computer equipment and software amount above, at a cost of $982 and accumulated amortization of $355 as of December 31, 2004. Amortization expense for this equipment is included in depreciation and amortization within the consolidated statements of cash flows.

Included in Construction in progress is $157,930 and $46,972 as of December 31, 2004 and 2003, respectively, relating to the Company's construction of a large-scale manufacturing facility. The Company expects to complete this facility in 2005 at a total cost of approximately $234,900.

(NOTE F) — Other Assets

Other assets are comprised of the following:

	December 31,	
	2004	2003
Deferred financing costs, net of accumulated amortization of $5,327 and $8,625, as of December 31, 2004 and 2003, respectively	$10,491	$ 6,954
Prepaid services	6,200	7,511
Deferred charge for residual value guarantee	3,430	4,063
All other assets	78	149
	$20,199	$18,677

(dollars in thousands, except share and per share data)

(NOTE F) — Other Assets (continued)

Deferred financing costs were incurred in connection with the Company's convertible subordinated debt offerings during 2004, 2000 and 1999. Debt issuance costs for the $504,815 of Notes outstanding amounted to approximately $15,818, representing primarily underwriting fees of approximately 3% of the gross amount of Notes, and are being amortized on a straight-line basis which approximates an effective interest method over the life of the Notes. Deferred financing costs of approximately $2,880 were written off in 2004 in connection with the repurchase of a portion of the Company's convertible subordinated debt. See Note H, Long-Term Debt, for additional discussion of the Company's convertible subordinated debt.

See Note D, Collaboration Agreements, for discussion of prepaid services relating to CAT.

In accordance with the provisions of Financial Accounting Standards Board Interpretation No. 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others* ("FIN 45"), during the second quarter of 2003 the Company recorded the estimated fair market value of its maximum residual value guarantee of the lease of one of its facilities ("Traville"). The Company estimated the fair market value of the guarantee as approximately $4,380 and is amortizing this amount on a straight-line basis over the term of the lease. As of December 31, 2004 and 2003, the unamortized amount of approximately $3,430 and $4,063, respectively, was recorded within Other assets and Other liabilities on the Company's consolidated balance sheets. See Note I, Commitments and Other Matters for additional discussion.

(NOTE G) — Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses are comprised of the following:

	December 31,	
	2004	2003
Fixed asset purchases	$20,320	$12,128
Professional fees	17,930	5,882
Restructuring	14,468	—
Accrued interest	5,405	7,529
Accrued expenses	5,004	6,582
	$63,127	$32,121

The fixed asset purchases as of December 31, 2004 primarily relates to the construction activity associated with the Company's large scale manufacturing facility.

The restructuring liability relates primarily to the Company's actions to sharpen its focus on its most promising drug candidates announced during the first quarter of 2004. See Note M, Charge for Restructuring, for additional discussion.

(dollars in thousands, except share and per share data)

(NOTE H) — Long-Term Debt

The components of long-term debt are as follows:

Debt	December 31, 2004 Interest Rates	Maturities	December 31, 2004	December 31, 2003
5.5% Convertible Subordinated Notes	5.50%	June 2006	$ 3,120	$ 3,120
5.0% Convertible Subordinated Notes	5.00%	February 2007	139,821	199,900
3.75% Convertible Subordinated Notes	3.75%	March 2007	81,874	300,000
2.25% Convertible Subordinated Notes	2.25%	October 2011	280,000	—
			$504,815	$503,020

Annual maturities of all long-term debt are as follows:

2005	$ —
2006	3,120
2007	221,695
2008	—
2009	—
2010 and thereafter	280,000
	$504,815

The carrying amount and fair value of the Company's long-term debt are as follows:

	December 31, 2004		December 31, 2003	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
5.5% Convertible Subordinated Notes	$ 3,120	$ 3,149	$ 3,120	$ 3,404
5.0% Convertible Subordinated Notes	139,821	139,821	199,900	189,048
3.75% Convertible Subordinated Notes	81,874	79,418	300,000	272,840
2.25% Convertible Subordinated Notes	280,000	295,050	—	—
	$504,815	$517,438	$503,020	$465,292

During the second quarter of 1999, the Company completed the private placement of $125,000 of 5½% Convertible Subordinated Notes due June 2006 ("5½% Notes") convertible into common stock at $13.05 per share. During 2000 and 2001, the Company converted $118,285 and $3,595, respectively, of 5½% Notes to common stock. The shares issued in 2000 were as a result of the Company's inducement to convert, which resulted in the issuance of 9,572,208 shares of common stock, including a total of 508,244 shares of common stock issued as an inducement to convert. In 2001, 275,477 shares of common stock were issued as a result of voluntary conversions on the part of Note holders. The Company reclassified the unamortized debt financing costs associated with the converted Notes to stockholders' equity as part of the conversions. Total remaining debt issuance costs, which are being amortized on a straight-line basis, which approximates the effective interest method, were approximately $111, of which $88 and $72 had been amortized as of December 31, 2004 and 2003, respectively.

During the first quarter of 2000, the Company completed the private placement of $225,000 of 5% Convertible Subordinated Notes due February 2007 ("5% Notes") and $300,000 of 3¾% Convertible Subordinated Notes

(dollars in thousands, except share and per share data)

(NOTE H) — Long-Term Debt (continued)

due March 2007 ("3¾% Notes"). The 5% Notes and the 3¾% Notes are convertible into common stock at $56.25 and $109.50 per share, respectively. Debt issuance costs for the total $525,000 of Notes amounted to approximately $16,305, including accrued expenses. During 2000, holders of $100 of these 5% Notes voluntarily converted their Notes into 1,776 shares of common stock. During 2001, holders of $25,000 of these 5% Notes voluntarily converted their Notes into 506,690 shares of common stock. In addition, the Company reclassified $673 of unamortized debt financing costs to stockholders' equity as part of the conversions. During the fourth quarter of 2004, the Company completed the private placement of new convertible subordinated debt, which enabled the Company to repurchase $60,079 of 5% Notes and $218,126 of 3¾% Notes or an aggregate principal amount of approximately $278,205, for an aggregate purchase price of approximately $272,892. The Company recorded a gain on the extinguishment of this debt of approximately $2,433, net of unamortized debt refinancing costs associated with the repurchased debt. Debt issuance cost for the remaining total $221,695 of Notes, which are being amortized on a straight-line basis, which approximates the effective interest method, amounted to approximately $7,057, including accrued expenses, of which $4,930 and $8,553 had been amortized as of December 31, 2004 and 2003, respectively.

During the fourth quarter of 2004, the Company completed the private placement of $280,000 of 2¼% Convertible Subordinated Notes due October 2011 ("2¼% Notes"), convertible into common stock at approximately $15.55 per share. Debt issuance costs for the $280,000 of 2¼% Notes amounted to approximately $8,650, including accrued expenses, which are being amortized on a straight-line basis, which approximates the effective interest method, over the life of the 2¼% Notes. Amortization of the debt issuance costs amounted to approximately $309 as of December 31, 2004. The 2¼% Notes also contain a provision for a "make-whole" premium to be paid by the Company to holders of the 2¼% Notes in the event of certain changes in control that could occur during the life of the 2¼% Notes. The premium is payable in the form of cash, the Company's common stock, or the same form of consideration used to pay for the shares of the Company's common stock in connection with the transaction constituting the change in control. The premium declines over time and is based upon the price of the Company's stock as of the effective date of the change in control. The maximum premium possible is approximately $67,000, or approximately 24% of the aggregate face value of 2¼% Notes outstanding, in the event a qualified change in control occurs during 2005 with a stock price of $16.00 at such date.

With respect to all of the Company's convertible subordinated notes (the "Notes"), the Notes are unsecured obligations of the Company and rank junior in right of payment to the Company's existing and future senior indebtedness. The Company's options with respect to redemption of all or a portion of the Notes are as follows:

Note	Optional Redemption Effective Date	December 31, 2004 Redemption Price
5½% Notes	December 2002	100.92%
5% Notes	February 2003	101.67%
3¾% Notes	March 2003	101.25%
2¼% Notes	No redemption option	Not applicable

The indentures under which the Notes have been issued contain no financial covenants or any restriction on the payments of dividends, the incurrence of senior indebtedness, or other indebtedness, or the Company's issuance or repurchase of securities. There are no sinking fund requirements with respect to the Notes.

In December 1994, the Company entered into a loan agreement with Maryland Industrial Development Financing Authority ("MIDFA") to finance certain leasehold improvements using the proceeds of a $4,000

(dollars in thousands, except share and per share data)

(NOTE H) — Long-Term Debt (continued)

taxable variable rate bond issue (the "Bonds") from MIDFA. The Company was required to make annual payments of $444 commencing December 1995 plus interest at a variable rate of interest equal to 50 basis points plus the higher of the yield equivalent of the average 30-day or 90-day commercial paper rate, to the trustee on behalf of the bondholders which is equal to the interest and principal requirements on the bonds. Principal was repaid to the bondholders at the rate of $444 annually with the final payment of $448 paid on December 1, 2003. Required monthly principal payments of $37 plus interest were deposited into a bond fund. The interest was disbursed monthly to the bondholders. The Company deposited approximately $450 and $460 of principal and interest into the bond fund during the years ended December 31, 2003 and 2002, respectively.

In connection with the loan agreement, the Company had certain collateral obligations and covenant restrictions. As of December 31, 2003, the Company had $651 on deposit with the participating bank, which is included in Restricted investments in the consolidated balance sheets. The collateral was released in full in 2004 upon the payment and performance in full of the Company's letter of credit obligations.

(NOTE I) — Commitments and Other Matters

Leases

The Company leases office and laboratory premises and equipment pursuant to operating leases expiring at various dates through 2021. The leases contain various renewal and cancellation options. Minimum annual rentals are as follows:

Year Ending December 31,	Operating Leases	Capital Lease
2005	$ 23,142	$353
2006	22,748	324
2007	20,447	—
2008	20,782	—
2009	11,986	—
2010 and thereafter	54,350	—
	$153,455	677
Less imputed interest		33
Present value of minimum lease payments		644
Less current portion		328
Long-term portion of minimum lease payments		$316

During 1997 and 1999, the Company entered into two long-term leases expiring January 1, 2019 for a process development and manufacturing facility aggregating 127,000 square feet and built to the Company's specifications. Annual base rent under the leases is $3,765. Pursuant to the terms of these leases, the Company had security deposits of $12,572 and $12,245 as of December 31, 2004 and 2003, respectively, on deposit with the financing bank which is included in Restricted investments in the consolidated balance sheets. The security deposit will accrue interest up to a total security deposit of $15,000. Any amounts over $15,000 will be released to the Company. The security deposits will be released at the end of the lease term. The lease agreements contain covenants with respect to tangible net worth, cash and cash equivalents and investment securities, restrictions on dividends, as well as other covenants. The leases require an additional security deposit if the Company does not meet its covenants. The Company has an option, but not an obligation, to

(NOTE I) — Commitments and Other Matters (continued)

Leases (continued)

purchase these facilities during the lease term at various prices or at the end of the lease term for an aggregate price of approximately $19,400.

The Company leases all of its research and development and administrative facilities. The Company's primary research and development and administrative facility, located on the Traville site in Rockville, Maryland, is owned by Wachovia Development Corporation ("WDC"). In June 2003, the Company adopted Financial Accounting Standards Board Interpretation No. 46, *Consolidation of Variable Interest Entities* ("FIN 46"). The Company restructured the lease relating to the Traville site in June 2003 and entered into an approximately seven year operating lease (the "Traville lease") with WDC. WDC, a wholly-owned subsidiary of Wachovia Corporation, is primarily engaged in real estate finance, development and leasing activities. The total financed cost of the Traville lease facility is $200,000. As of December 31, 2004, the total financed cost of the Traville facility relative to WDC's total direct real estate investments and net real estate lease investments was below the level requiring consolidation of WDC into the Company's consolidated financial statements. The construction of the research and development and administrative facility was substantially completed by November 2003, at which time the rent obligations under the Traville lease commenced. The Company's rent obligation will approximate the lessor's debt service costs plus a return on the lessor's equity investment. The Company's rent obligation under the Traville lease is floating and is based primarily on short-term commercial paper, but the lessor can lock in a fixed interest rate at any time at the Company's request. The floating rate was approximately 2.2% as of December 31, 2004. The Company's operating lease commitments include minimum annual rentals for the Traville seven-year lease which has been computed using the interest rate as of December 31, 2004. Over the life of this lease, an aggregate rent obligation of approximately $28,708 has been included in the Company's total operating lease commitment.

In addition, the Company had leased a research facility at 9800 Medical Center Drive near the Traville facility in October 2001. During the fourth quarter of 2004, the Company exited from its seven-year lease associated with this research facility. In connection with this exit, the Company obtained a release of both its restricted investments of approximately $76,000 and its residual value guarantee of $64,600 and received approximately $16,600 in cash. Also, to facilitate the transition from this space, the Company entered into a two-year operating sublease for this facility with the new lessee of this facility, which is included in the Company's future minimum lease payment schedule. See Note M, Charge for Restructuring, for additional discussion.

The Company's restricted investments with respect to the Traville lease, and leases for the existing process development and manufacturing facility will reach approximately $219,000, which will serve as collateral for the duration of the leases. The Company will be required to restrict investments equal to 102% of the full amount of the $200,000 financed project cost for the Traville lease, or $204,000, with the payment of the remaining construction period obligations. The Company's restricted investments with respect to the Traville lease were $202,664 and $189,809 as of December 31, 2004 and 2003, respectively. In addition, the Company is also required to maintain up to a maximum of $15,000 in restricted investments with respect to the process development and manufacturing facility leases. The Company's restricted investments were $215,236 and $280,776 as of December 31, 2004 and December 31, 2003, respectively. As of December 31, 2003, restricted investments also included approximately $78,072 that related to 9800 Medical Center Drive. As a result of the 9800 Medical Center Drive exit in December 2004, the Company no longer maintains any restricted investments with respect to this facility.

Under the Traville lease agreement, which the Company has accounted for as an operating lease, the Company has the option to purchase the property, during or at the end of the lease term, at an aggregate amount of $200,000. Alternatively, the Company can cause the property to be sold to third parties.

(NOTE I) — Commitments and Other Matters (continued)

Leases (continued)

With respect to the Traville lease, the Company has a residual value guarantee of 87.75% of the total financed cost at lease termination. In the event of default, the Company is responsible for 100% of the total financed cost of the project. Because the lessor is responsible for servicing and repaying the debt financings to various parties, the Company has made the residual value guarantee to the lessor. In the event the lessor defaults to the lender, the Company has the right to cure the default or exercise its option to acquire the property. At any time during the lease term, the Company has the option to purchase legal and/or beneficial interest in the project for 100% of the lease balance plus any unpaid indemnity amounts. As of December 31, 2004, the Company's residual value guarantee for the Traville lease had reached the full maximum amount of $175,500.

In connection with the Traville lease, the Company must maintain minimum levels of unrestricted cash, cash equivalents and marketable securities and certain debt ratios.

In accordance with the provisions of Financial Accounting Standards Board Interpretation No. 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others* ("FIN 45"), the Company recorded the estimated fair market value of the maximum residual value guarantee of the Traville lease during the second quarter of 2003. The Company estimated the fair market value of the guarantee as approximately $4,380 and is amortizing this amount on a straight-line basis over the term of the lease. As of December 31, 2004 and 2003, the unamortized amount of approximately $3,430 and $4,063, respectively, was recorded within Other assets and Other liabilities on the Company's consolidated balance sheets.

There are no recourse provisions under the Traville lease that would enable the Company to recover from third parties any of the amounts paid under the guarantee. The Company has set aside collateral in the form of restricted investments sufficient to satisfy all current obligations under the guarantee. In addition, the Company has the right to cause the sale of the property covered by the lease and may recover all or a portion of the money paid under the guarantee.

The Company has entered into leases for office and laboratory space, which provide for certain rent abatement and rent escalations on each anniversary of the lease commencement date. For financial reporting purposes, rent expense is charged to operations on a straight-line basis over the term of the lease, resulting in a liability for deferred rent of $3,404 and $4,067 at December 31, 2004 and 2003, respectively.

Certain other leases provide for escalation for increases in real estate taxes and certain operating expenses.

The Company has entered into various sale-leaseback transactions resulting in equipment leases with rental payments aggregating $59,311, with terms ranging from five to seven years. The Company must either purchase the equipment at the end of the initial term at the greater of fair market value or 20% of original cost or, in some cases, extend the term of the lease for an additional year. The Company has accounted for these leases as operating leases. Minimum annual rentals are approximately $10,239.

Rent expense aggregated $27,966, $20,446 and $18,232 for the years ended December 31, 2004, 2003 and 2002, respectively.

Capital Expenditures

At December 31, 2004 and 2003, the Company had commitments for capital expenditures, consisting primarily of manufacturing equipment, of approximately $13,398 and $51,227, respectively. Included in commitments for capital expenditures is $10,276 as of December 31, 2004 relating to the Company's construction of a large-scale manufacturing facility.

(dollars in thousands, except share and per share data)

(NOTE I) — Commitments and Other Matters (continued)

401(k) Plan

The Company has adopted a 401(k) pension plan available to eligible full-time employees. The Company made contributions of $1,410, $1,256 and $1,089 to the plan for the years ended December 31, 2004, 2003 and 2002, respectively.

(NOTE J) — Stockholders' Equity

Stock Option and Employee Stock Purchase Plans

The Company has stock option plans under which options to purchase shares of the Company's common stock may be granted to employees, consultants and directors at a price no less than the fair market value on the date of grant. At December 31, 2004, the total authorized number of shares under all plans was 53,227,896. The vesting period of the options is determined by the Board of Directors and is generally four years. All options expire after ten years from the date of grant.

In 2001, the Company's stockholders approved an amendment to the 2000 Stock Incentive Plan ("2000 Plan"), which established the number of shares of common stock that would be reserved for issuance and added to the 2000 Plan for 2001, 2002 and 2003. This limit was equal to five percent of the outstanding common stock as of the end of the preceding fiscal year. Shares that were available for a given year but not subject to awards granted in that year were carried forward to the following year. In 2003, five percent of the outstanding common stock as of December 31, 2002, or 6,442,527 shares, were reserved for issuance under the 2000 Plan. After 2003, only the carried forward shares and the shares that are returned to the pool of available shares due to award forfeitures will be available for issuance.

The Company issued options for 188,150 shares of common stock to non-employees during the year ended December 31, 2002. The fair value of these options has been amortized to expense over the service period. The Company issued no options to non-employees during the years ended December 31, 2004 and 2003.

Option transactions during 2004, 2003 and 2002 are summarized as follows:

	Year Ended December 31,					
	2004		2003		2002	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
Outstanding at beginning of year	30,769,339	$27.31	28,307,139	$31.03	24,700,767	$35.63
Options granted	2,520,350	10.97	6,010,898	12.47	5,816,516	13.13
Options exercised	(1,022,625)	7.79	(485,534)	7.74	(495,207)	7.14
Options canceled or expired	(8,793,151)	42.02	(3,063,164)	35.66	(1,714,937)	43.43
Outstanding at end of year	23,473,913	20.90	30,769,339	27.31	28,307,139	31.03
Options exercisable at end of year	16,049,826	24.45	17,488,816	30.90	13,829,582	30.09

(dollars in thousands, except share and per share data)

(NOTE J) — Stockholders' Equity (continued)

Stock Option and Employee Stock Purchase Plans (continued)

The following table summarizes information about stock options outstanding at December 31, 2004:

	Options Outstanding			Options Exercisable	
Range of Exercise Price	Number Outstanding	Weighted-Average Remaining Contractual Life (In Years)	Weighted-Average Exercise Price	Number Exercisable	Weighted-Average Exercise Price
$4.25 to $10.91	9,012,637	5.8	$8.70	6,055,082	$8.10
$10.92 to $21.82	6,616,177	8.2	13.54	2,542,474	14.19
$21.83 to $32.74	3,611,100	4.2	27.28	3,565,376	27.29
$32.75 to $54.56	2,092,351	6.2	39.46	1,763,710	39.49
$54.57 to $109.13	2,141,648	5.7	66.10	2,123,184	66.11
	23,473,913	6.3	20.90	16,049,826	24.45

During the second quarter of 2004, the Company's stockholders approved a Stock Option Exchange Program ("Exchange Program") whereby the Company subsequently made an offer to exchange options outstanding under the Company's Amended and Restated 2000 Stock Incentive Plan. Pursuant to this offer, eligible employees, other than the Company's executive officers, were offered a one-time opportunity to exchange their stock options that had an exercise price of at least $35.00 per share for a lesser number of options to be issued at a later date. Pursuant to the offer to exchange, in July 2004 the Company accepted for exchange options to purchase an aggregate of 4,199,094 shares of the Company's common stock. In January 2005, the Company issued new options to purchase 1,543,580 shares of the Company's common stock pursuant to the Exchange Program.

During the period covered under the Exchange Program and for the six months thereafter, the Company made no grants to employees who elected to participate in this program. In January 2005, the Company issued 3,927,646 options to purchase shares of the Company's common stock for grants unrelated to the Exchange Program.

In 2000, the Company's stockholders approved the establishment of an Employee Stock Purchase Plan that qualifies under Section 423 of the Internal Revenue Code and permits substantially all employees to purchase shares of common stock. Participating employees may purchase common stock through payroll deductions at the end of each participation period at a purchase price equal to 85% of the lower of the fair market value of the common stock at the beginning or the end of the participation period. Common stock reserved for future employee purchases under the plan aggregated 235,800 shares as of December 31, 2004. Common stock issued under this plan totaled 70,956, 97,363 and 76,937 in 2004, 2003 and 2002, respectively. Under the plan, eligible employees may purchase shares of common stock on certain dates and at certain prices as set forth in the plan.

The weighted-average fair value of the stock options granted during 2004, 2003 and 2002 is estimated as $4.79, $9.09 and $9.77 per share, respectively. The weighted-average fair value of the employee stock purchase plan rights granted during 2004, 2003 and 2002 is estimated as $4.26, $3.38, and $11.45 per share, respectively.

(dollars in thousands, except share and per share data)

(NOTE J) — Stockholders' Equity (continued)

Stock Option and Employee Stock Purchase Plans (continued)

These weighted-average fair values were determined based on the Black-Scholes option-pricing model with the following assumptions:

	Year Ended December 31,		
	2004	2003	2002
Expected life:			
Stock options	5.17 years	6.75 years	7.0 years
Employee stock purchase plan	1.0 year	1.0 year	1.0 year
Interest rate	3.68%	3.95%	4.02%
Volatility	40%	78%	79%
Dividend yield	0%	0%	0%

Beginning in 2004, the Company reevaluated its method of estimating volatility. The Company determined that the implied volatility of its common stock, rather than its historical volatility, is a better estimate of expected volatility over the expected life of its options. Accordingly, the Company valued its 2004 stock options using implied volatility within the Black-Scholes option-pricing model.

Options available for future grant were 16,753,085 at December 31, 2004.

In the first quarter of 2004, the Company modified the stock option agreement for the Company's former Chief Executive Officer ("CEO"), who retired in the fourth quarter of 2004. This modification included an acceleration of all unvested shares as of the date of retirement and an extension of the standard post-employment exercise period. The Company recorded a non-cash compensation charge of $4,151 ratably over CEO's remaining service period as a result of this modification. During the fourth quarter of 2004, the Company modified the stock option agreements for certain key officers by extending the standard post-employment exercise period. In the event any of the key officers terminates employment under certain circumstances, the key officer could receive the benefit of the modification provision and the Company would record an aggregate compensation charge of up to $11,018 for any modified options still outstanding as of the date of termination. No compensation charge has been recorded as of December 31, 2004 because all of the key officers are still employees of the Company as of this date and the Company is unable to estimate whether any of the key officers will ultimately obtain any benefit from this modification.

(NOTE K) — Preferred Share Purchase Rights

On May 20, 1998, the Company adopted a Shareholder Rights Plan which provided for the issuance of rights to purchase shares of Junior Participating Preferred Stock, par value $0.01 per share (the "Preferred Shares"), of the Company. Under the Shareholder Rights Plan, the Company distributed one preferred share purchase right (a "Right") for each outstanding share of common stock, par value $0.01 (the "Common Shares"), of the Company. The Rights were distributed on June 26, 1998 to stockholders of record on May 27, 1998.

Each Right entitles the holder to purchase from the Company one four-thousandth of a Preferred Share at a price of $250 per one four-thousandth of a Preferred Share, subject to adjustment. The rights become exercisable ten business days after any party acquires or announces an offer to acquire beneficial ownership of 15% or more of the Company's Common Shares. In the event that any party acquires 15% or more of the Company's Common Stock, the Company enters into a merger or other business combination, or if a substantial amount of the Company's assets are sold after the time that the Rights become exercisable, the

(dollars in thousands, except share and per share data)

(NOTE K) — Preferred Share Purchase Rights (continued)

Rights provide that the holder will receive, upon exercise, shares of the common stock of the surviving or acquiring company, as applicable, having a market value of twice the exercise price of the Right.

The Rights expire May 20, 2008, and are redeemable by the Company at a price of $0.00025 per Right at any time prior to the time that any party acquires 15% or more of the Company's Common Shares. Until the earlier of the time that the Rights become exercisable, are redeemed or expire, the Company will issue one Right with each new Common Share issued.

(NOTE L) — Income Taxes

The Company provides for income taxes using the liability method. The difference between the tax provision and the amount that would be computed by applying the statutory Federal income tax rate to income before taxes is attributable to the following:

	Year Ended December 31,		
	2004	2003	2002
Federal income tax provision at 34%	$(82,585)	$(63,010)	$(74,703)
State taxes, net of federal tax benefit	(11,024)	(8,551)	(10,023)
Tax credits, principally for research and development	(6,975)	(6,751)	(6,852)
Stock option deduction for which no book benefit is available	(1,475)	(667)	(1,303)
Other	1,457	81	99
Increase in valuation allowance on deferred tax asset	100,602	78,898	92,782
	$ —	$ —	$ —

Temporary differences and carryforwards which give rise to a significant portion of deferred tax assets and liabilities are as follows:

	Current Asset	Long-Term Asset/(Liability)
December 31, 2004		
Net operating loss carryforward	$ —	$ 420,320
Research and development and other tax credit carryforwards	—	40,996
Loss on impaired investments	—	21,037
Net unrealized gains on investments	—	(3,669)
Deferred revenue	992	3,843
Depreciation	—	20
Reserves and accruals	1,237	8,075
Other	—	480
	2,229	491,102
Less valuation allowance	(2,229)	(491,102)
	$ —	$ —

(dollars in thousands, except share and per share data)

(NOTE L) — Income Taxes (continued)

	Current Asset	Long-Term Asset/ (Liability)
December 31, 2003		
Net operating loss carryforward	$ —	$ 330,468
Research and development and other tax credit carryforwards	—	34,021
Loss on impaired investments	—	21,037
Net unrealized gains on investments	—	(10,319)
Deferred revenue	992	2,975
Depreciation	—	4,717
Reserves and accruals	2,271	2,430
Other	—	491
	3,263	385,820
Less valuation allowance	(3,263)	(385,820)
	$ —	$ —

The Company recognized a valuation allowance to the full extent of its deferred tax assets since the likelihood of realization of the benefit cannot be determined.

Provision for income taxes is comprised of the following:

	Year Ended December 31,		
	2004	2003	2002
Current:			
Federal	$—	$—	$—
State	—	—	—
Foreign taxes	—	—	—
Deferred	—	—	—
	$—	$—	$—

The Company has available tax credit carryforwards of approximately $40,996 which expire, if unused, from the year 2008 through the year 2024. The Company has net operating loss ("NOL") carryforwards for federal income tax purposes of approximately $1,088,348 which expire, if unused, from the year 2010 through the year 2024. The Company's ability to utilize these NOLs may be limited under Internal Revenue Code Section 382. The tax benefit of approximately $241,387 of NOLs related to stock options will be credited to equity when the benefit is realized through utilization of the NOL carryforwards.

(NOTE M) — Charge for Restructuring

During the first quarter of 2004, the Company announced plans to sharpen its focus on its most promising drug candidates. In order to reduce significantly future expenses, and thus enable the Company to dedicate more resources to the most promising drugs, the Company reduced staff, streamlined operations and consolidated facilities. The results for the year ended December 31, 2004 include a charge of $15,408, which is shown as a Charge for restructuring in the consolidated statement of operations. The charge consisted approximately of $7,696 for the consolidation of facilities, approximately $5,212 related to the recent retirement of the

(dollars in thousands, except share and per share data)

(NOTE M) — Charge for Restructuring (continued)

Company's former Chairman and Chief Executive Officer ("CEO"), including $4,151 related to the modification of the CEO's stock options and $2,500 related to the total cost of employee severance benefits.

With respect to the consolidation of facilities, during the third quarter of 2004, the Company exited a laboratory and production facility in Rockville, Maryland at 9410 Key West Avenue ("9410"), for which it has a remaining operating lease obligation of approximately $2,700 through 2008. As of September 30, 2004, the Company had been in discussions with respect to a sublease of this facility and the sale of leasehold improvements and equipment located at 9410 with a net book value of approximately $7,800 as of December 31, 2004. As of September 30, 2004, the Company believed the potential sublease income was sufficient to offset the Company's facility lease obligation. The Company reviewed the carrying value of the assets at 9410 compared to the expected selling price less costs to sell. Based upon that market information, the Company recorded an accrual for an estimated disposal loss of $4,000 in the third quarter of 2004. Subsequent to year-end, the Company decided to reoccupy 9410 as of the second quarter of 2005. Based on this decision, the Company reevaluated its position as of December 31, 2004 and concluded that no further disposal loss was necessary. The Company may continue to evaluate other facility consolidation alternatives during 2005.

The Company had a lease agreement for a research facility located at 9800 Medical Center Drive, near the Company's Traville facility in Rockville, Maryland (the "9800 MCD lease"). In December 2004, the Company exited from its seven-year lease associated with this facility. In connection with this exit, the Company obtained a release of both the restricted investments of approximately $76,000 and the residual value guarantee of $64,600. Also, to facilitate the transition from this space, the Company entered into an operating lease for this facility for two years with the new lessee of this facility. The Company received $16,600 in cash consideration from this new lessee in exchange for the Company's exit of its lease as well as the sale of the leasehold improvements having an aggregate net book value of approximately $9,294 and other assets associated with 9800 Medical Center Drive. Transaction costs and exit costs for rent and operating costs, net of estimated sublease income associated with non-utilized space under the new lease, aggregated $11,002. Net of the cash consideration and all the costs, which aggregated $20,296, the Company recorded a loss of $3,696 in 2004 related to this exit, which is included in the Charge for restructuring in the consolidated statements of operations. The Company will review its estimated exit cost accrual on an ongoing basis.

The following table summarizes the activity related to the liability for restructuring costs as of December 31, 2004:

	Severance and Benefits	Former CEO Related Charges	Facilities Related	Total
Balance as of January 1, 2004	$ —	$ —	$ —	$ —
Severance and benefits	2,500	—	—	2,500
Former CEO related charges	—	5,212	—	5,212
9410 Key West Avenue	—	—	4,000	4,000
9800 Medical Center Drive	—	—	20,296	20,296
Total	2,500	5,212	24,296	32,008
Cash paid	(2,479)	(100)	(1,516)	(4,095)
Non-cash	—	(4,151)	(9,294)	(13,445)
Balance as of December 31, 2004	$ 21	$ 961	$13,486	$ 14,468

(dollars in thousands, except share and per share data)

(NOTE M) — Charge for Restructuring (continued)

The liability for restructuring costs of $14,468 as of December 31, 2004, was shown within accounts payable and accrued expenses on the consolidated balance sheets.

The former CEO related charges above include the non-cash deferred compensation charge of $4,151 related to the modification of the CEO's stock options, which was recorded as a corresponding increase to additional paid-in capital.

The Company's Charge for restructuring for 2004 of $15,408 included in the consolidated statement of operations represents the gross expense of $32,008, net of $16,600 of cash consideration received in connection with the exit from 9800 Medical Center Drive.

(NOTE N) — Net Loss Per Share

The following table sets forth the computation of basic and diluted net loss per share:

	Year Ended December 31,		
	2004	2003	2002
Numerator:			
Net loss	$ (242,898)	$ (185,324)	$ (219,716)
Denominator:			
Denominator for basic and diluted earnings per share — weighted-average shares	130,041,071	129,112,670	128,591,153
Net loss per share, basic and diluted:			
Net loss per share	$ (1.87)	$ (1.44)	$ (1.71)

Common stock shares issued in connection with the Company's Employee Stock Purchase Plan and Employee Stock Option Plan are included in the Company's weighted average share balance based upon the issuance date of the related shares. For the years ended December 31, 2004, 2003 and 2002, diluted net income (loss) per share is the same as basic net income (loss) per share as the inclusion of outstanding stock options and convertible debt is anti-dilutive. As of December 31, 2004, 2003 and 2002, the Company had 23,473,913, 30,769,339 and 28,307,139, respectively, of stock options outstanding. As of December 31, 2004, 2003 and 2002, the Company had 21,482,403, 6,532,588 and 6,532,588, respectively, of shares issuable upon the conversion of the Company's convertible subordinated debt.

(dollars in thousands, except share and per share data)

(NOTE O) — Quarterly Financial Information (unaudited)

Quarterly financial information for 2004 and 2003 is presented in the following tables:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2004				
Revenue	$ 1,643	$ 644	$ 717	$ 827
Income (loss) from operations	(64,209)	(63,789)	(65,544)	(73,312)
Net income (loss)	(55,428)	(58,527)	(62,237)	(66,706)
Net income (loss) per share, basic and diluted	(0.43)	(0.45)	(0.48)	(0.51)
2003				
Revenue	$ 1,642	$ 642	$ 1,242	$ 4,642
Income (loss) from operations	(54,316)	(56,810)	(57,895)	(57,902)
Net income (loss)	(41,315)	(47,394)	(47,688)	(48,927)
Net income (loss) per share, basic and diluted	(0.32)	(0.37)	(0.37)	(0.38)

The Company's results for the first and second quarters of 2004 include restructuring charges of $3,699, or $0.03 per share, and $1,799, or $0.01 per share, respectively. The charges primarily relate to the accrual of the total cost of employee severance benefits and costs associated with the retirement of the Company's former CEO.

The Company's results for the third quarter of 2004 include a restructuring charge of $5,799, or $0.04 per share, relating to an accrual for facility closure cost of $4,000 and costs associated with the retirement of the Company's former CEO of $1,799.

The Company's results for the fourth quarter of 2004 include a net charge of $1,678, or $0.01 per share, primarily relating to a restructuring charge associated with facility consolidation of $3,696, costs associated with the retirement of the Company's former CEO of $415 and a gain recognized on the extinguishment of debt of $2,433.

EXHIBIT 31.1

I, H. Thomas Watkins, certify that:

1. I have reviewed this Annual Report on Form 10-K for the period ended December 31, 2004 of Human Genome Sciences, Inc.;

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

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

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

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

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

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

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

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

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

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

/s/ H. Thomas Watkins

H. Thomas Watkins
Chief Executive Officer

Date: March 15, 2005

EXHIBIT 31.2

I, Steven C. Mayer, certify that:

1. I have reviewed this Annual Report on Form 10-K for the period ended December 31, 2004 of Human Genome Sciences, Inc.;

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

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

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

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

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

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

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

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

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

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

/s/ Steven C. Mayer

Steven C. Mayer
Executive Vice President and Chief Financial Officer

Date: March 15, 2005

EXHIBIT 32.1

Certification of Principal Executive Officer
Pursuant to 18 U.S.C. 1350
(Section 906 of the Sarbanes-Oxley Act of 2002)

I, H. Thomas Watkins, Chief Executive Officer (principal executive officer) of Human Genome Sciences, Inc. (the "Registrant"), certify, to the best of my knowledge, based upon a review of the Annual Report on Form 10-K for the period ended December 31, 2004 of the Registrant (the "Report"), that:

(1) The Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934, as amended; and

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

/s/ H. Thomas Watkins

Name: H. Thomas Watkins
Date: March 15, 2005

EXHIBIT 32.2

Certification of Principal Financial Officer
Pursuant to 18 U.S.C. 1350
(Section 906 of the Sarbanes-Oxley Act of 2002)

I, Steven C. Mayer, Executive Vice President and Chief Financial Officer (principal financial officer) of Human Genome Sciences, Inc. (the "Registrant"), certify, to the best of my knowledge, based upon a review of the Annual Report on Form 10-K for the period ended December 31, 2004 of the Registrant (the "Report"), that:

(1) The Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934, as amended; and

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

/s/ Steven C. Mayer

Name: Steven C. Mayer
Date: March 15, 2005

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Drugs in Development

Human Genome Sciences is a biopharmaceutical company with a pipeline of novel protein and antibody drugs directed toward large markets that have significant unmet medical need. We focus our internal research and development efforts on novel protein and antibody drugs discovered through genomics-based research, and on new long-acting versions of existing drugs created using our albumin-fusion technology. We are able to produce our own protein and antibody drugs for preclinical studies and clinical trials. We are constructing a large-scale manufacturing facility to support our increasing needs for protein and antibody drug production related to the continuing progress of our product candidates and, eventually, the initial commercialization of our products.

We are conducting clinical trials of a number of our products, with a primary focus on two therapeutic areas: immunology/infectious disease and oncology. Our current clinical development pipeline includes drugs to treat such diseases as cancer, lupus, rheumatoid arthritis, hepatitis C and HIV/AIDS. Our partners are conducting clinical trials of additional drugs to treat cardiovascular disease and osteoporosis. We also have products in discovery and preclinical development. One example is Albugon™, a novel long-acting form of glucagon-like peptide-1 (GLP-1), which was in late-stage preclinical development for potential use in the treatment of diabetes when we licensed it to GlaxoSmithKline (GSK). Under the agreement, reached in the last quarter of 2004, GSK has acquired exclusive worldwide rights to develop and commercialize Albugon for all human therapeutic and preventive applications.

Highlights of Human Genome Sciences' Current Clinical Pipeline

IMMUNOLOGY/INFECTIOUS DISEASE

LymphoStat-B™

LymphoStat-B (belimumab) is a human monoclonal antibody that specifically recognizes and inhibits the biological activity of B-lymphocyte stimulator, or BLyS™. Preclinical studies indicate that higher than normal levels of BLyS may trigger autoimmune diseases such as lupus and rheumatoid arthritis by stimulating production of autoantibodies—antibodies that attack and destroy the body's own healthy tissues. On April 6, 2005, we reported that LymphoStat-B met the primary efficacy and safety endpoints in a Phase 2 clinical trial in patients with rheumatoid arthritis. The Phase 2 study results showed that LymphoStat-B was safe and well tolerated, biologically active, and reduced the signs and symptoms of rheumatoid arthritis at a level of statistical significance. We look forward to the full presentation of these data at an appropriate scientific meeting later this year. In 2003, we reported that the results of a Phase 1 clinical trial demonstrated that LymphoStat-B was safe, well tolerated and biologically active in patients with systemic lupus erythematosus. We have completed the enrollment, randomization and initiation of dosing of 449 patients with systemic lupus erythematosus in a Phase 2 clinical trial and anticipate that the results will be available in the Fall of 2005. LymphoStat-B has received a Fast Track Product designation from the U.S. Food and Drug Administration (FDA) for use in the treatment of systemic lupus erythematosus. In March 2004, we announced that the FDA selected LymphoStat-B for inclusion in the FDA's Continuous Marketing Application Pilot 2 Program, which provides for frequent scientific feedback and interactions based on a prospectively defined agreement between the FDA and Pilot 2 Program participants.

Albuferon™

Albuferon (albumin-interferon alpha) is a novel long-acting form of interferon alpha. Recombinant interferon alpha is approved for the treatment of hepatitis C, hepatitis B and a broad range of cancers. In November 2004, we reported the results of a Phase 1/2 clinical trial of Albuferon in adults with chronic hepatitis C who failed previous interferon-alpha treatments. The data demonstrate that Albuferon was well tolerated, had a prolonged half-life, was biologically active and able to reduce viral load with dose-dependent magnitude and durability. In November 2004, we initiated dosing in a Phase 2 study of Albuferon in combination with ribavirin to evaluate the safety, tolerability and efficacy of Albuferon in patients with chronic hepatitis C who failed to respond to previous interferon alpha-based treatment regimens. On April 14, 2005, we reported the results of a Phase 2 clinical trial of Albuferon to evaluate its safety, tolerability, pharmacology and optimal dosing in patients with chronic hepatitis C who are naive to interferon-alpha treatments. The results show that Albuferon exhibited robust antiviral activity and produced dose-dependent reductions in hepatitis C viral load. The drug was well tolerated, with a pharmacokinetic profile that supports dosing at intervals of two to four weeks.

CCR5 mAb

CCR5 mAb is a novel human monoclonal antibody that specifically recognizes and binds the chemokine receptor

CCR5. The CCR5 receptor is known to be a key facilitator of infection with human immunodeficiency virus (HIV-1), which causes acquired immunodeficiency syndrome (AIDS). Preclinical studies of CCR5 mAb show that it can prevent CCR5-dependent HIV-1 entry into human cells, cell-cell fusion and viral transmission. In March 2005, we initiated dosing in a Phase 1 clinical trial to evaluate the safety, tolerability and pharmacology of CCR5 mAb in patients who are infected with HIV-1 and are not receiving concurrent antiretroviral therapy.

ABthrax™

ABthrax (raxibacumab) is a human monoclonal antibody that blocks the binding to cell surfaces of *Bacillus anthracis* protective antigen, the key facilitator of anthrax infection, and prevents the anthrax toxins from entering and killing the cells. In March 2004, we presented the results of a Phase 1 clinical trial, which demonstrated that ABthrax was safe and well tolerated in healthy volunteers, and achieved the blood levels predicted by relevant animal models as necessary to afford significant protection from the lethal effects of the anthrax toxins. We also have conducted multiple preclinical studies in relevant animal models, which demonstrated the dose-related efficacy of ABthrax in both prevention and treatment of anthrax infections. ABthrax has received a Fast Track Product designation from the FDA for its potential use in this indication. However, further development of ABthrax, including a larger confirmatory safety trial in humans, and completion of the manufacturing scale-up required for production of ABthrax, will require a much higher level of investment. Our ability to develop ABthrax further is dependent on the U.S. government's willingness to commit to the purchase of ABthrax.

ONCOLOGY

HGS-ETR1

HGS-ETR1 (mapatumumab) is a novel agonistic human monoclonal antibody that specifically binds to the TRAIL receptor-1 protein and triggers programmed cell death, or apoptosis, in cancer cells. HGS-ETR1 does this by mimicking the activity of the natural protein TRAIL. Our own studies, as well as those of others, show that TRAIL receptor 1 is expressed on a number of solid tumors and tumors of hematopoietic origin. It has been demonstrated that cell lines derived from a broad array of solid and hematological human tumors, including lung, colon, breast, multiple myeloma, prostate and pancreas, are sensitive to killing by apoptosis induced by either native TRAIL or agonistic antibodies to TRAIL receptors 1 and 2. In separate Phase 2 clinical trials of HGS-ETR1, we have completed the enrollment and initial dosing of patients with advanced non-small cell lung cancer, advanced colorectal cancer and advanced non-Hodgkin's lymphoma. We anticipate that the results of all three Phase 2 studies will be available in 2005. Phase 1b clinical trials of HGS-ETR1 in combination with chemotherapy also are ongoing in patients with advanced solid malignancies.

TRAIL-R2 mAbs (HGS-ETR2 and HGS-TR2J)

HGS-ETR2 and HGS-TR2J are novel human monoclonal antibodies that specifically recognize and bind to the TRAIL receptor-2 protein. The TRAIL receptor-2 protein was originally identified by Human Genome Sciences, and is found on the surface of a number of solid tumor and hematopoietic cancer cells.

In September 2004, we reported the interim results of an ongoing Phase 1 clinical trial of HGS-ETR2. The interim results demonstrated that HGS-ETR2 could be administered safely and repetitively to patients with advanced solid tumors, and supported continued dose-escalation of HGS-ETR2 in these patients. Stable disease was observed in some patients. In 2005, we plan to initiate Phase 2 clinical trials of HGS-ETR2 as a single agent, and to initiate Phase 1b clinical trials of HGS-ETR2 in combination with chemotherapeutic agents.

We began dosing patients for a Phase 1 clinical trial of HGS-TR2J in August 2004. The primary objective of the study is to assess safety and tolerability. Pharmacokinetics and disease response also are being evaluated. Based on the results of the Phase 1 trial, we will make a decision regarding further clinical development of TR2J.

CARDIOVASCULAR DISEASE

480848

The first genomics-derived small molecule drug to enter clinical trials was discovered by our partner, GlaxoSmithKline (GSK), using our technology. 480848 is an inhibitor of lipoprotein-associated phospholipase A2 (Lp-PLA2). Lp-PLA2 is an enzyme associated with the formation of atherosclerotic plaques. In 2003, GSK announced that 480848 would eventually be advanced to Phase 3 clinical trials, with a New Drug Application (NDA) submission to the FDA targeted for 2008. Under the terms of an agreement signed in 1993, Human Genome Sciences is entitled to receive clinical development milestone payments and royalties for compounds discovered by GlaxoSmithKline through the use of our technology and intellectual property. Under the agreement, Human Genome Sciences will receive a milestone payment and royalties if 480848 moves into registration and is commercialized. In addition, we have an option to co-promote an approved drug in North America and Europe.

Corporate Information

Board of Directors

Argeris (Jerry) N. Karabelas, Ph.D.
Chairman of the Board, Human Genome Sciences, Inc.
Partner, Care Capital, L.L.C.
Former Head of Healthcare & Chief Executive Officer,
Worldwide Pharmaceuticals, Novartis AG

H. Thomas Watkins
Chief Executive Officer, Human Genome Sciences, Inc.

Betsy S. Atkins
President & Chief Executive Officer, Baja L.L.C.

Richard J. Danzig
Chairman, Center for Strategic & Budgetary Assessments
Senior Fellow, Center for Naval Analyses
Former Secretary of the Navy

Jürgen Drews, M.D.
Member of the Executive Committee of the Roche Group (Retired)
Former Chairman, International Biomedicine Management Partners
Former Managing Partner, Bear Stearns Health Innoventures, L.L.C.

Kathryn E. Falberg
Former Senior Vice President, Finance & Chief Financial Officer,
Amgen, Inc. (Retired)

Augustine Lawlor
Managing Director, HealthCare Ventures, L.L.C.
Former Chief Operating Officer, LeukoSite, Inc.

Max Link, Ph.D.
Former Chairman & Chief Executive Officer, Centerpulse, Ltd.
Chief Executive Officer, Sandoz Pharma Ltd. (Retired)

Craig A. Rosen, Ph.D.
President & Chief Scientific Officer, Human Genome Sciences, Inc.

William D. Young
Chairman & Chief Executive Officer, ViroLogic, Inc.
Former President & Chief Operating Officer, Genentech, Inc.

Officers

H. Thomas Watkins
Chief Executive Officer

Craig A. Rosen, Ph.D.
President & Chief Scientific Officer

James H. Davis, Ph.D., J.D.
Executive Vice President, General Counsel & Secretary

Steven C. Mayer
Executive Vice President & Chief Financial Officer

David C. Stump, M.D.
Executive Vice President, Drug Development

Susan Bateson McKay
Senior Vice President, Human Resources

Sally D. Bolmer, Ph.D., R.A.C.
Senior Vice President, Regulatory Affairs

Daniel S. Gold, Ph.D.
Senior Vice President, Pharmaceutical Operations

Vivian Albert, Ph.D.
Vice President, Development Sciences & Research

Florian Bieber, M.D.
Vice President, Drug Development &
Managing Director, HGS Europe GmbH

Alain D. Cappeluti
Vice President, Financial Operations

Michael R. Fannon
Vice President & Chief Information Officer

William W. Freimuth, M.D., Ph.D.
Vice President, Clinical Research
Immunology, Rheumatology & Infectious Diseases

Gilles Gallant, B. Pharm., Ph.D.
Vice President, Clinical Research, Oncology

Randy J. Maddux
Vice President, Quality

Joseph A. Morin
Vice President, Engineering

Daniel J. Odenheimer, Ph.D.
Vice President, Clinical Research, General Medicine

Jerry Parrott
Vice President, Corporate Communications & Public Policy

Mark A. Rampy, Ph.D.
Vice President, Business Development

Indra Sanyal, Ph.D.
Vice President,
Chief Technology Officer, CoGenesys

Curran M. Simpson
Vice President, Manufacturing Operations

Ann L. Wang
Vice President, Clinical Operations

Corporate Headquarters

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Transfer Agent

American Stock Transfer & Trust Company
59 Maiden Lane
New York, NY 10038
Phone: 800/937-5449 or 212/936-5100
Web: http://www.amstock.com

Annual Meeting

May 25, 2005 at 9:30 am
Germantown Room
University System of Maryland—Shady Grove Center
9630 Gudelsky Drive
Rockville, MD 20850

SEC Filings

Copies of the Company's filings with the Securities and Exchange Commission are available without charge on the Company's web site at http://www.hgsi.com/invest/index.html as soon as is reasonably practicable after filing.

Other Information

Health professionals or patients interested in inquiring about trials involving Human Genome Sciences' compounds are encouraged to inquire via the Human Genome Sciences' web site, at http://www.hgsi.com/products/request.html, or by calling 301/610-5790, extension 3550.

Dedicated to discovery for health

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