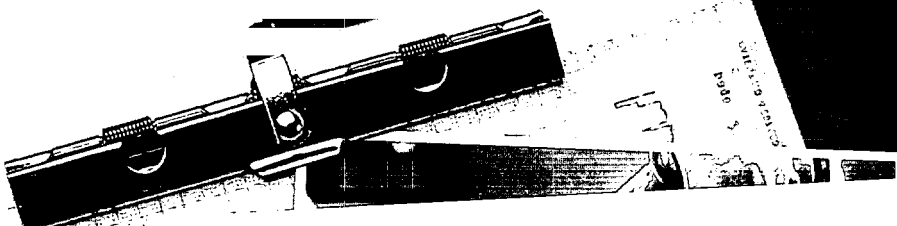




**Dyax**



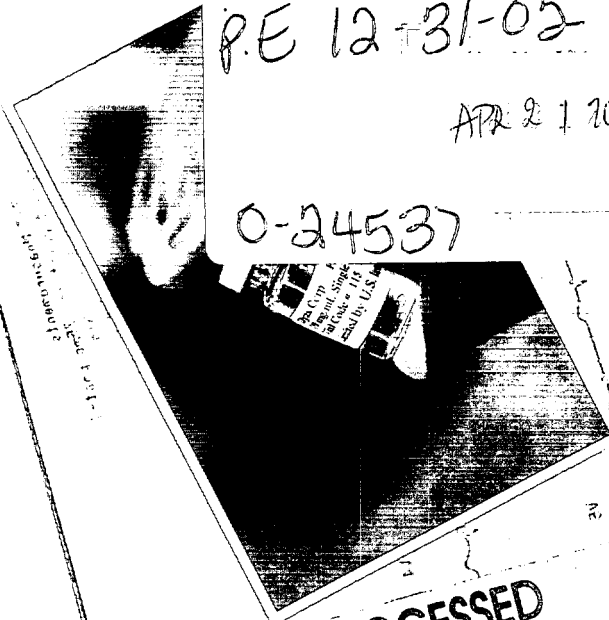
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# Dyax Highlights 2002

## Advanced DX-88 Clinical Development

### Hereditary Angioedema

- > Reported interim phase II results (Europe)
- > Initiated phase II EDEMA1 trial (U.S.)
- > Orphan drug designations granted (U.S. and Europe) for angioedema

### Cardiopulmonary Bypass/Coronary Artery Bypass Graft surgery

- > Initiated phase I/II trial (U.S.)

## Advanced DX-890 Clinical Development

### Cystic Fibrosis (Europe)

- > Reported initial phase IIa results (adults)
- > Initiated a second phase IIa trial (children)

## Signed Multiple Collaborative Agreements

- > Therapeutic antibody collaborations with AstraZeneca and Thios
- > Agreements for discovery of drug delivery ligands
- > Amersham Biosciences patent license for affinity separations
- > 6th patent licensee

## Negotiated Effective Freedom to Operate in Antibody Arena

- > Cross-licensing agreements with Biosite, Genentech, XOMA and Cambridge Antibody Technology

## Advanced Research Pipeline

- > 2 oncology compounds *in vivo*
- > 11 oncology and 3 inflammatory disease targets in pipeline

## Acquired New Disease Targets

- > Exclusive rights to inflammation target from the Center for Blood Research
- > Exclusive rights to oncology target from the University of Arizona

## Broadened Intellectual Property

- > 3 U.S. patents issued (biopharmaceutical segment)

## Realized Strong Growth at Biotage

- > Continued annual revenue growth
- > Horizon™ product line launched
- > Expanded direct international sales presence
- > Consolidated development, manufacturing and management headquarters into one new facility
- > Increased manufacturing capacity

## Continued Corporate Revenue Growth

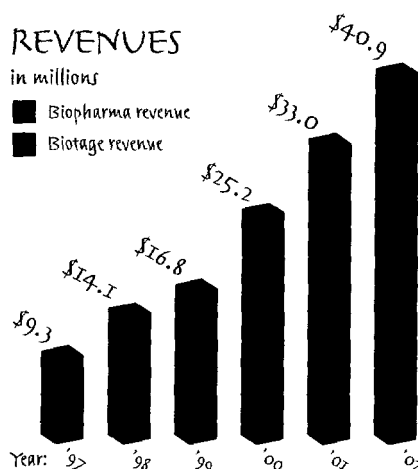
- > 23.8% revenue growth over 2001
- > 8<sup>th</sup> straight year of revenue growth for Dyax

## Financial Highlights

### REVENUES

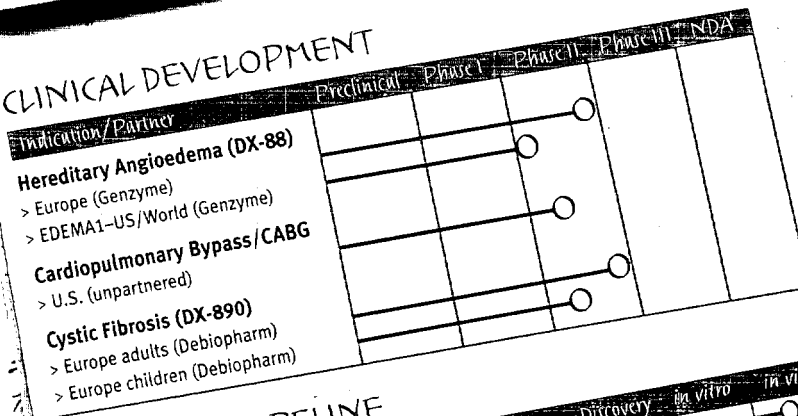
in millions

- Biopharma revenue
- Biotage revenue

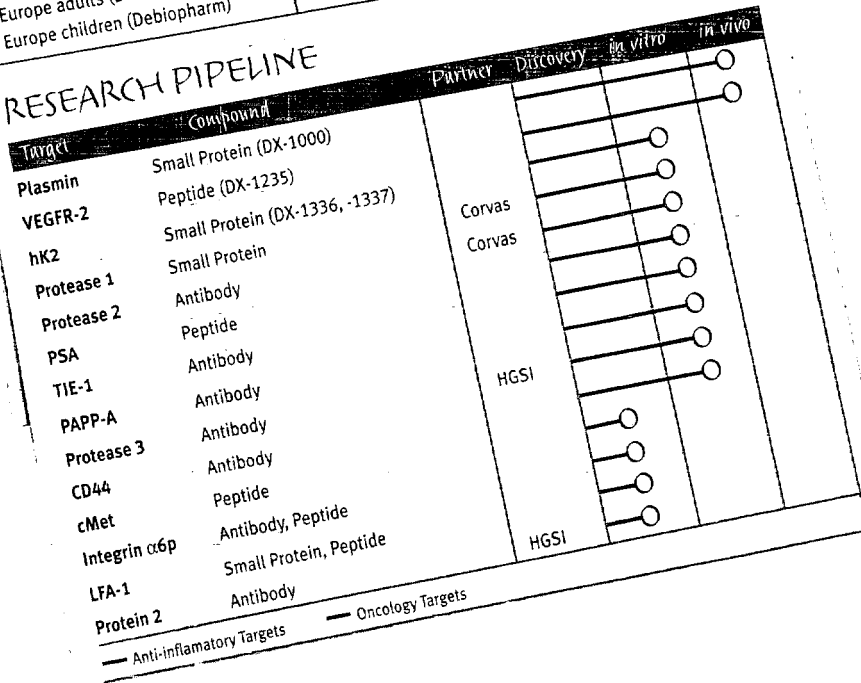


# Therapeutic Pipeline

## CLINICAL DEVELOPMENT



## RESEARCH PIPELINE



**In the Clinic** Utilizing our phage display technology, we have identified two recombinant proteins, DX-88 and DX-890, that have very high specificity<sup>1</sup> and affinity<sup>2</sup> to their enzyme targets. Both compounds are now in clinical development. We reported encouraging results in 2002 from our phase II clinical trials of DX-88 in hereditary angioedema and DX-890 in cystic fibrosis. A phase I/II study was also initiated for DX-88 in patients undergoing cardiopulmonary bypass in conjunction with coronary artery bypass graft surgery. Further, we are considering additional inflammatory disease indications for both lead compounds.

**Research** We intend to advance product candidates from our research pipeline into preclinical and clinical development, either on our own or with collaborators. Our current pipeline reflects our increased emphasis on the discovery and development of monoclonal antibodies against inflammation and cancer targets.

(1) Specificity – refers to the ability of a compound to select a particular disease target only  
(2) Affinity – refers to the strength of the binding between a compound and a disease target

# Dear Valued Shareholder:

I am pleased to report on the substantial progress made by Dyax during 2002 on all fronts and particularly in the area of clinical development. For Dyax, 2002 was marked by the Company's successful transition from a pioneering phage display technology company to a product-focused biopharmaceutical company.

During the year, we reached milestones with our two lead compounds in phase II clinical trials. We also cleared a path for new revenue generating collaborations that leverage our phage display technology in the area of antibody discovery and development. These are important achievements during a year in which we necessarily remained mindful of our available cash resources.

**Clinical Development** In 2002, we announced interim and initial clinical trial results involving our two lead products, DX-88 and DX-890, respectively. These results were encouraging and support our continuation and expansion of current programs for DX-88 in hereditary angioedema and cardiopulmonary bypass, and for DX-890 in cystic fibrosis. We are very pleased that orphan drug designation was granted in both the United States and Europe for DX-88 for the treatment of angioedema. Orphan designation can provide regulatory incentives and makes possible market exclusivity upon product approval.

**Antibody Capabilities** In recognition of growing market demand for novel antibodies, we increased the scope of our antibody discovery efforts in 2002, and strengthened those efforts with investments in high-throughput automation and affinity maturation. Today, I believe that the quality of Dyax's human monoclonal antibody libraries and capabilities are unsurpassed. Over the past year, we obtained freedom to operate in the important field of antibody discovery by successfully signing cross-licenses with Biosite, Genentech and XOMA (covering each party's antibody phage display technology), and most recently by expanding our existing agreement with Cambridge Antibody Technology.

**Pipeline Development** With regard to our discovery efforts, we obtained exclusive licenses to selected targets from academia, and are using our technology to identify potential clinical candidates against those targets. We currently have a pipeline of eleven oncology and three anti-inflammatory targets, and are evaluating additional inflammatory indications for our two products in the clinic.

Concurrent with these positive achievements, a difficult but strategically important decision was made to reduce spending on certain early research and discovery initiatives, and place greater emphasis on our antibody discovery work. This decision involved a staff reduction in September that, along with other cost saving initiatives, will significantly reduce our cash burn rate in 2003.

**Revenue Generating Collaborations** Capitalizing on our strategy to broadly leverage our phage display technology into revenue generating relationships, we signed new funded research collaborations with AstraZeneca and Thios for the discovery and optimization of Dyax antibodies against each collaborator's proprietary disease targets. Both agreements provide for research-based and success-based milestone payments to Dyax, as well

as royalties upon successful product commercialization. Several agreements were signed in non-therapeutic areas as well, which also include success-based milestone and royalty payments.

To date, we have provided libraries, performed funded discovery services or partnered product candidates with over a dozen companies and have signed over 60 licensees to our Ladner patent portfolio. The revenues generated from these agreements increased by 25% to \$17.8 million in 2002, compared to \$14.2 million in 2001.

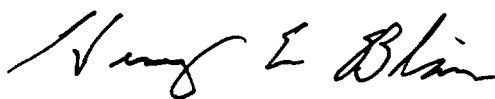
In addition to the revenue growth from our biopharmaceutical segment, we grew revenues through sales of chromatography separations systems by Biotage, Inc., a wholly-owned subsidiary of Dyax. Biotage will continue to build on its leadership position in the synthesis and purification marketplace, with several new product launches scheduled for 2003. We consider Biotage to be a very well-managed, self-sufficient and increasingly valuable asset.

**Financial Performance** We are pleased to report the Company's eighth straight year of revenue growth in 2002, up 23.8% over 2001 revenues for a total of \$40.9 million. This revenue helps to support the cost of our clinical programs. Due primarily to increased clinical development expenses, we ended 2002 with a net loss of \$26.8 million, compared with a \$17.2 million loss in 2001. At year-end we had approximately \$28.2 million in cash and cash equivalents, exclusive of restricted cash. With measures taken in 2002 to reduce our burn rate, we expect this cash to support current operations into 2004.

**What's Ahead** In 2003, we will continue to focus on the clinical development of our two lead products, DX-88 and DX-890, while building our pipeline of potential clinical candidates in the areas of oncology and inflammation. These efforts, in combination with an increased emphasis on antibody-based collaborations, are where we believe the greatest potential for increasing shareholder value exists.

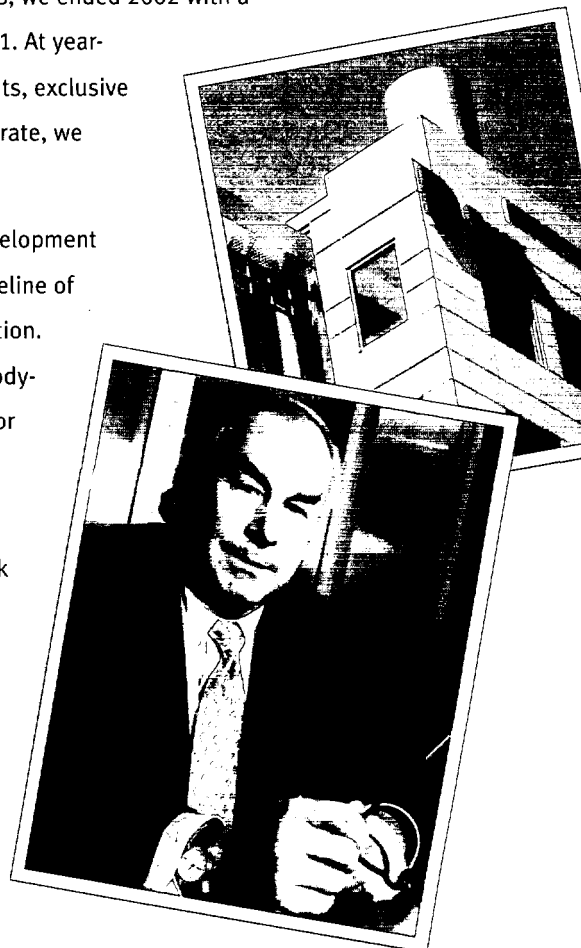
We remain strongly committed to building Dyax's presence as an emerging and innovative biopharmaceutical product company. I look forward to reporting to you on further progress during 2003.

Sincerely,



Henry E. Blair

Chairman, President and Chief Executive Officer



# Hereditary Angioedema: DX-88 in Phase II Clinical Trials



Hereditary angioedema is an uncommon disorder, caused by the deficiency of C1 esterase inhibitor (C1-Inh), a naturally occurring molecule that inhibits kallikrein and other serine proteases in the blood. The condition is believed to be significantly underdiagnosed, yet available literature places the prevalence of hereditary angioedema between 1 in 10,000 and 1 in 50,000 people worldwide.

Hereditary angioedema (HAE) is a rare genetic disorder in which patients experience acute episodes of swelling, most notably of the hands, feet, face, and abdomen. Patients with HAE have an average of 12 attacks per year, according to available

literature. A laryngeal attack that affects the airway passages can be life-threatening, and abdominal attacks cause swelling in the intestinal wall that results in bouts of severe pain, nausea, and vomiting.

In the United States, there is no marketed treatment for HAE. Physicians and patients most often manage the condition with long-term use of attenuated androgens, despite unwelcome side effects. Patients in certain European countries currently have an additional treatment option of human plasma-derived C1-Inh. However this option carries the theoretical risk of blood-borne pathogens.

DX-88 is currently being studied in two phase II clinical trials as a potential treatment for HAE in collaboration with Genzyme Corporation. During 2002, we reported interim results from the first trial, a nine-patient open label study of DX-88 in patients with HAE or a similar but non-genetic condition called acquired angioedema. Most recently, we announced completion of patient treatment in this exploratory study, and reported that all nine patients responded favorably to DX-88 and met the

#### DYAX CLINICAL TEAM MEMBERS (left to right):

Melissa Moles, Clinical  
Research Associate

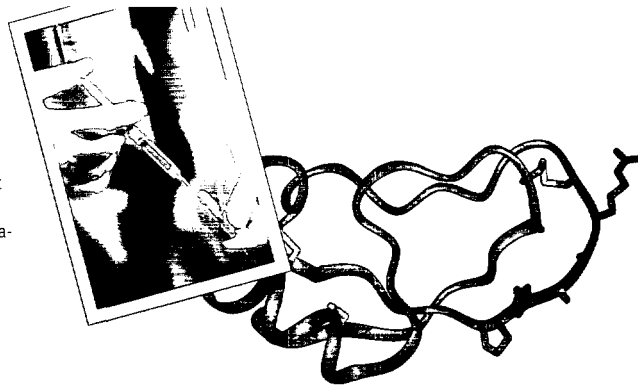
Karen Parker, CCRA, Senior  
Clinical Research Associate

Jennifer Roberts, CCRA, Clinical  
Research Associate

Jodie Morrison, CCRA, Associate  
Director, Clinical Research

DX-88 is administered by intravenous infusion in our current HAE trials. We are evaluating the development of a nebulized formulation of DX-88 as a second generation product for convenient at-home administration.

Far right: DX-88 displaying active site amino acids



primary endpoint of the trial – relief of symptoms within four hours. The duration of a typical HAE attack ranges from two to five days without treatment. An anaphylactoid reaction occurred in one patient and was controlled quickly with standard medical treatment, allowing the patient to complete the study per protocol.

Early in 2003, we initiated patient treatment in a second and larger study referred to as EDEMA1, a 48-patient double-blind placebo-controlled trial, designed to evaluate the efficacy and safety of a single dose of DX-88 in HAE patients. We also plan to initiate EDEMA2 during 2003, a study designed to evaluate the effects of repeat dosing with DX-88 in HAE patients.

Orphan drug designation was granted to DX-88 early in 2003 for the treatment of angioedema (hereditary and acquired) by both the United States Food and Drug Administration and the European Commission for Proprietary Medicinal Products. Incentives provided by orphan designation include protocol assistance (regulatory assistance, reduced filing fees, advice on the conduct of clinical trials), eligibility for research and development support, and a period of market exclusivity upon regulatory approval.

Dyax is committed to HAE on two fronts. First, we are committed to filling an unmet medical need by bringing DX-88 to market as a therapeutic for HAE in collaboration with Genzyme Corporation. Second, we are conducting the medical and market research necessary to obtain and share new intelligence about HAE in an effort to raise awareness and proper diagnosis of this difficult condition.

*"...The human toll of HAE in terms of disability and even death is tragic. Sadly, the anabolic steroids being used in the U.S. for attack prevention are often ineffective and produce untoward side effects such as liver toxicity and, in female patients, virilization. Dyax has reached out to the HAE community and has shown a steadfast dedication to testing DX-88 as a treatment for our dreadful disease. The company's ability to blend entrepreneurship with true compassion is a model for a modern biopharma..."*

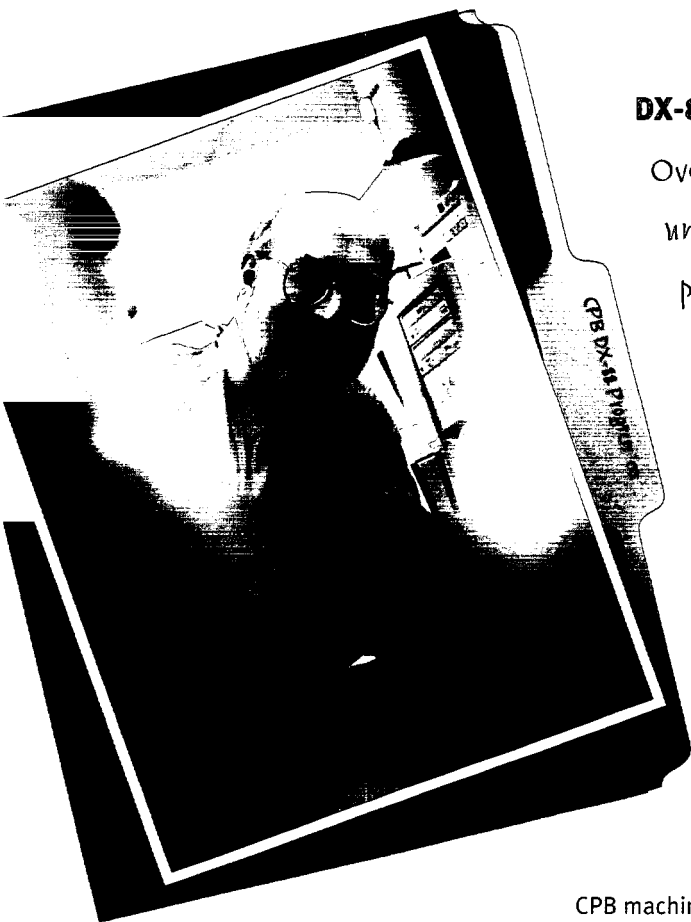
Anthony Castaldo, Founding Board Member, U.S. Hereditary Angioedema Association

## Hereditary angioedema

- Rare genetic inflammatory disorder
- Acute attacks of swelling in extremities, face, abdomen or larynx
- Laryngeal attacks can be life-threatening
- No marketed treatment currently available in U.S.
- Standard of care in U.S. – long-term use of androgens
- Believed to be significantly under diagnosed



# Cardiopulmonary Bypass/Coronary Artery Bypass Surgery DX-88 in Phase I/II Clinical Trials



## DX-88 in Cardiothoracic Surgery

Over 600,000 patients in the United States alone undergo a coronary artery bypass graft (CABG) procedure each year during cardiac surgery. Most are connected to a Cardiopulmonary Bypass (CPB) machine for two to six hours during this procedure.

The CPB machine maintains normal blood flow and oxygen to the heart during this “open heart surgery” while the surgeon reroutes blood away from narrowed or blocked arteries using blood vessels harvested from the patient's leg or chest.

Blood loss and other effects of systemic inflammatory response syndrome (SIRS) are common in cardiothoracic surgery, particularly when

CPB machines are utilized. Both the surgery itself and the passage

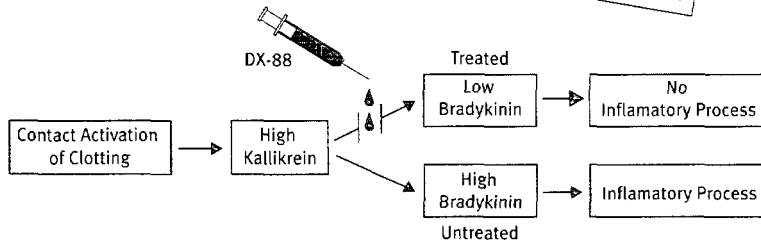
of the patient's blood through the artificial surfaces of the CPB machine cause SIRS. In addition to significant blood loss, SIRS can cause myocardial infarction, acute renal failure, and/or neurological deficits that may result in lifelong disability. These complications can significantly increase associated treatment costs, and can cause substantial morbidity. There are few options on the market today to reduce blood loss and other complications related to SIRS. The most common treatment for reduction of blood loss is aprotinin, a bovine-sourced product that is reportedly prothrombotic and is used in only the highest risk cases, or 10-15% of total CABG procedures. Due to its allergic potential, all patients being considered for aprotinin treatment must be skin tested.

DX-88 is a small protein identified by Dyax using phage display technology that inhibits an enzyme in the blood called plasma kallikrein. Plasma kallikrein is thought to play a role in systemic inflammatory response syndrome and the associated blood loss. Our studies have shown that DX-88 is 1,000 times more potent an inhibitor of plasma kallikrein *in vitro* than aprotinin.

Arthur C. Ley, Ph.D.,  
Vice President of Separations  
and Process Development

Anne Marie Woodland,  
Director of Quality





In 2002, we initiated a phase I/II randomized, double-blind placebo-controlled study of DX-88 in patients undergoing CPB in the course of CABG surgery. The study has three ascending dose cohorts of 14 patients in each. To date, we have completed patient treatment at the first dose level, and the second cohort is underway. We expect to report preliminary results of this trial during the year 2003. We believe that prophylactic use of DX-88 in these patients could reduce peri-operative blood loss and the need for transfusion. The study is designed to evaluate primary endpoints of pharmacokinetics and safety, and secondary endpoints of blood loss and clotting parameters. This DX-88 trial is being conducted at Emory University Hospital and the Atlanta VA Medical Center by Dr. Jerrold Levy, and at Duke University Medical Center by Dr. Hilary Grocott. It follows our completed Phase I trial in normal volunteers in which DX-88 was shown to be well tolerated.

*"...One of the risks inherent in cardiopulmonary bypass is contact activation, where blood interfaces with the artificial surface of the CPB unit. One major concern is activation of the kallikrein system that is thought to lead to untoward proinflammatory consequences. DX-88, a potent kallikrein inhibitor, may be useful in mitigating these systemic responses in patients undergoing CABG surgery. I believe the ability to develop highly potent, biopharmaceuticals that can be engineered to meet specific needs is one of the very exciting aspects of medicine in the new millennium..."*

Dr. Jerrold Levy, Professor and Deputy Chair of Research, Department of Anesthesiology, Emory University School of Medicine, Atlanta, Georgia

## DX-88

- Novel small protein identified by Dyax
- Potent inhibitor of human plasma kallikrein
- By inhibiting kallikrein, believed to block the formation of bradykinin
- Kallikrein is thought to play a role in systemic inflammatory response syndrome and associated blood loss
- Bradykinin is thought to be the intermediary of pain and swelling in many inflammatory disorders



# Cystic Fibrosis

## DX-890 in Phase IIa Clinical Trials



Cystic fibrosis (CF) is a fatal genetic disease afflicting about 55,000 people in the United States and Europe. Individuals with CF experience a reduction in lung function resulting in an average life expectancy of only 32 years, even with the latest treatments.

DX-890, a recombinant small protein discovered by Dyax using its proprietary phage display technology, is being studied in phase IIa clinical trials for its potential to stop the cycle of inflammation, infection and destruction of lung tissue in patients with CF. DX-890 is a novel inhibitor of human neutrophil elastase (hNE), an enzyme secreted by the body in a number of inflammatory diseases and implicated in the loss of lung function. These diseases include cystic fibrosis as well other chronic lung conditions such as bronchitis and emphysema.

During 2002, we reported initial results of a European phase IIa study in adults that confirm good tolerability of DX-890 and its inhibition of neutrophil elastase in the sputum of CF patients. The compound is currently delivered directly to the lungs by nebulization. Since the results of this adult CF study were reported during the summer of 2002, our collaborator DebioPharm S.A. has initiated a second phase IIa study in France and Italy to evaluate tolerability, pulmonary function and inhibition of sputum neutrophil elastase in children with CF. We expect to report initial results of this second study in 2003. DebioPharm is also preparing for a phase IIb study to evaluate safety and effectiveness of long-term dosing of DX-890 in both adults and children with cystic fibrosis.

Dyax continues to evaluate the development of DX-890 in other diseases where the target neutrophil elastase is potentially involved, including: chronic obstructive pulmonary diseases (COPD) such as chronic bronchitis and emphysema, that affect over 16 million Americans; alpha1 anti-trypsin (A1AT) deficiency, a genetic disorder affecting nearly 100,000 patients in the U.S.; and ulcerative colitis, an inflammatory bowel disease that affects about 400,000 people in the U.S.

# Dyax Phage Display 2002 Focus on Antibodies

The driver of Dyax's internal discovery programs and revenue-generating collaborations is the Company's phage display technology. Dyax pioneered this discovery technology and holds the core patent position. The Company utilizes phage display to generate and screen a massive number of antibodies, peptides and/or small proteins against any particular disease target.

During 2002, we successfully focused on achieving state-of-the-art antibody libraries and capabilities, and today we can:

- > Obtain fully human antibodies with exquisite specificity and affinity to targets, including antibodies to self antigens;
- > Discriminate between conformational changes and posttranslational modification of targets;
- > Achieve subnanomolar affinity with certain antibodies from preliminary screens;
- > Affinity mature antibodies through yeast display; and
- > Integrate high-throughput automated capabilities.

During 2002, we also obtained licenses to key third party antibody phage display patents, allowing us to most effectively collaborate in the antibody arena.

In this area, Dyax signed new funded research collaborations during 2002 with AstraZeneca and Thios for the discovery and optimization of Dyax antibodies against the collaborators' disease targets. Both provide for research-based and contingency-based milestone payments to Dyax, as well as royalties upon successful product commercialization.

Given Dyax's capabilities and proprietary position in phage display, we believe we are well positioned for a growing number of collaborations in 2003, in both therapeutic and non-therapeutic areas.



In 2002,

- we generated close to \$18 million in revenues by leveraging our phage display technology.
- We utilize this technology to:
  - Generate and advance Dyax's own product pipeline;
  - License our phage display patents;
  - Transfer libraries to collaborators to conduct their own research;
  - Conduct funded research for collaborators, ranging from screening to optimization; and
  - Collaborate with other companies through various co-development agreements.

Robert C. Ladner, Ph.D.,  
Senior Vice President &  
Chief Scientific Officer,  
Research Division

Kristin Rookey,  
Scientist II

# Biotage Inc. Synthesis and Purification: Faster, Safer, Easier



Biotage's new 51,000 sq. ft. headquarters at the University of Virginia's Research Park in Charlottesville, VA

Biotage, Inc., a wholly-owned subsidiary of Dyax Corp., is a market leader in purification, separation systems, and consumables for the small-molecule drug discovery industry.

Biotage primarily services the pharmaceutical industry by providing its innovative synthesis and purification systems to help scientists rapidly identify novel chemical entities (NCE's) against drug targets. In contrast, Dyax biopharmaceuticals utilizes its phage display technology to identify novel biologics against relevant disease targets. Both business segments (biopharmaceutical and separations) have patented unique tools for rapid drug discovery against the dramatically expanded number of drug targets available since the sequencing of the human genome.

The Biotage subsidiary operates independently and is led by an excellent management team that has guided the business to the leadership position in its market space. Today, Biotage is a valuable financial asset that provides financial resources to help fund Dyax's clinical development programs. The Biotage culture, which emphasizes disciplined high quality production of its products, has yielded results that have exceeded our expectations.

Since first introducing the concept of disposable FLASH™ chromatography cartridges in 1994, Biotage continues to develop unique value-added solutions to challenging purification problems, ranging from laboratory to production scale. Many of these purification products are patented and available only from Biotage.

During 2002, Biotage revenues grew 23.2% over 2001 revenues, with solid demand across all product lines. Since 1995, Biotage has averaged a 31.3% average annual

*"The Biotage Horizon™ system has been a huge success here at Merck. It has relieved medicinal chemists of the drudgery of flash chromatography and greatly increased productivity... while other suppliers have tried to copy the Biotage cartridge design, none have been successful. The consistency and reliability of the Biotage FLASH™ cartridges are unparalleled."*

Derek Von Langen, Ph.D., Research Fellow – Basic Chemistry, Merck & Co.

Jacqueline Sorrentino,  
Technical Support  
Specialist



revenue growth rate and revenues have increased almost ninefold from 1994 to 2002. There are 135 Biotage employees today, an increase from 24 in 1994.

Biotage highlights in 2002 include:

- > Over 400 Horizon™ personal flash chromatography systems shipped since product launch in December 2001;
- > Establishment of a direct sales presence in Germany, Italy and Switzerland, allowing Biotage to directly serve over 80% of the world's drug discovery centers;
- > Consolidation of development, manufacturing and management headquarters into one new facility in Charlottesville, Virginia, with the capacity to accommodate expected increases in demand for Biotage products; and
- > Over 10,000 Flash systems installed and 1.2 million pre-packed FLASH™ chromatography cartridges shipped since introducing the Flash line in 1994.

In 2003, Biotage expects double-digit revenue growth to continue with the introduction of new novel synthesis-workup consumables and Horizon™ product line extensions. The subsidiary's international business expansion is expected to continue as France and Canada are added to Biotage's direct sales and support presence.

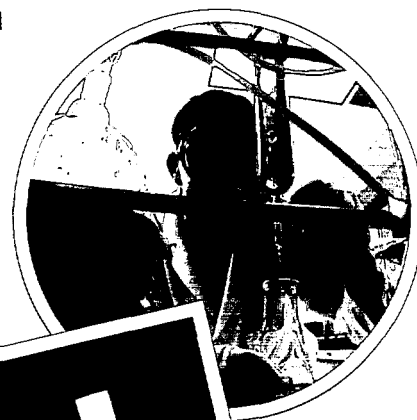
Biotage is headquartered in Charlottesville, Virginia with offices in England, Japan and Germany.

*"I love this Horizon™ instrument! We are saving tons of time, keeping our sanity instead of swapping endless fractions by hand, getting excellent separations, saving solvent and minimizing waste. Everyone at BMS who uses this machine has been very pleased. Thanks for making my job easier!"*

Brian Venables, Research Scientist, Bristol-Myers Squibb

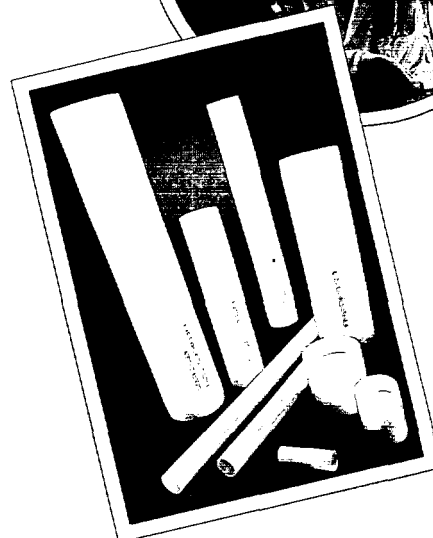
"...Our value concept of "Purification by Design™" extends through Biotage's entire philosophy - that is, designing and creating a broad range of chromatographic systems and solutions to effectively meet any purification challenge..."

David B. Patterson,  
President and CEO,  
Biotage Inc.



Mike Webb, Lab  
Technician

FLASH cartridges.  
Biotage offers a  
wide array of media  
prepacked in  
cartridges in a  
variety of sizes.



# On the Horizon Dyax Milestones 2003

## **Advance DX-88 Clinical Development**

### **Hereditary Angioedema**

- > Report initial phase II results from European trial
- > Report preliminary phase II results from EDEMA1 trial in U.S.
- > Initiate phase II EDEMA2 multi-dose trial
- > Launch HAE awareness program

### **Cardiopulmonary Bypass/Coronary Artery Bypass Graft Surgery**

- > Report preliminary phase I/II trial results

## **Advance DX-890 Clinical Development**

### **Cystic Fibrosis**

- > Report preliminary results of second phase IIa European trial in children

## **Increase Number of Revenue Generating Agreements**

### **Continue to grow Licensing, Funded Research and Discovery agreements**

- > Leverage antibody libraries and capabilities

## **Maintain Strong Research Pipeline**

### **Advance development of discovery and preclinical projects**

- > DX-1000 and DX-1235 product candidates
  - Administration optimization, further animal studies, mechanism of action studies
- > Advance promising new leads into *in vivo* testing
- > Focus on oncology anti-inflammatory leads

## **Continue Strong Growth at Biotage**

### **Launch new products**

- > Horizon™ product line extensions
- > Novel synthesis-workup consumables

### **Continue double-digit revenue growth**

**Further expand global presence with sales office openings in Canada and France**

**Leverage increased manufacturing capacity**

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Dyax Corp.  
Form 10-K

For the fiscal  
year ended  
December 31,  
2002

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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, 2002

OR

- Transition Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 000-2453

**DYAX CORP.**

(Exact name of Company as specified in its charter)

**Delaware**  
(State of Incorporation)

**04-3053198**  
(IRS Employer Identification No.)

**300 Technology Square, Cambridge, Massachusetts 02139**  
(Address of principal executive offices and zip code)

Company's telephone number, including area code: **(617) 225-2500**

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

**None**

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

**Common Stock, \$.01 Par Value**  
(Title of Class)

Indicate by checkmark whether the Company (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 Company was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

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

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

The aggregate market value of the Company's common stock held by nonaffiliates of the Company as of the last business day of the registrant's most recently completed fiscal second quarter, June 28, 2002, based on the last reported sale price of the Company's common stock on The Nasdaq National Market as of the close of business on that day, was \$53,222,563. The number of shares outstanding of the Company's Common Stock, \$.01 Par Value, as of March 25, 2003, was 24,455,103.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Company's Definitive Proxy Statement for its 2003 Annual Meeting of Shareholders to be held on May 15, 2003, which Definitive Proxy Statement will be filed with the Securities and Exchange Commission not later than 120 days after the Company's fiscal year-end of December 31, 2002, are incorporated by reference into Part III of this Form 10-K.

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ANNUAL REPORT ON FORM 10-K

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## PART I

### ITEM 1. BUSINESS

*This Annual Report on Form 10-K contains forward-looking statements, including statements regarding our results of operations, financial resources, research and development programs, clinical trials and collaborations. Statements that are not historical facts are based on our current expectations, beliefs, assumptions, estimates, forecasts and projections for our business and the industry and markets in which we compete. The statements contained in this report are not guarantees of future performance and involve certain risks, uncertainties and assumptions, which are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed in such forward-looking statements. Important factors which may affect future operating results, research and development programs, clinical trials and collaborations include, without limitation, those set forth in Exhibit 99.1 "Important Factors That May Affect Future Operations and Results" to this Form 10-K, which is incorporated into this item by this reference. We make our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to these reports available without charge through our website, [www.dyax.com](http://www.dyax.com), as soon as reasonably practicable after filing them with the Securities and Exchange Commission.*

#### Overview

We are a biopharmaceutical company principally focused on the discovery, development and commercialization of antibody, protein and peptide based therapeutic products. We currently have two recombinant proteins in phase II clinical trials. DX-88 is being studied for the treatment of hereditary angioedema and for use during cardiothoracic surgery and DX-890 is being studied for the treatment of cystic fibrosis. We also have a number of ongoing discovery programs using our proprietary and patented technology, known as phage display, to identify compounds with potential for the treatment of various diseases. We are using phage display technology to build a broad portfolio of product candidates that we plan to develop and commercialize either ourselves or with others. We believe that phage display can have the greatest potential impact on our business through our discovery of proprietary biopharmaceuticals.

We plan to continue to invest in programs using our phage display technology to discover new product candidates, especially antibodies. We have accumulated losses since inception as we have invested in our businesses. We seek to offset some of our development costs by generating revenue from the partnering of our portfolio of product candidates and by leveraging our phage display technology. The ways in which we can leverage our phage display technology include (i) funded research that we conduct on behalf of our collaborators using our phage display technology to identify compounds that can be used in therapeutics, diagnostic imaging, the development of research reagents, and in purifying and manufacturing biopharmaceuticals and (ii) licensing of our phage display patents and libraries. Our funded research collaborations and licensing agreements are structured to generate revenues through research funding, license fees, technical and clinical milestone payments and royalties.

We do not expect to generate profits until therapeutic products from our development portfolio reach the market. Obtaining regulatory approvals to market therapeutic products is a long and arduous process. We cannot currently predict when, if ever, we will obtain such approvals.

Through our wholly owned Biotage subsidiary we develop, manufacture and sell chromatography separations systems and products that are used in laboratories and pharmaceutical manufacturing to separate molecules in liquid mixtures. We are a leading developer, manufacturer and supplier of chromatography separations systems that use disposable cartridges to separate and thereby purify pharmaceuticals being produced for research or clinical development. We also seek to offset some of the development costs of our therapeutic programs by generating revenue through greater market penetration for our chromatography products.

## **Our Business Strategy**

Our goal is to become a fully integrated biopharmaceutical company. We use our phage display technology to discover and develop novel product candidates aimed at addressing unmet medical needs. We expect to maximize the value of our phage display technology primarily by pursuing internal product discovery and development programs. Our business model is designed to augment this value creation through a combination of collaborative arrangements to discover therapeutic products for others and to exploit our technology in non-core areas such as diagnostic imaging, research reagents and separations and through our patent and library licensing program.

The following are the principal elements of our business strategy:

- *Develop Our Proprietary Biopharmaceutical Products Now in the Clinic.* We have two internally discovered and developed proteins now in Phase II clinical trials. One of these product candidates, DX-88, is being developed and commercialized in an alliance with Genzyme and the other, DX-890, in collaboration with Debiopharm. For DX-88, we have initiated a Phase I/II clinical trial for a second indication.
- *Discover and Develop Additional Proprietary Biopharmaceutical Products.* We are also expanding our pipeline by identifying antibodies, proteins and peptides that may be developed as candidates for the treatment of some inflammatory diseases and cancers. We intend to identify new leads for targets that we discover or license from others. We intend to develop and commercialize these leads ourselves or through collaborative arrangements.
- *Leverage Our Technology Through Biopharmaceutical Product Collaborations.* We are leveraging our technology and maximizing our opportunities through collaborative arrangements with several biotechnology and pharmaceutical companies for the discovery and/or development of antibody-based biopharmaceuticals. The goal of this strategy is to build a more diverse portfolio of product candidates and to increase our opportunities for success.
- *Leverage Our Technology By Licensing Our Phage Display Patents and Libraries.* We are further creating value from our phage display patents by licensing them to companies and institutions on a non-exclusive basis to encourage the broad application of our technology. We also make our phage display libraries available for licensing in therapeutic, drug discovery, diagnostic and other fields for which we receive technology transfer and licensing fees and the right to receive milestone payments and royalties from the commercialization of products. We intend to enter into additional license agreements for our phage display patents and libraries.
- *Leverage Phage Display in Non-Therapeutic Areas.* We are applying our phage display technology to develop diagnostic products for *in vivo* imaging. We have partnered the development of *in vivo* imaging products with the Bracco Group, a leader in the imaging products market. We are collaborating with BD Biosciences in the research products field and have licensed Amersham Biosciences non-exclusively in the area of separations. We also have collaborative arrangements with pharmaceutical and biotechnology companies where we identify compounds from our phage display libraries that purify the collaborator's specific biopharmaceutical product.
- *Continue to Extend Our Intellectual Property and Technology.* We plan to continue to develop our technology internally and to acquire technology that is complementary to our existing technology. Through our patent licensing program, we will continue to enhance our phage display technology by obtaining access to phage display improvements that our licensees develop. We have also entered into cross licensing agreements under which we have licensed our phage display patents to third parties and have received in the same agreements rights to practice under the phage display technology patents of these third parties.

## **Our Biopharmaceutical Programs**

Two of the products we discovered and developed using phage display technology are now in clinical trials. We are using phage display technology internally and through collaborative arrangements

to discover and develop additional biopharmaceutical products. Our product development programs are primarily focused on inflammatory diseases and cancers.

#### ***Products in Clinical Trials***

**DX-88.** The enzyme plasma kallikrein is a key component responsible for the regulation of the inflammation and coagulation pathways. Excess plasma kallikrein activity is thought to play a role in a number of inflammatory and autoimmune diseases. Using phage display, we have developed DX-88, which was shown *in vitro* to be a high affinity, high specificity inhibitor of human plasma kallikrein. In disease states where inhibiting plasma kallikrein is desirable for a therapeutic effect, DX-88 may have fewer side effects and/or greater efficacy than naturally occurring inhibitors, which lack its specificity and affinity for plasma kallikrein.

In collaboration with Genzyme, we are currently evaluating DX-88 as a treatment for hereditary angioedema (HAE) in two Phase II clinical trials, one in Europe and the other in the United States. In March 2003 we completed patient treatment in our nine-patient European clinical trial. Both the United States Food and Drug Administration (FDA) and the European Commission for Proprietary Medicinal Products (CPMP) have granted orphan designation to DX-88 for the treatment of acquired and hereditary angioedema. We are also evaluating DX-88 in a Phase I/II trial in the United States in patients undergoing cardiopulmonary bypass.

- ***Hereditary Angioedema.*** The prevalence of hereditary angioedema is believed to be between 1/10,000 and 1/50,000 worldwide. Hereditary angioedema is a genetic disease that can cause painful swelling of the larynx, gastrointestinal tract and/or extremities. Severe swelling of the larynx is life threatening and may require insertion of a breathing tube into the airway to prevent asphyxiation. In the United States, the only currently approved and available treatments during severe attacks are steroids, pain control, restriction of the inciting activity (e.g. repetitive motion such as typing or hammering), and rehydration. Patients are frequently given synthetic anabolic steroids but these have a variety of side effects and may not be well tolerated. Researchers believe plasma kallikrein is a primary mediator of both the pain and swelling in hereditary angioedema. DX-88, a potent plasma kallikrein inhibitor, may decrease the severity and frequency of symptoms during the acute attacks of hereditary angioedema and, therefore, may provide an effective treatment for this disease.
- ***Complications of Cardiopulmonary Bypass.*** In the United States there are approximately 600,000 cardiac surgeries annually that use cardiopulmonary bypass, the vast majority of which involve coronary artery bypass graft surgery, known as CABG. Cardiopulmonary bypass elicits a systemic inflammatory response, which adversely affects the patient post operatively. Many patients undergoing CABG experience significant intraoperative blood loss, requiring transfusion. In addition, an estimated 25% of patients have post-operative cardiac, pulmonary, hematologic or renal dysfunction. Kallikrein has been implicated in the body's response to cardiopulmonary bypass as a major contributor to the significant blood loss seen in CABG patients and to the pathologic inflammation that plays a role in the complications of CABG surgery. Aprotinin, a kallikrein inhibitor derived from cattle, is currently approved in the U.S. for use to reduce transfusion requirements in patients undergoing CABG. DX-88 may have benefits over this existing therapy, because the DX-88 compound is recombinant rather than bovine sourced, and its sequence is based on that of a human protein, which may make it appear less foreign to the patient's immune system. DX-88 is also a 1,000 times more potent inhibitor of plasma kallikrein *in vitro* than aprotinin.

**DX-890.** In a number of inflammatory diseases, the body secretes an excess of the enzyme known as neutrophil elastase, or elastase. Excess elastase activity, or a decrease in the elastase inhibitor destroys lung tissue. Using phage display, we have developed a novel human neutrophil elastase inhibitor, DX-890. This inhibitor binds to elastase with high affinity and high specificity, suggesting that it may be a potent and specific treatment for lung disease mediated by elastase. Based on its biological

activity, DX-890 may be effective in stopping the destruction of lung tissue due to excess elastase activity.

Our collaborator, Debiopharm has completed a Phase IIa clinical trial with DX-890 in Europe for adult cystic fibrosis patients and has initiated a second Phase IIa clinical trial in Europe in children with cystic fibrosis. DX-890 may be an effective therapy in this and other inflammatory diseases:

- *Cystic Fibrosis.* There are approximately 55,000 patients in the United States and Europe who suffer from cystic fibrosis. The median survival age of cystic fibrosis patients is approximately 32 years. A genetic mutation causes a number of problems including progressive lung destruction and frequent infections in these patients. Large amounts of elastase are found in the lungs of cystic fibrosis patients where it is thought to play a significant role in the disease process. The elastase directly destroys lung tissue and contributes to recurrent pulmonary infections, a cycle of inflammation, and repeated tissue destruction. Current treatments inadequately prevent this cycle of inflammation, infection, and destruction of tissue. By blocking elastase, DX-890 may significantly prevent tissue destruction in cystic fibrosis and preserve pulmonary function.
- *Chronic Obstructive Pulmonary Diseases.* Approximately 16 million Americans suffer from chronic obstructive pulmonary diseases, which include chronic bronchitis and emphysema. Genetic mutations or inhaled irritants, including cigarette smoke, cause these diseases, which are characterized by a progressive deterioration in lung function. Over \$14 billion is spent annually to treat this group of diseases, which is the fourth leading cause of death in the United States. Elastase is thought to play a role in the progressive destruction of lung tissue in these diseases. DX-890 may block elastase and retard further damage, improving the quality of life and life expectancy for these patients.
- *Alpha1 Anti-Trypsin Deficiency.* Alpha1 Anti-Trypsin, or A1AT deficiency is a genetic disease affecting nearly 100,000 patients in the United States. The role of A1AT in normal people is to modulate the effect of neutrophil elastase. A1AT is the body's natural inhibitor to neutrophil elastase and makes certain the enzyme does its job without causing excessive destruction. Patients who are genetically deficient in A1AT have lung and liver damage caused by the overactivity of neutrophil elastase. Current therapy utilizes plasma derived A1AT to supplement the low levels seen in patients with a genetic deficiency. DX-890 may be an effective replacement therapy to prevent lung damage in these patients.
- *Ulcerative Colitis.* Ulcerative colitis is an inflammatory bowel disease that affects 400,000 people in the United States. The etiology of the disease is currently unknown but these patients suffer from severe inflammation of the lower gastro-intestinal tract and often require very potent immunosuppressive therapy. Patients with ulcerative colitis are at risk for frequent bowel infections, bowel obstructions from chronic inflammation, recurrent painful and bloody diarrhea, and colonic rupture. We are determining whether DX-890 could potentially be used as a therapy for these patients.

#### ***Other Biopharmaceutical Discovery and Development Programs***

We are pursuing biopharmaceutical discovery and development programs in the fields of immunology, tumor angiogenesis, tumor biology and inflammation using optimized phage libraries that express proteins, peptides and human antibodies. We have been able to establish a broad discovery platform to identify compounds that interact with a wide array of targets that have been shown to be involved in pathologic processes and are membrane proteins, circulating proteins or enzymes. Our processes have been automated, thus we are now able to evaluate a large number of molecules binding to each target. In this way we can rapidly identify and select a specific protein, peptide or antibody with the desired biochemical and biological characteristics. While our early discovery research efforts are now focused primarily on monoclonal antibodies, we are also testing the *in vitro* and *in vivo* efficacy of several of our peptide and small protein compounds.

We have a total of eleven discovery and development programs underway in the oncology area, including two programs in a collaboration with Corvas International, Inc., and one program where we have an option to acquire rights to the target from Human Genome Sciences, Inc. The eleven programs are focused on the discovery and development of therapies that fight cancer primarily in three ways: inhibiting angiogenesis, inhibiting proteases believed to be associated with tumor growth and proliferation, and targeting cell surface proteins believed to be over expressed by certain tumors. We also have three discovery and development programs focused on targets that are believed to be important mediators of inflammation. We have an option to acquire from Human Genome Sciences the rights to the target in one of these programs.

#### **Our Therapeutic Product Collaborations**

**Genzyme.** We have a collaboration agreement with Genzyme Corporation for the development and commercialization of DX-88. Under this agreement, as amended in May 2002, we are responsible for funding the development of DX-88 for the treatment of HAE until the later of incurring \$8.0 million of development costs or completion of the first Phase II clinical trial for HAE, which is expected to occur early in the second quarter of 2003. After it reviews with us the data from the clinical trial, Genzyme will have a period of 60 days to exercise its option to acquire a 50% interest in the DX-88 program. If Genzyme exercises its option, it will be responsible for 50% of the development costs incurred subsequent to completion of the first Phase II clinical trial, and upon dosing the first patient in a pivotal clinical trial of DX-88 for HAE, Genzyme will be obligated to pay us one-half of the development costs in excess of \$6.0 million that we incurred through completion of the first Phase II clinical trial. As of December 31, 2002, we had incurred approximately \$11.0 million of costs under this program. If Genzyme exercises its option, we will be entitled to receive potential milestone payments of \$10.0 million for the first FDA approved product derived from DX-88, and up to \$15.0 million for additional therapeutic indications developed under the collaboration, as well as 50% of the profits from sales of such products. The term of this collaboration is perpetual unless terminated by either party with prior written notice or upon a material breach by the other party or immediately upon a change of control or bankruptcy of the other party. We currently anticipate that this collaboration will not terminate until the parties determine that no commercial products will result from the collaboration or, if commercial products are eventually sold, until the sale of those products is no longer profitable. Because the drug discovery and approval process is lengthy and uncertain, we do not expect to be able to determine whether any commercial products will result under this collaboration until the completion of clinical trials. Under the collaboration agreement, we have an option until March 31, 2003 to purchase Genzyme's interest in the application of DX-88 for the prevention of blood loss and other systemic inflammatory responses in cardiopulmonary bypass and other surgery for \$1.0 million, which we intend to exercise. When we amended the collaboration agreement in May 2002, we also executed a senior secured promissory note and security agreement under which Genzyme agreed to loan us up to \$7.0 million. As of December 31, 2002, we had borrowed the full \$7.0 million available under the note.

**Debiopharm.** We have a collaboration and license agreement with Debiopharm S.A. for the commercialization of our neutrophil elastase inhibitor, DX-890, for the treatment of cystic fibrosis. This agreement arose out of our March 1997 research and development program with Debiopharm for the clinical development of DX-890. Debiopharm is responsible for funding the clinical development program for Europe and North America. Under our collaboration and license agreement, Debiopharm has exclusive rights to commercialize DX-890 in Europe for cystic fibrosis, acute respiratory distress syndrome and chronic obstructive pulmonary diseases and for these indications we have retained the rights to North America and the rest of the world. If we wish to outlicense the commercialization of any of these indications to a third party outside of Europe, Debiopharm has a first right of refusal to obtain the outlicensing rights. We have also retained worldwide rights to DX-890 for all other therapeutic indications, subject to Debiopharm's first right to negotiate for a license in Europe should

another party not already have such rights or if we do not wish to retain the indication. Under this collaboration, we are entitled to receive a percentage of revenues generated by Debiopharm from the commercialization of the cystic fibrosis product in Europe and we will pay Debiopharm a percentage of royalties we receive on product sales outside of Europe. None of the product candidates developed under this collaboration has been approved for sale. Thus, we have neither paid nor received any royalties to date and our future receipts of royalties will depend on future sales of any products that may be developed and approved for sale. The parties' financial obligations to each other on product sales will expire on the later of ten years from the first commercial sale of a product or the life of the patent rights covering the product.

### **Leveraging Phage Display**

In the late 1980s, Dyax scientists invented phage display, a novel method to individually display up to tens of billions of proteins, peptides and human antibodies on the surface of a small bacterial virus called a bacteriophage or phage. Using phage display, we are able to produce and search through large collections, or libraries, of antibodies, proteins and peptides to rapidly identify those compounds that bind with high affinity and high specificity to targets of interest. We describe the technology of phage display in more detail under the caption "Dyax Technology".

Our phage display process generally consists of the following steps:

- generating one or more phage display libraries;
- screening new and existing phage display libraries to select binding compounds with high affinity and high specificity; and
- producing and evaluating the selected binding compounds.

Scientists can use phage display to improve the speed and cost effectiveness of drug discovery and optimization. Phage display offers important advantages over, and can be used synergistically to improve, other drug discovery technologies which are currently employed to identify binding proteins, such as combinatorial chemistry, single target high throughput screening and monoclonal antibodies. Over the past decade, our scientists, collaborators and licensees have applied this powerful technology to a wide range of biopharmaceutical applications. We and our collaborators and licensees are using phage display technology at many stages of the drug discovery process to identify and determine the function of novel targets and to discover biopharmaceutical leads.

Over the past year, we have brought on-line high-throughput automated capacity, developed state-of-the-art antibody phage display libraries, and successfully implemented a strategy under which we have obtained freedom to operate in the antibody phage display area through cross-licenses with Biosite Incorporated, Genentech, Inc. and XOMA Ireland Limited. In addition to these cross-licenses, we recently entered into a new agreement with Cambridge Antibody Technology Limited, known as CAT, that amends our 1997 license agreement. As a result of the new agreement, we now have worldwide research licenses under all the CAT antibody phage display patents and have options to obtain product licenses from CAT to develop and commercialize therapeutic and diagnostic antibody products for which CAT will receive milestones and royalties. We also gave CAT an option to develop with us our own therapeutic antibody products and further agreed to pay CAT a portion of the revenues that we generate from certain other applications of antibody phage display. With regard to Humira,<sup>™</sup> a product of Abbott Laboratories that received marketing approval from the FDA at the end of 2002, CAT has options to buy out under a predetermined schedule any royalty obligation that CAT may have for that product. We agreed that CAT will no longer have any royalty obligations to us with regard to any other products covered by our phage display patents.

With this technology, we have established the capability to identify fully human antibodies with high specificity and high affinity. We also have high-throughput proprietary technologies available to increase the affinity and specificity of antibody panels, for batch reformatting, and for protein expression. We are now able to move product candidates rapidly into both *in vitro* testing and optimization. We plan to use our increased capabilities to support our discovery and development programs for antibody-based therapeutics and to expand our revenue-generating collaborations.

### **Our Technology and Target Access Collaborations for Therapeutics**

In addition to our therapeutic product development collaborations with Debiopharm and Genzyme, we are also leveraging our phage display technology in a variety of other collaborations and licenses to enhance the discovery of therapeutic leads for ourselves and our collaborators and to access targets for our own biopharmaceutical discovery programs. We have a collaboration and license agreement with AstraZeneca PLC under which AstraZeneca is funding us to use our phage display technology to identify, characterize and optimize antibodies that bind specifically to AstraZeneca's neurological and metabolic disease target. AstraZeneca has the right to develop and commercialize the antibodies as therapeutic and *in vitro* diagnostic products. We also have a collaboration with Thios Pharmaceuticals, Inc. where Thios is funding us to use our technology to identify and characterize antibodies that bind to Thios' sulfated glycoprotein target, which is thought to play a key role as a mediator of inflammation. Thios has an option to obtain a license from us to use the antibodies to develop and commercialize therapeutic and *in vitro* diagnostic products. We are also engaged in a collaboration with Corvas International, Inc. where we are identifying antibody, protein and peptide compounds that bind to two serine proteases that were isolated and characterized by Corvas. With Corvas we will evaluate the leads that we generated during the research phase of our collaboration to determine if we wish to jointly develop any of them for the potential treatment of cancer. We also seek to gain access to targets by in-licensing them from academic institutions. In March 2002, we licensed exclusive rights from The Center for Blood Research to develop and commercialize therapeutic products aimed at the activated form of LFA-1, a cell surface adhesion protein, that is considered an essential mediator of inflammation. We also have the option to license additional adhesion molecules discovered in the laboratory of Dr. Timothy Springer at the Center for Blood Research. In July 2002, we obtained exclusive rights from the University of Arizona to commercialize therapeutics and diagnostics to a cancer target that is a form of alpha 6 integrin that was discovered by Dr. Anne Cress of the University of Arizona Cancer Center. We also have an exclusive license in the therapeutic and diagnostics fields to Tie-1, an angiogenesis target that was developed by Dr. Kari Alitalo of the University of Helsinki.

### **Leveraging Phage Display in Non-Core Areas and Through Licensing**

While our focus is on therapeutic programs, we are able to leverage our phage display technology in a number of other ways. For example, often the binding compounds that we discover for biopharmaceutical targets can be used in diagnostic or imaging formats to access therapeutic effectiveness and monitor disease progression. Binding compounds are also active components of many research products used for drug discovery and development, specifically to detect and analyze proteins. In the diagnostic imaging and research product fields, we have formed collaborations, and we also license others to practice our phage display technology in other fields. In addition to the specific transactions discussed below, we previously used our phage display technology to identify peptides for Epix Medical, Inc. to use in blood clot imaging applications in the magnetic resonance imaging field.

#### ***Diagnostics Imaging Collaborations***

**Bracco Group.** In November 2000, we entered into a collaboration with Bracco Group to exploit diagnostic imaging and related therapeutic applications of our phage display technology. We granted



Bracco exclusive worldwide rights to our phage display technology for the development of diagnostic imaging products. Bracco also has the right to develop diagnostic imaging products using our product leads that have potential imaging applications. Bracco also has the opportunity to evaluate for possible imaging applications the peptide leads that we have access to through our alliance with The Burnham Institute. We received a \$3.0 million up-front licensing fee, and will receive an additional \$3.0 million per year in research funding for a total of three to six years from the commencement of the collaboration in connection with the performance of research projects aimed at the discovery of product leads for Bracco for which Bracco will have an exclusive license in the imaging field. Subject to Bracco's exclusive rights in the imaging field and a limited option in therapeutics, we have retained ownership rights to the leads we generate during the collaboration and have retained rights for ourselves in therapeutics and other fields. We will also receive development milestones and royalties on any product sales. Bracco's royalty obligation to us for each product arising out of the collaboration is for ten years from the date the product is first launched for sale in each country. Bracco has a right to terminate our collaboration on six months prior notice, which may only be given after the funded research term expires. Either party may terminate the agreement for material breach by the other party if the breach is not cured within sixty days.

### ***Research Products***

***BD Biosciences.*** In June 2001 we entered into a collaboration and license agreement with BD Biosciences, a division of Becton, Dickinson and Company, under which we use our phage display technology to discover antibodies for use as research reagents. Under the terms of the agreement, BD Biosciences has obtained rights to antibodies identified using our proprietary human antibody library and screening technology. BD Biosciences has the exclusive right to market our antibodies as research products to the life science market. BD Biosciences also has the option to extend its rights to *in vitro* diagnostic products on an antibody-by-antibody basis. We have retained all rights to use these antibodies in the therapeutic field. Under the agreement, we will perform research using our antibody phage display technology for a period of up to three years. In addition to the license fee, we will receive royalties on all of BD Bioscience's product sales. BD Bioscience is obligated to pay royalties on a product-by-product basis for a period of ten years from the first product sale.

### ***Patent and Library Licensing Programs***

We have established a broad licensing program for our phage display patents for use in the fields of therapeutics, *in vitro* diagnostics and for making phage display research kits. Through this program, we grant companies and research institutions non-exclusive licenses to practice our phage display patents in their discovery and development efforts in the licensed fields. We also grant licenses to others, e.g., Amgen Inc., Imclone Systems, Inc. and Human Genome Sciences, Inc. (HGSI), to use our phage display libraries and other technology to research and develop therapeutic, *in vitro* diagnostic, and other products. We have granted over 60 companies and institutions patent licenses as a result of these efforts. We believe that the success of our patent licensing program provides support for our patent position in phage display, enhances the usefulness of phage display as an enabling discovery technology and generates short term and long term value for us through licensing fees, milestones and royalties. Under these non-exclusive licenses, we have retained rights to practice our phage display technology in all fields. Our license agreements generally provide for signing or technology transfer fees, annual maintenance fees, milestone payments based on successful product development and royalties based on any future product sales. In addition, under the terms of our license agreements, most licensees have agreed not to sue us for using phage display improvement patents developed by the licensee that are dominated by our phage display patents. We believe that these covenants and provisions allow us to practice enhancements to phage display developed by our licensees and some have granted us specific access to certain technologies developed or controlled by the licensee. We have also entered into cross licensing agreements with third parties under which we have granted rights to

our phage display patents and have received rights to practice under the phage display related patents of such third parties.

### ***Affinity Separations***

Purification of a biopharmaceutical product is a complex, multi-step process, which can be a time-consuming step in the discovery process and is often the most expensive step in the manufacturing process. Our phage display technology can be used to generate small, stable binding compounds, known as ligands, that have high affinity and high specificity for desired biological compounds that bind and release targets in predetermined conditions that can be used for the purification of biopharmaceuticals. We have successfully completed funded affinity separations discovery projects for Wyeth and HGSI. Wyeth and HGSI have each entered into a license with us to use the ligand that we developed for them in their discovery project. Wyeth is using the ligand for purification of its recombinant blood factor product for treating hemophilia and HGSI is using the ligand to purify its B-Lymphocyte Stimulator Protein. Under both of these license agreements, we will be entitled to commercial milestones and product royalties for any product that may be purified using our ligand. During the past year, we granted our first phage display patent license in the separations field to Amersham Biosciences, the life sciences business of Amersham plc. The non-exclusive license permits Amersham Biosciences, a market leader in the separations media field, to practice our phage display patents to discover ligands from peptide libraries for use as affinity-based media for chromatography separations.

### **Biotage Separations Products**

Purification of a pharmaceutical product is a complex, time-consuming process, which can often be the dominant bottleneck in drug discovery and production. A widely used separations technology, chromatography, is used for purification during the discovery, development and manufacture of a pharmaceutical product. Liquid chromatography separates molecules in a mixture by making use of the different rates at which the molecules in the solution accumulate on the surface of another material known as separations media. In this technology, the molecules in solution pass through a chamber, or column, packed with separations media. The migration rates of different molecules through the column vary due to differences in the strength of binding interactions with the media in the column. This differential separation of molecules can be used to purify a desired novel therapeutic compound.

We develop, manufacture and sell chromatography separations systems and consumables through our Biotage subsidiary under the Biotage trade name. Our customers use these systems and consumables in separations processes from the discovery scale, where small amounts of a compound are purified for research work, through the preparative and production scales, where a product is manufactured for commercialization. We have designed our FLASH systems to use prepacked cartridges at all of these scales for a wide range of chemical and biological materials. Our customers in the pharmaceutical industry use our Flex, Quad, Horizon and Flash systems for high throughput purification of synthetic organic molecules, synthetic peptides, and natural products. We customize our Kiloprep systems to meet the requirements of development and manufacturing scale chromatography applications for the production of peptides and DNA diagnostics. We are a leading developer and manufacturer of chromatography systems that use disposable cartridges to purify pharmaceuticals being produced for research and clinical development. Our prepacked, disposable cartridges can be packed with a wide range of separations, or chromatography, media from a variety of sources. We believe that cartridge-based chromatography systems provide competitive advantages to our customers compared to manually packed systems, including:

- greater speed and convenience;
- lower cost due to less labor and reduced solvent use;

- improved safety by minimizing exposure of production personnel to media and hazardous solvents; and
- reproducible performance.

We believe Biotage's product line addresses a large and fast growing drug discovery and scale-up market. In 2002, sales of purification products for drug discovery, combinatorial and medicinal chemistry increased nearly 17% from the prior year, and represented 78% of Biotage's revenue. Biotage has focused its resources to gain the maximum return from the drug discovery segment. Biotage intends to maximize its high potential in discovery purification.

The following table summarizes our principal chromatography products:

<u>Products</u>	<u>Market Segment</u>	<u>Applications</u>
FLASH systems Parallel Flex, Horizon and Quad systems	Pharmaceutical discovery	Novel compound purification High throughput compound purification Natural Products
Production FLASH, Kiloprep systems	Pharmaceutical production	Production scale purification Peptide and synthetic DNA purification
FLASH, BioFLASH and Kiloprep cartridges	Pre-packed disposable cartridges for all Biotage systems	Disposable cartridges for use on all Biotage systems

## **Dyax Technology**

Molecular binding is the key to the function of most biopharmaceutical products. The binding of a molecule to a target is the mechanism nature uses to modulate biochemical and physiological processes such as cellular growth, differentiation, metabolism and death. To effect these processes, naturally occurring binding molecules typically distinguish between the correct target and other closely related molecules (specificity), and bind more tightly to the target than non-target molecules (affinity), under appropriate physiological conditions. Biopharmaceutical products bind to targets, including cellular receptors and enzymes, to achieve a desired effect, and those with higher affinity and specificity are thought to be preferable. Binding also plays a significant role in diagnostics, research reagents and separations products.

### ***Phage Display***

Living organisms, such as viruses, have the ability to display a foreign gene product, or protein, on their surfaces. Based on this ability of organisms to display proteins, our scientists developed our patented phage display technology for displaying large collections of proteins on filamentous bacteriophage or “phage,” a virus that infects laboratory bacteria. Our phage display technology is a broadly applicable method for the display and selection of proteins with desired binding properties. Our phage display process generally consists of the following steps:

***Generating a Phage Display Library.*** The generation of a phage display library is based upon a single protein framework and contains tens of billions of variations of this protein. The first step in generating a library is the selection of the protein framework upon which the library will be created. This selection is based on the desired product properties, such as structure, size, stability, or lack of immunogenicity. We then determine which amino acids in the framework will be varied, but do not vary amino acids that contribute to the framework structure. We also control the exact numbers and types of different amino acids that are varied, so that the resulting phage display library consists of a diverse set of chemical entities, each of which retains the desired physical and chemical properties of the original framework.

The next step is the creation of a collection of genes that encode the designed variations of the framework protein. We can easily generate diverse collections of up to hundreds of millions of different synthetic DNA sequences. Each new DNA sequence, or gene, encodes a single protein sequence that will be displayed on the surface of the individual phage that contains this gene. The scientists combine the new DNA sequences with phage genome DNA and certain enzymes so that the new DNA is inserted into a specific location of the phage genome. The result is that the new protein is displayed on the phage surface fused to one of the naturally occurring phage proteins. The phage acts as a physical link between the displayed protein and its gene.

In addition to fused synthetic DNA sequences, we can also use naturally occurring genes, such as cDNA, which are sequences that represent all of the expressed genes in a cell or organism, to create a library. We have also inserted genes from antibody expressing human cells into the phage genome. Using these genes, we have constructed phage display libraries that express billions of different human antibodies on the phage surface. From one of these libraries, individual antibody fragments can be selected and used to build highly specific human monoclonal antibodies.

The new phage genome is then transferred into laboratory bacteria, where the phage genome directs the bacterial cells to produce thousands of copies of each new phage. The collection of phage displaying multiple peptides or proteins is referred to as a phage display library. Because we can reproduce the phage display library by infecting a new culture of laboratory bacteria to produce millions of additional copies of each phage, we can use libraries for a potentially unlimited number of screenings.

**Screening Phage Display Libraries.** We can then select binding compounds with high affinity and high specificity by exposing the library to specified targets of interest and isolating the phage that display compounds that bind to the target. For certain applications of phage display, such as separations, we can design the binding and release conditions into the selection process. Each individual phage contains the gene encoding one potential binding compound, and when its displayed protein is selected in the screening procedure, it can be retrieved and amplified by growth in laboratory bacteria.

To screen a phage display library, we expose the library to the target under desired binding conditions. The target is normally attached to a fixed surface, such as the bottom of a tube, or a bead, allowing removal of phage that do not express binding compounds that recognize the target. Once these unbound phage are washed away, the phage containing the selected binding compounds can be released from the target. Since the phage are still viable, they can be amplified rapidly by again infecting bacteria. The capacity of the phage to replicate itself is an important feature that makes it particularly well suited for rapid discovery of specific binding compounds. We can amplify a single phage by injecting it into bacteria and producing millions of identical phage in one day.

If the binding affinity of the compounds identified in an initial screening for a target is not considered sufficiently high, information derived from the binding compounds identified in the initial screening can be used to design a new focused library. The design, construction and screening of a second generation library, known as affinity maturation, can lead to increases of 10- to 100-fold in the affinity of the binding compounds for the target.

**Evaluation of Selected Binding Compounds.** Screening phage display libraries generally results in the identification of one or more groups of related binding compounds such as proteins, peptides, or antibodies. These groups of compounds are valuable in providing information about which chemical features are necessary for binding to the target with affinity and specificity, as well as which features can be altered without affecting binding. Using DNA sequencing, we can determine the amino acid sequences of the binding compounds and identify the essential components of desired binding properties by comparing similarities and differences in such sequences. If desired, scientists can further optimize the binding compounds by building additional phage display libraries based on these key components and repeating this process. We can complete the entire selection process in several weeks. We can produce small amounts of the binding compound by growing and purifying the phage. For production of larger amounts, we can remove the gene from the phage DNA and place it into a standard recombinant protein expression system. Alternatively, if the identified binding compound is sufficiently small, it can be chemically synthesized. These binding compounds can be evaluated for desired properties including affinity, specificity and stability under conditions that will be encountered during its intended use. From each group of compounds, scientists can identify, develop and test a compound with the desired properties for utility as a biopharmaceutical, diagnostic, research reagent or affinity separations product.

The entire phage display process for identifying compounds that bind to targets of interest is nearly identical whether the ultimate product is to be used for biopharmaceuticals, diagnostics, research reagents or separations, which allows for an efficient use of scientific resources across a broad array of commercial applications.

**Advantages of Phage Display Technology in Therapeutic Drug Discovery.** We believe our phage display technology has the following advantages over other drug discovery technologies:

- **Diversity and Abundance.** Many of our phage display libraries contain billions of potential binding compounds that are rationally-designed variations of a particular peptide or protein framework. Furthermore, we can isolate a diverse family of genes by including, for example, those that encode human antibodies. The size and diversity of our libraries significantly increase

the likelihood of identifying binding compounds with high affinity and high specificity for the target. Once we generate libraries, we can reproduce them rapidly in phage and use them for an unlimited number of screenings.

- *Speed and Cost Effectiveness.* We can construct phage display libraries in a few months and screen them in a few weeks to identify binding compounds. Conventional or combinatorial chemistry approaches require between several months and several years to complete this process. Similarly, mouse and human-mouse technologies generally require four to six months to identify an antibody. As a result, our phage display technology can significantly reduce the time and expense required to identify an antibody, protein or peptide with desired binding characteristics.
- *Automated Parallel Screening.* In an automated format, we can apply our phage display technology to many targets simultaneously to discover specific, high-affinity proteins, including human monoclonal antibodies, for each target. In contrast, human-mouse antibody technology identifies antibodies that bind to a single target per test group of mice and is difficult to automate. Among antibody technologies, phage display is particularly well suited for functional genomic applications, due to the large number of genetic targets that need to be screened for specific antibodies.
- *Rapid Optimization.* We screen phage display libraries to identify binding compounds with high affinity and high specificity for the desired target and can design and produce successive generations of phage display libraries to further optimize the leads. We have demonstrated between 10- and 100-fold improvement in binding affinity with second-generation phage display libraries. This optimization cannot occur with humanized mouse or human-mouse antibody technologies and cannot progress as rapidly or with equivalent diversity.

## Competition

*Therapeutic Products.* We compete in industries characterized by intense competition and rapid technological change. New developments occur and are expected to continue to occur at a rapid pace. Discoveries or commercial developments by our competitors may render some or all of our technologies, products or potential products obsolete or non-competitive.

Our principal focus is on the development of therapeutic products. We will conduct research and development programs to develop and test product candidates and demonstrate to appropriate regulatory agencies that these products are safe and effective for therapeutic use in particular indications. Therefore our principal competition going forward, as further described below, will be companies who either are already marketing products in those indications or are developing new products for those indications. Substantially all of these organizations have greater financial resources and experience than we do.

For our DX-88 product candidate, our competitors for the treatment of hereditary angioedema include Aventis Behring and Baxter Healthcare, which currently market plasma-derived C1 esterase inhibitor products that are approved for the treatment of this disease in Europe. In addition, other competitors would be Jerini AG, which is developing a bradykinin antagonist for the treatment of angioedema in Europe, companies developing recombinant C1 inhibitors, such as Pharming Group N.V., as well as companies that market and develop corticosteroid drugs or other anti-inflammatory compounds. Bayer currently markets aprotinin, which is indicated for reduction of blood loss in patients undergoing cardiopulmonary bypass during CABG. A number of companies, including Alexion, are developing additional products to reduce the complications of cardiopulmonary bypass.

For our DX-890 product candidate, companies with products for the treatment of cystic fibrosis include Genentech and Chiron. A number of other companies are developing neutrophil elastase

inhibitors for broader indications. These include Medea Research, Cortech, Inc., Ono, Eli Lilly, SuperGen, Teijin, GlaxoSmithKline, Arriva, and Ivax.

For potential oncology product candidates coming out of our biopharmaceutical discovery and development programs potential competitors include numerous pharmaceutical and biotechnology companies, most of which have substantially greater financial resources and experience than we do.

In addition, most large pharmaceutical companies seek to develop orally available small molecule compounds against many of the targets for which others and we are seeking to develop protein, peptide, and/or antibody products.

Our phage display technology is one of several technologies available to generate libraries of compounds that can be used to discover and develop new protein, peptide, and/or antibody products. The primary competing technology platforms that pharmaceutical, diagnostics and biotechnology companies use to identify antibodies that bind to a desired target are transgenic mouse technology and the humanization of murine antibodies derived from hybridomas. Abgenix Inc., Medarex Inc., Genmab, and Protein Design Labs, Inc. are leaders in these technologies. Further, we license our phage display patents and libraries to other parties in the fields of therapeutics and *in vitro* diagnostic products on a non-exclusive basis. Our licensees may compete with us in the development of specific therapeutic and diagnostic products. In particular, Cambridge Antibody Technology Group plc, Morphosys AG, and Crucell, all of which have licenses to our base technology, compete with us, both to develop therapeutics and to offer research services to larger pharmaceutical and biotechnology companies. Biosite, which is also a patent licensee of ours, has partnered with Medarex, Inc. to combine phage display technology with the transgenic mouse technology, to create antibody libraries derived from the RNA of immunized mice. Other companies are attempting to develop new antibody engineering technology. These include Phylos, which is developing ribosomal display technology and antibody mimics, Diversa, which is developing combinatorial arrays for large-scale screening of antibodies, our patent licensees Domantis, which makes single domain antibody libraries, and Novagen, which is developing cDNA display technology.

**Separation Products.** Chromatography is only one of several methods of separation, including centrifugation and filtration, used in the manufacture of biopharmaceutical products. Biotage faces active competition from other suppliers of separations products. The principal competitors in Biotage's existing product markets include Nova Sep, Isco, Inc. and Gilson, Inc. In addition, many pharmaceutical companies have historically assembled their own chromatography systems and hand-packed their own cartridges. Biotage's principal competitor in the prepacked disposable cartridge market for its FLASH cartridges is Isco, which has started selling non-interchangeable cartridges. In addition others may be able to use conventional or combinatorial chemistry approaches, or develop new technology, to identify binding molecules for use in separating and purifying products.

### **Patents and Proprietary Rights**

Our success is significantly dependent upon our ability to obtain patent protection for our products and technologies, to defend and enforce our issued patents, including patents related to phage display, and to avoid the infringement of patents issued to others. Our policy generally is to file for patent protection on methods and technology useful for the display of binding molecules, on biopharmaceutical, diagnostic and separation product candidates, and on chromatography product improvements and applications.

Our proprietary position in the field of phage display is based upon patent rights, technology, proprietary information, trade secrets and know-how. Our patents and patent applications for phage display include U.S. Patent Nos. 5,837,500, which expires June 29, 2010, 5,571,698, which expires June 29, 2010, 5,403,484, which expires April 4, 2012, and 5,223,409, which expires June 29, 2010, issued patents in Canada and Israel, and pending patent applications in the United States and other

countries. These phage display patent rights contain claims covering inventions in the field of the surface display of proteins and certain other peptides, including surface display on bacteriophage.

For our therapeutic product candidates, we file for patent protection on groups of peptides, proteins and antibody compounds that we identify using phage display. These patent rights now include U.S. Patent No. 5,666,143, which expires September 2, 2014, claiming sequences of peptides that have neutrophil elastase inhibitory activity, including the sequence for DX-890; and U.S. Patent Nos. 5,994,125, which expires January 11, 2014, 5,795,865, which expires August 18, 2015, 6,057,287, which expires August 18, 2015, and 6,333,402, which expires January 11, 2014 claiming sequences of peptides that have human kallikrein inhibitory activity, including the sequence for DX-88, and polynucleotide sequences encoding these peptides.

For our affinity separation technology our patent rights include U.S. Patent No. 6,326,155, which expires March 20, 2016. The patent rights cover methods for identifying affinity ligands to purify biological molecules. The patented method can be used in combination with our proprietary phage display technology, making it a powerful tool for biological purification, discovery and development.

To protect our chromatography separations products, we rely primarily upon trade secrets and know-how, as well as the experience and skill of our technical personnel. We also have several patents and patent applications claiming specific inventions relating to our proprietary chromatography systems and cartridges. These patent rights include U.S. Patent No. 6,294,087, which expires August 20, 2018, U.S. Patent No. 6,398,953, which expires on March 25, 2019, and U.S. Patent No. 6,436,284, which expires on June 30, 2018. These patents relate to our chromatography cartridge product line and covers our current Quad™ and Flash 12+™, 25+™ and 40+™ cartridges.

There are no legal challenges to our phage display patent rights or our other patent rights now pending in the United States. However, we cannot assure that a challenge will not be brought in the future. We plan to protect our patent rights in a manner consistent with our product development and business strategies. If we bring legal action against an alleged infringer of any of our patents, we expect the alleged infringer to claim that our patent is invalid, not infringed, or not enforceable for one or more reasons, thus subjecting that patent to a judicial determination of infringement, validity and enforceability. In addition, in certain situations, an alleged infringer could seek a declaratory judgment of non-infringement, invalidity or unenforceability of one or more of our patents. We cannot be sure that we will have sufficient resources to enforce or defend our patents against any such challenges or that a challenge will not result in an adverse judgment against us or the loss of one or more of our patents. Uncertainties resulting from the initiation and continuation of any patent or related litigation, including those involving our patent rights, could have a material adverse effect on our ability to maintain and expand our licensing program and collaborations, and to compete in the marketplace.

Our first phage display patent in Europe, European Patent No. 436,597, known as the 597 Patent was ultimately revoked in 2002 in a proceeding in the European Patent Office. We have two divisional patent applications of the 597 Patent pending in the European Patent Office. We will not be able to prevent other parties from using our phage display technology in Europe if the European Patent Office does not grant us another patent. We cannot be assured that we will prevail in the prosecution of either of these patent applications.

Our phage display patent rights are central to our non-exclusive patent licensing program. We offer non-exclusive licenses under our phage display patent rights to companies and non-profit institutions in the fields of therapeutics, *in vitro* diagnostics and other select fields. In jurisdictions where we have not applied for, obtained, or maintained patent rights, we will be unable to prevent others from developing or selling products or technologies derived using phage display. In addition, in jurisdictions where we have phage display patent rights, we cannot assure that we will be able to prevent others from selling or importing products or technologies derived using phage display.



George Pieczenik and I.C. Technologies America, Inc. sued us in 1999 for patent infringement of three United States patents. The complaint was initially filed against us in New York, dismissed for lack of jurisdiction and then refiled in the United States District Court in Massachusetts. On February 25, 2003, the District Court granted summary judgment of noninfringement in our favor with respect to the three asserted patents. On March 5, 2003, the plaintiff filed a Notice of Appeal to the United States Court of Appeals for the Federal Circuit.

We are aware that other parties have patents and pending applications to various products and processes relating to phage display technology. Through licensing our phage display patent rights, we have secured a limited ability to practice under some of the third party patent rights relating to phage display technology. These rights are a result of our standard license agreement, which contains a covenant by the licensee that it will not sue us under the licensee's phage display improvement patents. In addition, we have sought and obtained affirmative rights of license or ownership under certain patent rights relating to phage display technology owned by other parties. For example, in addition to our new agreement with CAT, we entered into cross licensing agreements in 2002 with Biosite and with Genentech under which we granted each of those companies rights to practice our phage display patents and in return received rights to practice under their phage display related patents. In October of 2002, we entered into a cross licensing agreement with XOMA under which we received a license to use XOMA's antibody expression technology to develop antibody products for ourselves and our collaborators. We also received a license from XOMA to produce antibodies. In exchange we agreed to pay XOMA a license fee and a royalty in connection with the sale of any of our antibody products. We also granted XOMA a license to our phage display patents and agreed to provide them with one of our antibody phage display libraries.

The issues relating to the validity, enforceability and possible infringement of such patents present complex factual and legal issues that we periodically reevaluate. Third parties have patent rights related to phage display, particularly in the area of antibodies. While we have during 2002 gained access to key patents in the antibody area through the cross licenses with Biosite, Genentech, XOMA and CAT, other third party patent owners may contend that we need a license or other rights under their patents in order for us to commercialize a process or product. In addition, we may choose to license patent rights from third parties. While we believe that we will be able to obtain any needed licenses, we cannot assure that these licenses, or licenses to other patent rights that we identify as necessary in the future, will be available on reasonable terms, if at all. If we decide not to seek a license, or if licenses are not available on reasonable terms, we may become subject to infringement claims or other legal proceedings, which could result in substantial legal expenses. If we are unsuccessful in these actions, adverse decisions may prevent us from commercializing the affected process or products. Moreover, if we are unable to maintain the covenants with regard to phage display improvements that we obtain from our licensees through our patent licensing program and the licenses that we have obtained to third party phage display patent rights it could have a material adverse effect on our business.

In all of our activities, we substantially rely on proprietary materials and information, trade secrets and know-how to conduct research and development activities and to attract and retain collaborative partners, licensees and customers. Although we take steps to protect these materials and information, including the use of confidentiality and other agreements with our employees and consultants in both academic and commercial relationships, we cannot assure you that these steps will be adequate, that these agreements will not be violated, or that there will be an available or sufficient remedy for any such violation, or that others will not also develop similar proprietary information.

#### **Government Regulation**

The production and marketing of any of our future biopharmaceutical or diagnostic products will be subject to numerous governmental laws and regulations on safety, effectiveness and quality, both in the United States and in other countries where we intend to sell the products. In addition, our research

and development activities in the United States are subject to various health and safety, employment and other laws and regulations.

#### ***United States FDA Approval***

In the United States, the U.S. Food & Drug Administration rigorously regulates products intended for diagnostic or therapeutic use in humans. In addition, products intended for use in the manufacturing of these products, such as separations media and equipment, are subject to certain FDA manufacturing and quality standards.

The steps required before a new pharmaceutical can be sold in the United States include:

- preclinical tests;
- submission of an Investigational New Drug Application to the FDA, which must become effective before initial human clinical testing can begin;
- human clinical trials to establish safety and effectiveness of the product, which normally occurs in three phases each monitored by the FDA;
- submission and approval by the FDA of a New Drug or Biologics License Application; and
- compliance with the FDA's Good Manufacturing Practices regulations and facility and equipment validations and inspection.

The requirements for testing and approval for *in vitro* diagnostic products may be somewhat less onerous than for pharmaceutical products, but similar steps are required. All our biopharmaceutical or diagnostic product leads, including our neutrophil elastase inhibitor, DX-890, our plasma kallikrein inhibitor, DX-88, and the pharmaceutical and diagnostic products of our collaborators and licensees, will need to complete successfully the FDA-required testing and approvals before they can be marketed. There is no assurance that our collaborators or we can gain the necessary approvals. Failure to do so would have a material adverse effect on our future business.

#### ***Foreign Regulatory Approval***

In many countries outside the United States, governmental regulatory authorities similar to the FDA must approve the investigational program and/or marketing application for pharmaceutical and diagnostic products. The investigational documentation requirements vary from country to country and certain countries may require additional testing. Following the conclusion of the clinical evaluation of a medicinal product, a marketing authorization is prepared and submitted. The format of the required documentation has been harmonized in the United States, the European Union, and Japan. However, some variations continue to exist. In addition, the national laws governing manufacturing requirements, advertising and promotion, and pricing and reimbursement may vary widely. Therefore, the time to market can vary widely among different regions and countries. In addition, the export to foreign countries for investigation and /or marketing of medicinal products that have been manufactured in the US but not approved for marketing by the FDA is subject to US law as well as the laws of the importing country and may require FDA authorization. There is no assurance that we will be able to gain the necessary authorizations in a timely fashion or at all. Failure to do so would have a material adverse effect on our future business.

#### ***Environmental, Health, Safety and Other Regulations***

In addition to the laws and regulations that apply to the development, manufacture and sale of our products, our operations are subject to numerous foreign, federal, state and local laws and regulations. Our research and development activities involve the use, storage, handling and disposal of hazardous materials, chemicals and radioactive compounds and, as a result, we are required to comply with

regulations and standards of the Occupational Safety and Health Act, Nuclear Regulatory Commission and other safety and environmental laws. Although we believe that our activities currently comply with all applicable laws and regulations, the risk of accidental contamination or injury cannot be completely eliminated. In the event of such an accident, we could be held liable for any damages that result, which could have a material adverse effect on our business, financial condition and results of operations.

## **Manufacturing**

*Therapeutic Products.* We currently rely on contract manufacturers for the production of our therapeutic recombinant proteins for preclinical and clinical studies, including the manufacture of both the bulk drug substance and the final pharmaceutical product. The testing of the resultant products is the responsibility of the contract manufacturer and/or an independent testing laboratory. These materials must be manufactured and tested according to strict regulatory standards established for pharmaceutical products. Despite our close oversight of these activities, there is no assurance that the technology can be readily transferred from our facility to those of the contractors, that the process can be scaled up adequately to support clinical trials, or that the required quality standards can be achieved. To date, we have identified only a few facilities that are capable of performing these activities and willing to contract their services. There is no assurance that contractors will have the capacity to manufacture or test our products at the required scale and within the required time frame. There is no assurance that the supply of clinical materials can be maintained during the clinical development of our product candidates.

It is our current intent to rely on contract manufacturers for the production and testing of marketed pharmaceuticals following the approval of one or more of our products. The quality standards for marketed pharmaceuticals are even greater than for investigational products. The inability of these contractors to meet the required standards and/or to provide an adequate and constant supply of the pharmaceutical product would have a material adverse effect on our business.

*Separation Products.* We manufacture and sell chromatography systems and cartridges through our Biotage subsidiary. Subcontractors manufacture components for chromatography systems to our specifications. We purchase commercial media for certain prepacked cartridges, which we repack and sell in disposable cartridges. A small number of components of our chromatography systems are currently purchased from single sources. However, we believe that alternative sources for these components are readily available, if necessary, and that we will be able to enter into acceptable agreements to obtain these components from such alternate sources at similar costs with only a temporary disruption or delay in production.

## **Sales and Marketing**

*Therapeutic Products.* We do not currently have any therapeutic products approved for sale. For any products that are approved in the future for diseases where patients are treated primarily by limited numbers of physicians, we intend in most cases to conduct sales and marketing activities ourselves in North America and, possibly, in Europe. For any product that we intend to market and sell ourselves, we do not expect to establish direct sales capability until shortly before the products are approved for commercial sale, but we will begin product management and market education activities earlier during clinical trials. For markets outside of North America, including possibly European markets, we will seek to establish arrangements where our products are sold by pharmaceutical companies, which are already well established in these regions. For products that are indicated for conditions where patients may be treated by large numbers of internists, general surgeons, or family practitioners, we will seek to establish arrangements under which our products will be sold and marketed by large pharmaceutical organizations with established sales representatives. These arrangements will generally be worldwide on a product-by-product basis.

**Biotage Products.** Our Biotage separations business has a total sales and marketing group of approximately 48 people located in the United States, Europe and Japan. In selected countries we sell Biotage products through independent distributors. As new products are introduced and the market for our Biotage products grows, we anticipate increasing our direct marketing and sales capacity.

**Other Product Areas.** For areas other than therapeutic products and Biotage products, we will generally seek to establish arrangements with leading companies in particular business areas under which those companies develop the products based on Dyax technology and conduct sales and marketing activities through their established channels.

We provide financial information by segment and geographical area in Note 16 to our Consolidated Financial Statements. We are incorporating that information into this section by this reference.

### **Employees**

As of December 31, 2002, worldwide we had 244 employees, including 38 with Ph.D.'s and 2 with an M.D. Approximately 105 of our employees are in research and development, 40 in manufacturing, 53 in sales and marketing and 46 in administration. Our workforce is non-unionized, and we believe that our relations with employees are good.

## **ITEM 2. PROPERTIES**

In June of 2001, we signed a ten-year lease with the Massachusetts Institute of Technology. The leased property is located in Cambridge, Massachusetts and serves as our corporate headquarters and main research facility. Under the terms of the lease, we have initially leased 67,197 square feet. Of the space we initially leased, we have subleased a total of approximately 24,000 square feet to two different biotechnology companies under subleases that expire through April 30, 2004. We are obligated to lease an additional 24,122 square feet on November 1, 2007. We have the option to extend the lease for two additional five-year terms. We have provided the lessor with a Letter of Credit in the amount of \$4.3 million, which may be reduced after the fifth year of the lease term. Through our Belgian subsidiary, Dyax S.A., we maintain 10,000 square feet of laboratory and office space in Liege, Belgium to support our research efforts.

Through our Biotage subsidiary, we purchased approximately 7 acres of land in Charlottesville, VA in 2002 on which Biotage built a 51,000 square foot facility to support all of its activities in Charlottesville. We have occupied this facility since October of 2002. Through Biotage, we also lease approximately 4,000 square feet of office space in the United Kingdom and a small facility in Japan to support marketing efforts for the Biotage products. We believe that our current space plans are adequate for our foreseeable needs and that we will be able to obtain additional space, as needed, on commercially reasonable terms.

## **ITEM 3. LEGAL PROCEEDINGS**

Except for the proceedings described in Item 1, "Business—Patents and Proprietary Rights", which is incorporated into this item by this reference, we are not a party to any material legal proceedings.

## **ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS**

During the quarter ended December 31, 2002, no matters were submitted to a vote of security holders through the solicitation of proxies or otherwise.

## PART II

### ITEM 5. MARKET FOR THE COMPANY'S COMMON STOCK AND RELATED SECURITY HOLDER MATTERS

Our common stock is traded on The Nasdaq National Market under the symbol DYAX. At March 25, 2003, there were 24,455,103 shares of our common stock outstanding, which were held by approximately 307 common stockholders of record, and approximately 1,800 beneficial owners.

The following table sets forth, for the periods indicated, the high and low selling prices for our common stock as reported on the Nasdaq National Market:

	<u>High</u>	<u>Low</u>
Fiscal year ended December 31, 2002:		
First Quarter . . . . .	\$11.38	\$3.10
Second Quarter . . . . .	\$ 4.68	\$3.20
Third Quarter . . . . .	\$ 4.20	\$1.65
Fourth Quarter . . . . .	\$ 2.68	\$1.05
	<u>High</u>	<u>Low</u>
Fiscal year ended December 31, 2001:		
First Quarter . . . . .	\$20.94	\$6.56
Second Quarter . . . . .	\$19.99	\$6.81
Third Quarter . . . . .	\$21.24	\$6.05
Fourth Quarter . . . . .	\$11.99	\$6.59

We have never declared or paid cash dividends on our capital stock. We currently intend to retain our future earnings, if any, for use in our business and therefore do not anticipate paying cash dividends in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our Board of Directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs and plans for expansion.

On August 14, 2000, the Securities and Exchange Commission declared effective our Registration Statement on Form S-1 (File No. 333-37394) in connection with the initial public offering of our common stock. J.P. Morgan & Co., Lehman Brothers and Pacific Growth Equities, Inc. served as managing underwriters of the offering.

On August 18, 2000, we sold 4,600,000 shares of our common stock (including 600,000 shares pursuant to the exercise by the underwriters of their over-allotment option) at a price of \$15.00 per share to the underwriters. We received proceeds in the initial public offering of approximately \$62.4 million, net of underwriter commissions of approximately \$4.8 million and other offering costs of approximately \$1.8 million. No expenses were paid or payments made to our directors, officers or affiliates or 10% owners of any class of our equity securities. From August 18, 2000 through December 31, 2002, we used approximately \$39.3 million to fund operating activities, \$16.7 million for the purchase of fixed assets and we hold the remaining proceeds in cash and cash equivalents.

## ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following table summarizes certain selected consolidated financial data, which should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this Form 10-K.

	December 31,				
	2002	2001	2000	1999	1998
	(In thousands, except per share data)				
<b>Consolidated Statement of Operations Data:</b>					
Revenues:					
Separations product revenues . . . . .	\$ 23,158	\$ 18,803	\$ 15,782	\$ 12,596	\$ 9,641
Biopharmaceutical product development and license fee revenues . . . . .	17,750	14,237	9,434	4,237	4,490
Total revenues . . . . .	40,908	33,040	25,216	16,833	14,131
Operating expenses:					
Cost of products sold . . . . .	10,038	8,805	7,495	5,515	4,164
Research and development:					
Other research and development . . . . .	31,407	18,745	14,391	10,618	6,778
Non-cash compensation . . . . .	394	687	1,089	423	306
Selling, general and administrative:					
Other selling, general and administrative . . . . .	24,388	23,254	18,089	14,069	10,061
Non-cash compensation . . . . .	746	867	1,332	516	375
Total operating expenses . . . . .	66,973	52,358	42,396	31,141	21,684
Loss from operations . . . . .	(26,065)	(19,318)	(17,180)	(14,308)	(7,553)
Other (expense) income, net . . . . .	(753)	2,153	1,991	1,121	401
Net loss . . . . .	\$ (26,818)	\$ (17,165)	\$ (15,189)	\$ (13,187)	\$ (7,152)
Basic and diluted net loss per share . . . . .	\$ (1.36)	\$ (.89)	\$ (1.77)	\$ (6.81)	\$ (4.22)
Shares used in computing basic and diluted net loss per share . . . . .	19,652,474	19,244,809	8,577,912	1,936,907	1,694,782

	December 31,				
	2002	2001	2000	1999	1998
	In thousands:				
<b>Consolidated Balance Sheet Data:</b>					
Cash and cash equivalents . . . . .	\$ 28,199	\$ 51,034	\$ 74,205	\$ 16,726	\$ 25,491
Working capital . . . . .	17,643	44,010	71,798	15,279	26,515
Total assets . . . . .	73,906	81,441	91,405	29,608	34,416
Long-term obligations, less current portion . . . . .	17,946	4,240	1,580	1,249	586
Accumulated deficit . . . . .	(110,827)	(84,009)	(66,844)	(51,655)	(38,468)
Total stockholders' equity . . . . .	30,843	55,464	69,857	19,300	29,410

As a result of the adoption of Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets", goodwill is no longer amortized commencing January 1, 2002. Amortization expense on goodwill would have been approximately \$27,000 for the year ended December 31, 2002. See Notes 2 and 6 of the financial statements.

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

*The discussion in this item and elsewhere in this report contains forward-looking statements involving risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. These risks and uncertainties include those described under "Important Factors That May Affect Future Operations and Results" below.*

### **Overview**

We are a biopharmaceutical company principally focused on the discovery, development and commercialization of antibody, protein and peptide based therapeutic products. We have two product candidates in clinical trials, DX-88 and DX-890, and have collaborative agreements for the development of both of these product candidates. We are currently conducting two Phase II trials of DX-88 for the treatment of patients with hereditary angioedema (HAE): one is being conducted in Europe, in which treatment was completed in March 2003, and the other is being conducted in the United States with the intent to add international sites. We are also conducting a Phase I/II study of DX-88 in the United States in patients undergoing cardiopulmonary bypass. Our collaborator for DX-890 has completed a Phase IIa trial in adult patients with cystic fibrosis and has initiated a second Phase IIa trial in children with cystic fibrosis. We use our proprietary, patented technology, known as phage display, to identify a broad range of compounds with the potential for the treatment of various diseases. We are using phage display technology to build a broad portfolio of product candidates that we plan to develop and commercialize either ourselves or with others. On behalf of collaborators, we also use phage display technology to identify compounds that can be used in therapeutics, diagnostic imaging, the development of research reagents, and in purifying and manufacturing biopharmaceuticals. We are further leveraging our phage display technology through collaborations and licenses that are structured to generate revenues through research funding, license fees, technical and clinical milestone payments, and royalties.

We also develop, manufacture and sell chromatography separations systems and products through our Biotage subsidiary. We are a leading developer, manufacturer and supplier of chromatography separations systems that use disposable cartridges to separate and purify pharmaceuticals being produced for research and clinical development.

### **Recent Development**

On March 19, 2003, we completed the sale of 4,721,625 shares of our common stock at a price of \$1.86 per share in a registered directed offering covered by our shelf registration on Form S-3 (File No. 333-86904), which had been declared effective on May 3, 2002.

### **Results of Operations**

#### *Year Ended December 31, 2002 and 2001*

Total revenues for 2002 were \$40.9 million, compared with \$33.0 million in 2001, an increase of \$7.9 million or 24%. Separations product revenues represents revenues generated by our wholly owned Biotage subsidiary from the sale of chromatography separations systems and consumables. Biopharmaceutical product development and license fee revenues represents revenues generated by our biopharmaceutical business. Separations product revenues and Biopharmaceutical product development and license fee revenues accounted for 57% and 43% of total revenues in both 2002 and 2001. Separations product revenues increased to \$23.2 million in 2002 from \$18.8 million in 2001, an increase of \$4.4 million or 23%. The increase in Separations product revenues was due to increased unit sales in Biotage's drug discovery purification systems and consumable business. Biopharmaceutical product development and license fee revenues increased to \$17.8 million in 2002 from \$14.2 million in 2001, an

increase of \$3.5 million or 25%. The increase in Biopharmaceutical product development and license fee revenues was primarily due to the related revenues from increased clinical manufacturing activity in our DX-890 product development program as well as the continued expansion of our phage display research collaborations.

Cost of products sold related to Separations product revenues in 2002 was \$10.0 million compared to \$8.8 million in 2001, an increase of \$1.2 million or 14%. The cost of products sold as a percentage of Separations product revenues was 43% and 47% for 2002 and 2001, resulting in a gross margin from Separations product revenues of 57% and 53% for 2002 and 2001, respectively. These improvements in gross margin reflect increased Separations product sales in 2002, increased direct sales through Biotage's foreign subsidiaries instead of sales through independent distributors, as well as continued efforts to reduce and control material costs.

Research and development expenses are comprised of costs incurred in performing research and development activities including salaries and benefits, clinical trial and related costs, contract manufacturing and other outside costs, and overhead costs. Research and development expenses for 2002 were \$31.8 million, compared with \$19.4 million in 2001, an increase of \$12.4 million or 64%. The increase resulted primarily from increased compound manufacturing and related external research and development expenditures for clinical trials. These increases were partially offset by a staff reduction that occurred in September of 2002 when we reduced the scope of our early discovery research programs in the area of small protein and peptide discovery to focus early stage discovery efforts on monoclonal antibodies. In conjunction with this refocusing, we reduced our total workforce by 21 people (which represented 16% of our biopharmaceutical workforce) from our Cambridge, Massachusetts and Liege, Belgium facilities. The cost to us of the associated severance was approximately \$650,000 including \$533,000 of severance for workforce reductions related to research and development, which was incurred during the third quarter of 2002. We expect the full effect of these cost reductions to be realized in 2003.

As of December 31, 2002, we had ongoing costs due to the initiation of a phase I/II clinical trial of DX-88 for patients undergoing cardiopulmonary bypass (CPB), costs associated with enrollment into the United States of EDEMA1, a Phase II 48-patient clinical study of DX-88 for the treatment of hereditary angioedema (HAE), enrollment into a Phase II clinical study of HAE in Europe, and manufacturing costs associated with the ongoing Phase II trial in Europe for DX-890 in cystic fibrosis (CF). We expect to complete and report preliminary results from all four of these active trials during 2003, but the length of time needed to complete clinical trials can vary substantially. An estimation of clinical trial completion dates and completion costs can vary significantly and are difficult to predict. We expect that we will incur the most significant clinical development costs of these product candidates during Phase III trials. In conducting both biopharmaceutical and separation product development, research and development costs are expensed as incurred.

Selling, general and administrative expenses increased to \$25.1 million in 2002 from \$24.1 million in 2001, an increase of \$1.0 million or 4%. Expenses for selling, general and administrative included salaries, fringe and other expenses for business development and corporate administrative functions, as well as expenses related to protecting our intellectual property, administrative occupancy, meeting the reporting requirements of a public company, and selling and marketing expenses at Biotage as we continue to expand our sales capabilities. In light of current business conditions, we contained spending in this area during 2002 and continue to review our organization and cost structure to further manage operating expenses and improve efficiencies.

Net other (expense) income decreased to an expense of \$753,000 in 2002 from \$2.2 million of income in 2001, a decrease of \$2.9 million. The decrease resulted primarily from higher interest expense associated with long-term obligations, lower interest income earned from a lower average invested cash balance, and lower yield rates.



Net loss in 2002 was \$26.8 million, compared to \$17.2 million in 2001.

*Year Ended December 31, 2001 and 2000*

Total revenues for 2001 were \$33.0 million, compared with \$25.2 million in 2000, an increase of \$7.8 million or 31%. Separations product revenues and Biopharmaceutical product development and license fee revenues accounted for 57% and 43% respectively, of total revenues in 2001, as compared with 63% and 37% in 2000. Separations product revenues increased to \$18.8 million in 2001 from \$15.8 million in 2000, an increase of \$3.0 million or 19%. The increase in Separations product revenues was due to increased unit sales in Biotage's drug discovery purification systems and consumable business. Biopharmaceutical product development and license fee revenues increased to \$14.2 million in 2001 from \$9.4 million in 2000, an increase of \$4.8 million or 51%. The increase in Biopharmaceutical product development and license fee revenues was primarily due to a full year of amortization associated with the upfront payments on several large funded collaborative arrangements, which were entered into during 2000, as well as the continued expansion of our phage display licensing program, including the recognition of a perpetual patent license in 2001. As a result of amortization of upfront fees for collaborations signed in 2000, our deferred revenues decreased to \$9.4 million from \$11.3 million as of December 31, 2001 and 2000, respectively. These Biopharmaceutical product development and license fees are amortized over the expected term of each agreement, ranging from one to six years.

Cost of products sold in 2001 was \$8.8 million, compared to \$7.5 million in 2000, an increase of \$1.3 million or 17%. The cost of products sold as a percentage of Separations product revenues remained constant at 47%, resulting in a gross margin from Separations product revenues of 53%. Research and development expenses for 2001 were \$19.4 million, compared with \$15.5 million in 2000, an increase of \$4.0 million or 26%. The increase resulted primarily from increased compound manufacturing and related expenditures for clinical trials, salaries and fringe expenses, and expenditures on new collaborative arrangements. These increases were partially offset by a decrease in non-cash compensation because deferred compensation in 2000 included the acceleration of vesting of certain restricted stock related to the completion of our initial public offering.

Selling, general and administrative expenses increased to \$24.1 million in 2001 from \$19.4 million in 2000, an increase of \$4.7 million or 24%. The increase is primarily due to increased salaries and fringe expenses in business development and corporate administrative functions, professional fees related to expanding and protecting our intellectual property and meeting the reporting requirements of a public company, and selling and marketing expenses at Biotage as we continue to expand our sales capabilities including opening a Japanese sales subsidiary. These increases were partially offset by a decrease in non-cash compensation because deferred compensation in 2000 included the acceleration of vesting of certain restricted stock related to the completion of our initial public offering.

Net other income increased to \$2.2 million in 2001 from \$2.0 million in 2000, due to an increase in interest income earned from a higher average invested cash balance.

Net loss in 2001 was \$17.2 million compared to \$15.2 million in 2000.

**Liquidity and Capital Resources**

Through December 31, 2002, we have funded our operations principally through the sale of equity securities, which have provided aggregate net cash proceeds since inception of approximately \$132.4 million, including net proceeds of \$62.4 million from our August 2000 initial public offering. We have also generated funds from Separations product revenues, Biopharmaceutical product development and license fee revenues, interest income and other sources. As of December 31, 2002, we had cash and cash equivalents of approximately \$28.2 million, a decrease of \$22.8 million from December 31, 2001. Our excess funds are currently invested in U.S. Treasury obligations and certificates of deposit.

On March 19, 2003, we sold an aggregate of 4,721,625 shares of our common stock in a registered directed offering for net proceeds of \$8.3 million.

Our operating activities used cash of \$22.5 million and \$14.1 million for the years ended December 31, 2002 and 2001, respectively. The use of cash in both years resulted primarily from our losses from operations and changes in our working capital accounts, net of depreciation, amortization and non-cash compensation expense. During 2002, cash used for operating activities increased approximately \$8.4 million from December 31, 2001. This was primarily due to increased research and development costs including clinical trial costs. As of December 31, 2002 we had four active clinical trials compared to only two active clinical trials at December 31, 2001.

Our investing activities used cash of \$6.9 million and \$10.2 million for the years ended December 31, 2002 and 2001, respectively. Our investing activities consisted principally of fixed assets purchases and payments on licensed patent technology. We estimate that we will reduce our investment level in 2003 for equipment to satisfy our facilities requirements for our research activities as compared to our investment level during 2002.

We have historically financed fixed asset purchases through capital lease arrangements. At December 31, 2002, we had an open facility with a lender, but the lender has no obligation to fund any further amounts. The capital lease obligations are collateralized by the assets sold to the lender. We believe that we will be able to obtain funding for our future fixed asset purchases through our existing or alternative lenders. If we cannot obtain additional funding we will have to use our existing cash and cash equivalents to fund future fixed asset purchases. The leasehold improvement obligations are currently collateralized by a stand-by letter of credit for the amount financed. If at the end of any quarter, our unrestricted cash is less than the greater of \$25.0 million or annualized cash needs, we must provide to the lender an irrevocable letter of credit in the amount equal to the amount of leasehold improvements financed, which was \$2.0 million at December 31, 2002. We anticipate we will be required to provide this letter of credit during the first half of 2003 based on our annualized cash needs. Annualized cash needs are determined by multiplying the cash used in operations on a consolidated basis for the most recently ended quarter by four.

In connection with the construction of Biotage's new facility in Charlottesville, Virginia, Biotage executed a loan agreement for approximately \$4.3 million from a commercial bank. The loan was converted to a term loan during the first quarter 2003 and will be repaid over 20 years with interest at a rate fixed for five-year periods based on the five-year U.S. treasury note rate in effect plus 1.58%. Interest is fixed at 5.83% for the first five years and will be adjusted once every five years thereafter, but may be adjusted earlier if Biotage fails to maintain an average non-interest bearing compensating balance of \$750,000 at the lending bank, which is included in cash and cash equivalents on our balance sheet. As of December 31, 2002, there was \$3.9 million outstanding under the loan, which is included in long-term obligations on our balance sheet. Biotage drew down the remaining \$400,000 during the first quarter of 2003.

Our financing activities provided \$6.5 million and \$842,000 for the years ended December 31, 2002 and 2001, respectively. Our 2002 financing activities consisted primarily of proceeds from long-term obligations, proceeds from our Cambridge landlord for leasehold improvements, the exercise of stock options and the exercise from our employee stock purchase plan, offset by increases in restricted cash and the repayments of long-term obligations.

On May 31, 2002, Genzyme Corporation and we amended and restated our collaboration agreement for the development of DX-88. Genzyme and we also executed a senior secured promissory note and security agreement under which Genzyme agreed to loan us up to \$7.0 million and we pledged certain tangible and intangible personal property of or arising out of the DX-88 program. The security agreement provides for additional collateral should we, under the Amended Collaboration Agreement, exercise our option to purchase Genzyme's interest in the application of DX-88 in

cardiopulmonary bypass and other surgery for \$1.0 million, or should we fail to meet certain financial covenants. The financial covenants state that we must maintain at least \$20.0 million in cash or cash equivalents based on our quarterly consolidated financial statements and that we maintain at least one continued listing standard for the Nasdaq National Market. We intend to exercise our option to purchase Genzyme's interest in the cardiopulmonary bypass and other surgery indication in the first quarter of 2003, which will require us to pay \$1.0 million to Genzyme in the second quarter of 2003. When we exercise the option, the security agreement provides that Genzyme release its security interest in the portion of the DX-88 program relating to the cardiopulmonary bypass and other surgery indication and that we pledge a percentage of our interest in our Biotage subsidiary as additional collateral for the loan.

## Outlook

In 2003, we anticipate total revenues will increase by approximately 20% to 30%. Separations product revenues should continue to grow due to our continued strength in the chromatography separations systems market, particularly our cartridge chromatography and Horizon instrumentation product lines. We also expect Biopharmaceutical product development and license revenues to grow based on our expectations regarding additional collaboration opportunities available to us in the therapeutic antibody area, the continued progress in clinical development, and expanded arrangements relating to our DX-88 and DX-890 product candidates.

Statements about our expectations of the period of time through which financial resources will be adequate to support our operations are forward-looking statements that involve risks and uncertainties. Actual results could vary as a result of a number of factors. We believe that existing cash and cash equivalents plus anticipated cash flow from product revenues and collaborations will be sufficient to support our current operating plans into 2004. We expect to use approximately \$15.0 to \$20.0 million in cash during 2003. If our existing resources and cash flows from product sales and collaborations are insufficient to satisfy our liquidity requirements, we may need to sell additional equity, debt securities or otherwise further leverage assets. The sale of any equity or debt securities may result in additional dilution to our stockholders, and we cannot be certain that additional financing will be available in amounts or on terms acceptable to us, if at all. If we are unable to obtain any required additional financing, we may be required to reduce the scope of our planned research, development and commercialization activities, which could harm our financial condition and operating results.

## Contractual Obligations

We have long-term obligations. Minimum future payments under our long-term obligations as of December 31, 2002 are as follows:

2003 .....	\$ 4,796,000
2004 .....	4,285,000
2005 .....	8,968,000
2006 .....	1,008,000
2007 and thereafter .....	<u>7,525,000</u>
Total future minimum payments .....	26,582,000
Less: amount representing interest .....	<u>(5,084,000)</u>
Present value of future minimum payments .....	21,498,000
Less: current portion .....	<u>(3,552,000)</u>
Long-term obligations .....	<u>\$17,946,000</u>

We have non-cancelable operating leases in the United States and Europe. Minimum future lease payments under these leases as of December 31, 2002 are as follows:

2003 . . . . .	\$ 4,200,000
2004 . . . . .	4,027,000
2005 . . . . .	3,812,000
2006 . . . . .	3,629,000
2007 and thereafter . . . . .	27,544,000

**Critical Accounting Estimates**

The United States Securities and Exchange Commission (“SEC”) recently issued disclosure guidance for “critical accounting estimates.” The SEC defines “critical accounting estimates” as those that require application of management’s most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods.

Our accounting policies are described in Note 2 in the consolidated financial statements. Since not all of these accounting policies require management to make difficult, subjective or complex judgments or estimates, they are not all considered critical accounting estimates. However, the following estimates could be deemed to be critical within the SEC definition.

*Inventories*

Inventories are stated at the lower of cost or market. Cost is determined using the first-in, first-out (FIFO) method. If it is determined that cost is less than market value, then cost is used for inventory valuation. If market value is less than cost, then we write down the related inventory to market value. If a write down to the current market value is necessary, the market value cannot be greater than the net realizable value.

Inventories are continually reviewed for slow moving, obsolete and excess items. Inventory items identified as slow moving are evaluated to determine if an adjustment is required. Additionally, our industry is characterized by regular technological developments that could result in obsolete inventory. Our estimates may prove to be inaccurate, in which case we may have understated or overstated the valuation of the excess and obsolete inventory. If our inventory is determined to be overvalued, we would recognize additional cost of goods sold at the time of such determination. Therefore, although we make every effort to ensure the accuracy of our estimates, any significant unanticipated changes in demand or technological developments could have a significant impact on the value of our inventory and our results of operations. At December 31, 2002 and 2001, our inventory balance was \$3.4 million and \$3.3 million, respectively. During 2002, 2001 and 2000, inventory valuation write downs were \$25,000, \$0 and \$425,000, respectively.

*Allowance for doubtful accounts*

We estimate the uncollectibility of our accounts receivable. When evaluating the adequacy of our allowance for doubtful accounts, we analyze our accounts receivable aging, historical bad debts, customer concentrations, customer credit-worthiness and current economic trends. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. Our accounts receivable balance net of allowances for doubtful accounts was \$6.8 million and \$7.1 million at December 31, 2002 and 2001, respectively. During 2002, 2001 and 2000, provisions for doubtful accounts were \$42,000, \$84,000 and \$1,000, respectively.

### *Valuation of long-lived and intangible assets*

We review long-lived assets, including goodwill, for impairment whenever events or changes in business circumstances indicate that the carrying amount of assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate. Factors considered important which could trigger an impairment review include the following:

- Significant change relative to historical or projected future operating results;
- Significant changes in the use of the assets or the strategy for the overall business;
- Significant industry or economic trends and developments.

Each impairment test is based on a comparison of the undiscounted cash flow to the recorded value of the asset. When it is determined that the carrying value of intangibles, long-lived assets and related goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, the asset is written down to its estimated fair value on a discounted cash flow basis. Our intangible assets at the end of 2002 consisted primarily of a license for antibody technology from a third party. The balance net of accumulated amortization of our other intangible assets was \$3.6 million and \$177,000 at December 31, 2002 and 2001, respectively. No impairment losses have been recognized in any of the periods presented herein.

### *Revenue recognition*

Separations product revenue is generally recognized on product sales arrangements based on product shipment if no installation obligations exist. For separations product sale arrangements that require installation services that are not considered essential to the functionality of the product, revenue is recognized upon shipment and a portion of revenue equal to the fair value of the installation service is deferred and recognized upon the completion of the installation. For separations product sale arrangements that require significant installation services and contain customer acceptance criteria, all revenue is recognized upon the completion of the installation and satisfaction of the customer acceptance criteria.

We enter into biopharmaceutical product development agreements with collaborators for the research and development of therapeutic, diagnostic and other products. The terms of the agreements may include non-refundable signing fees, funding for research and development, licensing fees, milestone payments and royalties on any product sales derived from the collaborations. Non-refundable signing fees are recognized as services are performed over the expected term of the collaboration. Funding for research and development, where the amounts recorded are non-refundable, is recognized as the related expenses are incurred. We evaluate all collaborative agreements on a quarterly basis to determine the appropriate revenue recognition for that period. The evaluation includes all of the potential revenue components from each specific collaborative agreement. Upon achievement of milestones, a portion of the milestone payment equal to the percentage of the collaboration completed through that date is recognized. The remainder is recognized as services are performed over the remaining term of the collaboration. Royalties are recognized when earned.

We license our patent rights covering phage display on a non-exclusive basis in the fields of therapeutics, antibody-based *in vitro* diagnostics, research products and others. Standard terms of the license agreements, for which we have no future obligations, generally include non-refundable signing fees, non-refundable annual license maintenance fees, development milestone payments and royalties on product sales. Signing fees and annual maintenance fees are recognized in equal monthly installments over the period to which the payment applies. Perpetual patent licenses are recognized immediately if we have no future obligations. Milestone payments under non-exclusive phage display patent licenses are recognized when the milestone is achieved and royalties are recognized when they are earned.

Revenue from National Institute of Standards and Technology and other grants to conduct research and development is recognized as eligible costs are incurred, up to the funding limit. Eligible grant related costs, which have been incurred in advance of cash receipts are recorded as receivables.

Payments received that have not met the appropriate criteria for revenue recognition are recorded as deferred revenue. At December 31, 2002 and 2001, our deferred revenue related to product development agreements was \$3.7 million and \$4.8 million, respectively.

Significant assumptions and estimates include the expected term of the agreement and total expected cost. Our assumptions and estimates may prove to be inaccurate. Therefore, although we make every effort to ensure the accuracy of our estimates, any significant unanticipated changes in our estimates could have a material impact on revenues and our results of operations.

#### *Litigation Claims*

As of December 31, 2002, we were engaged in a United States court proceeding relating to three patents owned by a third party; however, on February 25, 2003, the court granted summary judgment of noninfringement in our favor with respect to the three asserted patents. On March 5, 2003, the plaintiff filed a Notice of Appeal to the United States District Court of Appeals to Federal Circuit. We make provisions for claims specifically identified for which we believe the likelihood of an unfavorable outcome is probable and reasonably estimable. We record at least the minimum estimated liability related to claims where there is a range of loss and the loss is considered probable. Because of the uncertainties related to the likelihood and amount of loss on any of our pending claims, we are unable to make a reasonable estimate of the liability that could result from an unfavorable outcome of those claims. As additional information becomes available, we assess the potential liability related to our pending claims and revise our estimates. Future revisions in our estimates of the potential liability could materially impact our results of operation and financial position. We maintain insurance coverage that limits the exposure for any single claim as well as total amounts incurred per policy year, and we believe our insurance coverage is adequate. We make every effort to use the best information available to us in determining the level of liability reserves. As of December 31, 2002, we have no reserves for litigation settlements.

#### **Related Party Transactions**

Our President, Chief Executive Officer and Chairman of the Board also serves as an outside director of Genzyme Corporation and was a consultant to Genzyme until 2001. In 1996, we entered into a sublease agreement with Genzyme for laboratory and office facilities in Cambridge, Massachusetts, which was extended to and terminated in April 2002. Rent expense in connection with this sublease of \$162,000, \$682,000 and \$615,000 was recorded in each year ended December 31, 2002, 2001 and 2000, respectively. During 1996, we signed two patent license agreements with Genzyme under the our standard license terms. We recorded license revenues of \$50,000, for each year ended December 31, 2002, 2001 and 2000, in connection with the maintenance fees on these two agreements. As of December 31, 2002 and 2001, the related accounts receivable balance was \$0 and \$50,000, respectively.

In October 1998, we entered into a collaboration and commercialization agreement with Genzyme for one of our proprietary therapeutic compounds for the treatment of chronic inflammatory diseases, with initial development to be focused on the treatment of hereditary angioedema. On May 31, 2002, Genzyme and we amended our collaboration agreement. We are now funding the development of DX-88 for the treatment of HAE and expect to complete the first Phase II clinical trial for HAE (the Initial Program) early in the second quarter of 2003. Genzyme has an option to acquire a 50% interest in the DX-88 program upon our completion of the Initial Program, and will have a period of 60 days after review of the clinical trial data to exercise its option. If Genzyme exercises its option, it will be

responsible for 50% of the development costs incurred subsequent to completion of the Initial Program. Upon dosing the first patient in a pivotal clinical trial of DX-88 for HAE, Genzyme will be obligated to pay us one-half of the development costs in excess of \$6.0 million that we incurred through completion of the Initial Program. Through December 31, 2002, we had incurred approximately \$11.0 million of development cost in the program. On May 31, 2002, we and Genzyme also executed a senior secured promissory note and security agreement under which Genzyme agreed to loan us up to \$7.0 million and we pledged certain tangible and intangible personal property of or arising out of the DX-88 program. As of December 31, 2002, we had borrowed the full amount available under the loan. In addition, as of December 31, 2002, Genzyme owns approximately 2.7% of our common stock outstanding.

In June 1999, we provided a loan to an officer of the Company in the amount of \$100,000. The note, which bears interest at the Prime Rate (4.25% at December 31, 2002) plus 1.0% is payable in June 2004, subject to acceleration, and becomes due immediately if the officer's employment is terminated other than by us without cause. As long as the officer remains employed by us, we will forgive \$20,000 and all accrued interest on June 14 annually. In the event of the officer's death or permanent disability, the remaining principal of the loan plus all accrued interest will be forgiven. For the years ended December 31, 2002, 2001 and 2000 interest due was forgiven in the amount of \$6,000, \$8,000 and \$9,000, respectively. For the years ended December 31, 2002, 2001 and 2000 principal was forgiven in the amount of \$20,000. At December 31, 2002 and 2001, the balance outstanding on this note was \$40,000 and \$60,000, respectively. The outstanding principal of this loan at December 31, 2002 was repaid during March 2003, after the officer resigned.

In October 1998, we provided a mortgage loan and pledge agreement in the amount of \$1,300,000 to our President and Chief Executive Officer, who is also Chairman of the our Board of Directors, to purchase a residence within commuting distance of our headquarters. The loan bears interest at the Prime Rate (4.25% at December 31, 2002) less 1.5%, or the applicable federal rate (3.26% at December 31, 2002), which ever is higher and is collateralized by the real estate acquired with the loan proceeds and shares of our common stock owned by this officer. The agreement as amended in 2001, requires that aggregate collateral value of at least 150% of the outstanding loan principal be maintained throughout the life of the loan. Payments in the amount of \$8,220 are due monthly to us which are applied to interest and then principal. All remaining unpaid principal and accrued interest is payable on October 30, 2003, provided, however that it may be accelerated at any time at the discretion of the Board of Directors, including upon (i) termination of his service as Chairman and Chief Executive Officer; provided, however that in the case of death or disability, payment shall not be due for at least twelve months after termination; or (ii) at any time that our cash and marketable investments total less than \$10,000,000. Due to the maturity date of the note all amounts outstanding at December 31, 2002 are included in the current portion of notes receivable, employees. The balance outstanding on this note was \$1,229,000 and \$1,286,000, at December 31, 2002 and 2001, respectively.

#### **Tax Loss Carryforwards**

As of December 31, 2002, we had federal net operating loss (NOL) and research and experimentation credit carryforwards of approximately \$91.0 million and \$4.9 million, respectively, which may be available to offset future federal income tax liabilities and expire at various dates from 2004 through 2022. We have recorded a deferred tax asset of approximately \$1.5 million reflecting the benefit of deductions from the exercise of stock options. This deferred asset has been fully reserved until it is more likely than not that the benefit from the exercise of stock options will be realized. The benefit from this \$1.5 million deferred tax asset will be recorded as a credit to additional paid-in capital when realized. As required by SFAS No. 109, our management has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets, which are comprised principally of NOL and research and experimentation credit carryforwards. Management has determined at this time

that it is more likely than not that we will not recognize the benefits of federal and state deferred tax assets and, as a result, a valuation allowance of approximately \$45.1 million has been established at December 31, 2002.

### **Recent Pronouncements**

In January 2003, the Financial Accounting Standards Board (FASB) issued FIN 46, "*Consolidation of Variable Interest Entities, an Interpretation of ARB 51*". The primary objectives of FIN 46 are to provide guidance on the identification of entities for which control is achieved through means other than through voting rights ("variable interest entities" or "VIEs") and how to determine when and which business enterprise should consolidate the VIE (the "primary beneficiary"). This new model for consolidation applies to an entity which either (1) the equity investors (if any) do not have a controlling financial interest or (2) the equity investment at risk is insufficient to finance that entity's activities without receiving additional subordinated financial support from other parties. In addition, FIN 46 requires that both the primary beneficiary and all other enterprises with a significant variable interest in a VIE make additional disclosures. The disclosure requirements are required in all financial statements initially issued after January 31, 2003. For VIE's created prior to February 1, 2003, the Interpretation will be effective after the first interim reporting period after June 15, 2003. For VIE's created after January 31, 2003, the Interpretation will be effective immediately. We do not expect the application of this Interpretation to have a material impact on our financial statements.

In December 2002, FASB issued SFAS 148, "*Accounting for Stock-Based Compensation—Transition and Disclosure—an amendment to SFAS 123*". SFAS 148 amends SFAS 123, Accounting for Stock-Based Compensation to provide alternative methods of transition to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based compensation and the effect of the method used on reported results. SFAS 148 is effective for fiscal years ending after December 15, 2002 with respect to the alternative transition methods permitted and the annual disclosures required. The disclosure provisions for interim financial information is effective for all periods presented in financial reports containing financial statements for interim periods beginning after December 15, 2002. We have not yet evaluated the alternative transition methods if it were to adopt SFAS 123 under this new standard, however, we have complied with all current disclosure requirements.

In December 2002, the Emerging Issues Task Force (EITF) reached a final consensus on EITF Issue 00-21, "*Accounting for Revenue Arrangements with Multiple Deliverables*". EITF 00-21 provides guidance on determining whether a revenue arrangement contains multiple deliverable items and if so, requires revenue to be allocated amongst the multiple elements based on fair values. EITF 00-21 also provides guidance as to when recognition of revenue for each deliverable is appropriate. The effective date of this Issue is required for revenue arrangements entered into by us after June 28, 2003. We do not expect the application of this issue to have a material impact on our financial statements.

In November 2002, the FASB issued FIN No. 45, "*Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*" an interpretation of FASB Statements No. 5, 57, and 107 and rescission of FASB Interpretation No. 34. The Interpretation requires that a guarantor recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken by issuing the guarantee. The Interpretation also requires additional disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees it has issued, including warranties. The accounting requirements for the initial recognition of guarantees are applicable on a prospective basis for guarantees issued or modified after December 31, 2002. The disclosure requirements are effective for all guarantees outstanding, regardless of when they were issued or modified, during the first quarter of fiscal 2003.



The adoption of the fair value provisions of this Statement are not expected to have a material impact on our financial statements.

In June 2002, the FASB issued SFAS 146, *Accounting for Costs Associated with Exit or Disposal Activities*. SFAS 146 addresses significant issues regarding the recognition, measurement, and reporting of costs that are associated with exit and disposal activities, including restructuring activities that are currently accounted for pursuant to the guidance that the Emerging Issues Task Force (EITF) has set forth in EITF Issue 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. The scope of SFAS 146 also includes (1) costs related to terminating a contract that is not a capital lease, (2) termination benefits that employees who are involuntarily terminated receive under the terms of a one-time benefit arrangement that is not an ongoing benefit arrangement or an individual deferred-compensation contract and (3) costs to consolidate facilities or relocate employees. SFAS 146 will be effective for exit or disposal activities that are initiated after December 31, 2002. We do not expect the application of SFAS 146 to have a material impact on our financial position or results of operations.

### **Important Factors That May Affect Future Operations and Results**

This Annual Report on Form 10-K contains forward-looking statements. These forward-looking statements appear principally in the sections entitled "Business" and "Management's Discussion and Analysis of Financial Conditions and Results of Operations." Forward-looking statements may appear in other sections of this report as well. Generally, the forward-looking statements in this report use words like "expect," "believe," "continue," "anticipate," "estimate," "may," "will," "could," "opportunity," "future," "project," and similar expressions.

The forward-looking statements include statements about our:

- results of operations;
- research and development programs;
- clinical trials; and
- collaborations.

Statements that are not historical facts are based on our current expectations, beliefs, assumptions, estimates, forecasts and projections for our business and the industry and markets in which we compete. The forward-looking statements contained in this report are not guarantees of future performance and involve certain risks, uncertainties and assumptions that are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed in such forward-looking statements. We caution investors not to place undue reliance on the forward-looking statements contained in this report. These statements speak only as of the date of this report, and we do not undertake any obligation to update or revise them, except as required by law.

The following factors, among others, create risks and uncertainties that could affect our future or other performance:

- our history of operating losses and our expectation that we will incur significant additional operating losses;
- any inability to raise the capital that we will need to sustain our operations;
- any inability to successfully and expeditiously complete the rigorous clinical trials and regulatory approvals processes that any biopharmaceutical or diagnostic product candidates that we develop must undergo, which could substantially delay or prevent their development or marketing;

- our dependence on third parties to manufacture biopharmaceuticals, which may adversely affect our ability to commercialize any biopharmaceuticals we may develop;
- our lack of experience in conducting clinical trials, regulatory processes, and conducting sales and marketing activities, any or all of which may adversely impact our ability to commercialize any biopharmaceuticals we may develop;
- our dependence on the expertise, effort, priorities and contractual obligations of our collaborators, any changes in our collaborators' business direction or priorities or defaults in their obligations may have an adverse impact on our research revenues and ultimately our license revenues and expenses;
- any failure by us or our collaborators to gain market acceptance of our biopharmaceuticals;
- competition and technological change that may make our potential products and technologies less attractive or obsolete;
- any inability to obtain and maintain intellectual property protection for our products and technologies;
- time consuming and expensive proceedings to obtain, enforce or defend patents and to defend against charges of infringement that may result in unfavorable outcomes and could limit our patent rights and our activities;
- significant fluctuations in our revenues and operating results, which have occurred in the past and which we expect to continue to fluctuate in the future;
- any loss or inability to hire and retain qualified personnel;
- difficulties in managing our growth;
- our dependence on one supplier for a key component in our separations products;
- our handling, storage or disposal of hazardous materials used and generated in our business may be time-consuming and expensive;
- our exposure to product liability;
- risks associated with international sales and operations and collaborations;
- failure to acquire technology and integrate complementary businesses;
- our common stock may continue to have a volatile public trading price and low trading volume; and
- anti-takeover provisions in our governing documents and under Delaware law and our shareholder rights plan that may make an acquisition of us more difficult.

As a result of the foregoing and other factors, we may experience material fluctuations in our future operating results, which could materially affect our business, financial position, and stock price. These risks and uncertainties are discussed in more detail in Exhibit 99.1 "Important Factors That May Affect Future Operations and Results" to this Form 10-K, which is incorporated into this item by this reference.

#### **ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Our exposure to market risk is confined to our cash and cash equivalents. We place our investments in high-quality financial instruments, primarily U.S. Treasury funds and certificates of deposit, which we believe are subject to limited credit risk. We currently do not hedge interest rate exposure. As of December 31, 2002, we had cash and cash equivalents of \$28.2 million consisting of

cash and highly liquid, short-term investments. Our short-term investments will decline by an immaterial amount if market interest rates increase, and therefore, our exposure to interest rate changes is immaterial. Declines of interest rates over time will, however, reduce our interest income from our short-term investments.

As of December 31, 2002, we had \$21.5 million outstanding under long-term obligations. Interest rates on \$10.6 million of these obligations are fixed and therefore are not subject to interest rate fluctuations. Interest rates on the remaining \$10.9 million are variable as follows: i) Interest on the \$7.0 million Genzyme note is variable based on the prime interest rate and is therefore subject to interest rate fluctuations. A 1% increase in the prime rate will result in an additional \$70,000 in annual interest expense. ii) Interest on Biotage's \$3.9 million Charlottesville facility loan is fixed over the next five years and therefore would not be subject to interest rate fluctuations over that period.

Most of our transactions are conducted in U.S. dollars. We have collaboration and technology license agreements and product sales with parties located outside of the United States. We also have sales offices in Europe and Japan for the Biotage chromatography separations systems and cartridges and a research facility located in Europe. Transactions under certain of the agreements between us and parties located outside of the United States, as well as transactions conducted by our foreign offices are conducted in local foreign currencies. If exchange rates undergo a change of up to 10%, we do not believe that it would have a material impact on our results of operations or cash flows.

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**Index to Consolidated Financial Statements**

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## Report of Independent Accountants

To the Board of Directors and Stockholders of Dyax Corp.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations and comprehensive loss, of changes in stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Dyax Corp. and its subsidiaries at December 31, 2002 and 2001, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2002, in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the accompanying financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for goodwill to conform with Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets" in 2002.

*PricewaterhouseCoopers LLP*

PricewaterhouseCoopers LLP

Boston, Massachusetts

March 19, 2003

**Dyax Corp. and Subsidiaries**  
**Consolidated Balance Sheets**

	December 31, 2002	December 31, 2001
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents . . . . .	\$ 28,199,000	\$ 51,034,000
Accounts receivable, net of allowances for doubtful accounts of \$256,000 and \$214,000 at December 31, 2002 and 2001, respectively . . . . .	6,829,000	7,128,000
Inventories . . . . .	3,389,000	3,267,000
Current portion of notes receivable, employees . . . . .	1,353,000	159,000
Other current assets . . . . .	2,018,000	541,000
Total current assets . . . . .	41,788,000	62,129,000
Fixed assets, net . . . . .	22,455,000	12,915,000
Notes receivable, employees . . . . .	20,000	1,400,000
Goodwill, net . . . . .	111,000	111,000
Other intangibles, net . . . . .	3,638,000	177,000
Restricted cash . . . . .	5,635,000	4,365,000
Other assets . . . . .	259,000	344,000
Total assets . . . . .	\$ 73,906,000	\$ 81,441,000
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable and accrued expenses . . . . .	\$ 12,979,000	\$ 10,104,000
Current portion of deferred revenue . . . . .	7,565,000	5,821,000
Current portion of long-term obligations . . . . .	3,552,000	2,194,000
Total current liabilities . . . . .	24,096,000	18,119,000
Deferred revenue . . . . .	233,000	3,618,000
Long-term obligations . . . . .	17,946,000	4,240,000
Other long-term liabilities . . . . .	788,000	—
Total liabilities . . . . .	43,063,000	25,977,000
Commitments and Contingencies (Notes 8, 9, 10, 12 and 18)		
Stockholders' equity:		
Preferred stock, \$0.01 par value; 1,000,000 shares authorized ; 0 shares issued and outstanding . . . . .	—	—
Common stock, \$0.01 par value; 50,000,000 shares authorized at December 31, 2002 and 2001; 19,705,040 and 19,433,928 shares issued and outstanding at at December 31, 2002 and 2001, respectively . . . . .	197,000	194,000
Additional paid-in capital . . . . .	141,637,000	141,384,000
Accumulated deficit . . . . .	(110,827,000)	(84,009,000)
Deferred compensation . . . . .	(668,000)	(2,199,000)
Accumulated other comprehensive income . . . . .	504,000	94,000
Total stockholders' equity . . . . .	30,843,000	55,464,000
Total liabilities and stockholders' equity . . . . .	\$ 73,906,000	\$ 81,441,000

The accompanying notes are an integral part of the consolidated financial statements.

**Dyax Corp. and Subsidiaries**  
**Consolidated Statements of Operations and Comprehensive Loss**

	Years Ended December 31,		
	2002	2001	2000
Revenues:			
Separations product revenues . . . . .	\$ 23,158,000	\$ 18,803,000	\$ 15,782,000
Biopharmaceutical product development and license fee revenues . . . . .	<u>17,750,000</u>	<u>14,237,000</u>	<u>9,434,000</u>
Total revenues . . . . .	40,908,000	33,040,000	25,216,000
Costs and expenses:			
Cost of products sold . . . . .	10,038,000	8,805,000	7,495,000
Research and development:			
Research and development . . . . .	31,407,000	18,745,000	14,391,000
Other non-cash compensation . . . . .	394,000	687,000	1,089,000
Selling, general and administrative:			
Selling, general and administrative . . . . .	24,388,000	23,254,000	18,089,000
Other non-cash compensation . . . . .	<u>746,000</u>	<u>867,000</u>	<u>1,332,000</u>
Total costs and expenses . . . . .	<u>66,973,000</u>	<u>52,358,000</u>	<u>42,396,000</u>
Loss from operations . . . . .	(26,065,000)	(19,318,000)	(17,180,000)
Other (expense) income:			
Interest income . . . . .	526,000	2,315,000	2,188,000
Interest expense . . . . .	(1,279,000)	(162,000)	(197,000)
Total other (expense) income . . . . .	<u>(753,000)</u>	<u>2,153,000</u>	<u>1,991,000</u>
Net loss . . . . .	(26,818,000)	(17,165,000)	(15,189,000)
Other comprehensive income:			
Foreign currency translation adjustments . . . . .	<u>410,000</u>	<u>121,000</u>	<u>81,000</u>
Comprehensive loss . . . . .	<u>\$(26,408,000)</u>	<u>\$(17,044,000)</u>	<u>\$(15,108,000)</u>
Basic and diluted net loss per share . . . . .	\$ (1.36)	\$ (.89)	\$ (1.77)
Shares used in computing basic and diluted net loss per share . . . . .	19,652,474	19,244,809	8,577,912

The accompanying notes are an integral part of the consolidated financial statements.

**Dyax Corp. and Subsidiaries**  
**Consolidated Statements of Changes in Stockholders' Equity**  
**For the years ended December 31, 2002, 2001 and 2000**

	Class A				Common Stock	Additional Paid-in Capital	Receivable For Common Stock Purchase	Accumulated Deficit	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Total					
	Convertible Preferred Stock		Series 5									Par Value	Shares	Amount	Series 3	Series 4
	Series 1	Series 2	Series 3	Series 4												
Balance at December 31, 1999	1,942,936	703,970	2,000,000	4,297,137	5,752,944	57,426,000	2,353,790	24,000	18,938,000	(418,000)	(51,655,000)	(4,907,000)	(108,000)	19,300,000		
Net proceeds from initial public offering							4,600,000	46,000	62,304,000					62,350,000		
Conversion of preferred stock upon completion of initial public offering	(1,942,936)	(703,970)	(2,000,000)	(4,297,137)	(5,752,944)	(57,426,000)	11,585,454	116,000	57,310,000					—		
Exercise of stock options							480,505	4,000	783,000					787,000		
Exercise of stock warrants							27,022		107,000					107,000		
Deferred compensation									1,494,000			(1,494,000)		—		
Compensation expense associated with stock options												2,421,000	81,000	2,421,000		
Foreign currency translation											(15,189,000)			(15,189,000)		
Net Loss																
Balance at December 31, 2000	—	—	—	—	—	—	19,046,771	190,000	140,936,000	(418,000)	(66,844,000)	(3,980,000)	(27,000)	69,857,000		
Exercise of stock options							380,132	4,000	496,000					500,000		
Issuance of common stock for employee stock purchase plan							7,025		104,000			1,781,000		104,000		
Deferred compensation									(152,000)					1,629,000		
Repayment of loan to purchase common stock										418,000				418,000		
Foreign currency translation											(17,165,000)		121,000	121,000		
Net Loss														(17,165,000)		
Balance at December 31, 2001	—	—	—	—	—	—	19,433,928	\$194,000	\$141,384,000	—	—	—	\$ 94,000	\$ 55,464,000		
Exercise of stock options							224,222	2,000	395,000					397,000		
Issuance of common stock for employee stock purchase plan							46,890	1,000	249,000			1,531,000		250,000		
Deferred compensation									(391,000)					1,140,000		
Foreign currency translation											(26,818,000)		410,000	410,000		
Net Loss														(26,818,000)		
Balance at December 31, 2002	—	—	—	—	—	—	19,705,040	\$197,000	\$141,637,000	—	—	—	\$ 504,000	\$ 30,843,000		

The accompanying notes are an integral part of the consolidated financial statements.



**Dyax Corp. and Subsidiaries**  
**Consolidated Statements of Cash Flows**

	Years Ended December 31,		
	2002	2001	2000
<b>Cash flows from operating activities:</b>			
Net loss	\$(26,818,000)	\$(17,165,000)	\$(15,189,000)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization of fixed assets	3,850,000	1,537,000	988,000
Amortization of goodwill and other intangibles	180,000	953,000	890,000
Loss on sale or disposal of fixed assets	147,000	—	—
Compensation expenses associated with stock options	1,140,000	1,554,000	2,421,000
Inventory valuation write downs	25,000	—	425,000
Provision for doubtful accounts	42,000	84,000	1,000
Changes in operating assets and liabilities:			
Accounts receivable	445,000	(806,000)	(3,459,000)
Inventories	(113,000)	(570,000)	(138,000)
Other assets	(1,245,000)	(52,000)	(584,000)
Accounts payable and accrued expenses	742,000	2,232,000	2,168,000
Other long-term liabilities	788,000	—	—
Deferred revenue	(1,690,000)	(1,860,000)	8,433,000
Net cash used in operating activities	(22,507,000)	(14,093,000)	(4,044,000)
<b>Cash flows from investing activities:</b>			
Increase in capitalized software development costs	(141,000)	—	—
Purchase of fixed assets	(5,415,000)	(10,400,000)	(2,409,000)
Notes receivable, employees	186,000	233,000	(9,000)
Licensed patent technology	(1,500,000)	—	—
Net cash used in investing activities	(6,870,000)	(10,167,000)	(2,418,000)
<b>Cash flows from financing activities:</b>			
Net proceeds from the issuance of common stock from initial public offering	—	—	62,350,000
Proceeds from the issuance of common stock, exercise of stock options and warrants	647,000	604,000	894,000
Proceeds from landlord for leasehold improvements	2,352,000	—	—
Proceeds from long-term obligations	7,000,000	5,010,000	1,217,000
Proceeds from receivable associated with common stock purchase	—	418,000	—
Increase in restricted cash	(1,220,000)	(4,365,000)	—
Repayment of long-term obligations	(2,303,000)	(825,000)	(506,000)
Net cash provided by financing activities	6,476,000	842,000	63,955,000
Effect of foreign currency translation on cash balances	66,000	247,000	(14,000)
Net (decrease) increase in cash and cash equivalents	(22,835,000)	(23,171,000)	57,479,000
Cash and cash equivalents at beginning of the period	51,034,000	74,205,000	16,726,000
Cash and cash equivalents at end of the period	\$ 28,199,000	\$ 51,034,000	\$ 74,205,000
<b>Supplemental disclosure of cash flow information:</b>			
Interest paid	\$ 1,008,000	\$ 162,000	\$ 197,000
Income taxes paid	—	—	—
<b>Supplemental disclosure of non-cash investing and financing activities:</b>			
Acquisition of fixed assets under long-term obligations	\$ 7,854,000	\$ 2,080,000	\$ 1,217,000
Deferred compensation	—	—	\$ 1,494,000
Fair value of licensed patent technology	\$ 3,500,000	—	—
Less: license fee obligation	(2,000,000)	—	—
Cash paid for licensed patent technology	\$ 1,500,000	—	—

The accompanying notes are an integral part of the consolidated financial statements.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements**

**1. Nature of Business**

Dyax Corp. (Dyax or the Company) is a biopharmaceutical company principally focused on the discovery, development and commercialization of antibody, protein and peptide based therapeutic products. The Company has two product candidates in clinical trials, DX-88 and DX-890, and has collaborative agreements for the development of both of these product candidates. The Company is currently conducting two Phase II trials of DX-88 for the treatment of patients with hereditary angioedema (HAE): one is being conducted in Europe, in which treatment was completed in March 2003, and the other is being conducted in the United States with the intent to add international sites. The Company is also conducting a Phase I/II study of DX-88 in cardiopulmonary bypass in the United States. The Company's collaborator for DX-890 has completed a Phase IIa trial in adult patients with cystic fibrosis and has initiated a second Phase IIa trial in children with cystic fibrosis.

The Company uses its proprietary patented technology, known as phage display, to identify compounds with the potential for the treatment of various conditions and diseases. The Company is using phage display technology to build a broad portfolio of product candidates that it plans to develop and commercialize on its own or with others. On behalf of collaborators, the Company also uses phage display technology to identify compounds that can be used in therapeutics, diagnostic imaging, the development of research reagents, and in purifying and manufacturing biopharmaceuticals. The Company is further leveraging its phage display technology through collaborations and licenses that are structured to generate revenues through research funding, license fees, technical and clinical milestone payments, and royalties. The Company, through its Biotage subsidiary, develops, manufactures and sells chromatography separations systems and products and is a leading supplier of chromatography separations systems that use disposable cartridges to separate and purify pharmaceuticals being produced for research or clinical development.

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, dependence on collaborative arrangements, development by the Company or its competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, and compliance with FDA and other governmental regulations and approval requirements.

**2. Accounting Policies**

*Basis of Consolidation:* The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, Biotage, Inc. including its foreign sales subsidiaries, and Dyax BV (formerly known as TargetQuest BV) and Dyax S.A., European research subsidiaries. All intercompany accounts and transactions have been eliminated.

*Reclassifications:* Certain reclassifications have been made to the prior years financial statements to conform to current presentation.

*Use of Estimates:* The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions that affect the amounts of assets and liabilities reported and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenue and expenses during the reporting periods. The significant estimates and assumptions in these financial statements include revenue recognition, receivable collectibility, inventory valuation, useful lives with respect to long lived assets, valuation of common stock and related stock options, accrued expenses and tax valuation reserves. Actual results could differ from those estimates.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**2. Accounting Policies (Continued)**

*Concentration of Credit Risk:* Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash, cash equivalents and trade accounts receivable. At December 31, 2002, approximately 71% of the Company's cash and cash equivalents were invested in U.S. Treasury funds held by one financial institution.

The Company provides most of its products and services to pharmaceutical and biomedical companies worldwide. Concentrations of credit risk with respect to trade receivable balances are limited due to the diverse number of customers comprising the Company's customer base. The Company performs ongoing credit evaluations of its customers' financial conditions and maintains reserves for potential credit loss. Activity for 2002, 2001 and 2000 included provisions of \$42,000, \$84,000 and \$1,000, respectively. Receivable write offs in 2002, 2001 and 2000 were nominal. One customer accounted for approximately 11% and 24% of the Company's accounts receivable balance at December 31, 2002 and 2001.

*Cash and Cash Equivalents:* All highly liquid investments purchased with an original maturity of three months or less are considered to be cash equivalents. Cash and cash equivalents consist principally of cash and U.S. Treasury funds. The Company currently invests its excess cash in U.S. Treasury funds and certificates of deposit. The Company maintains balances in various operating accounts in excess of federally insured limits.

*Inventories:* Inventories are stated at the lower of cost or market. Cost is determined using the first-in, first-out (FIFO) method. Inventories are reviewed for slow moving, obsolete and excess items on a quarterly basis and, if necessary, an inventory valuation charge is recorded in the results of operations.

*Fixed Assets:* Property and equipment are recorded at cost and depreciated over the estimated useful lives of the related assets using the straight-line method. Laboratory and production equipment, and furniture and office equipment are depreciated over a three to seven year period. Leasehold improvements are stated at cost and are amortized over the lesser of the non-cancelable term of the related lease or their estimated useful lives. Leased equipment is amortized over the lesser of the life of the lease or their estimated useful lives. Maintenance and repairs are charged to expense as incurred. When assets are retired or otherwise disposed of, the cost of these assets and related accumulated depreciation and amortization are eliminated from the balance sheet and any resulting gains or losses are included in operations in the period of disposal.

*Goodwill and Other Intangibles:* Prior to January 1, 2002, the Company amortized goodwill on a straight line basis over its useful life, periods not exceeding 15 years. Goodwill had previously been tested for impairment under the provisions of Statement of Financial Accounting Standards (SFAS) No. 121, "Accounting for the Impairment of Long-lived Assets and Long-lived Assets to be Disposed of". The Company previously evaluated goodwill for impairment by comparing the unamortized balance of goodwill to projected undiscounted cash flows, which did not indicate an impairment. Effective January 1, 2002, the Company adopted SFAS No. 142, "Goodwill and Other Intangible Assets". SFAS No. 142 requires cessation of goodwill amortization and a fair value approach to testing the impairment of goodwill and other intangibles. The Company has performed the transitional annual impairment tests of goodwill and indefinite-lived intangible assets as of December 31, 2002 and determined there was no impairment of the remaining goodwill. The company will perform the required impairment tests at least annually.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**2. Accounting Policies (Continued)**

*Impairment of Long-Lived Assets:* The Company reviews its long-lived assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate. Each impairment test is based on a comparison of the undiscounted cash flow to the recorded value of the asset. If an impairment is indicated, the asset is written down to its estimated fair value on a discounted cash flow basis.

*Software Development Costs:* The Company capitalizes software development costs for software products in accordance with SFAS No. 86, "Accounting for the Costs of Computer Software to Be Sold, Leased or Otherwise Marketed". Capitalized software costs are amortized to cost of sales over the estimated useful lives of the related software products, currently five years. Capitalized software costs included in other intangibles, net of accumulated amortization of \$85,000 and \$10,000, were \$197,000 and \$131,000 at December 31, 2002 and 2001, respectively.

*Revenue Recognition:* The Company has utilized the guidance of Staff Accounting Bulletin 101, "Revenue Recognition in Financial Statements", for all periods presented in these financial statements. Separations product revenue is generally recognized on product sales arrangements based on product shipment if no installation obligations exist. For separations product sale arrangements that require installation services that are not considered essential to the functionality of the product, revenue is recognized upon shipment and a portion of revenue equal to the fair value of the installation service is deferred and recognized upon the completion of the installation. For separations product sale arrangements that require significant installation services and contain customer acceptance criteria, all revenue is recognized upon the completion of the installation and satisfaction of the customer acceptance criteria. One customer accounted for approximately 11% and 12% of product revenues in 2002 and 2001, respectively and no customer accounted for more than 10% of product revenues in 2000.

The Company enters into biopharmaceutical product development agreements with collaborative partners for the research and development of therapeutic, diagnostic and separations products. The terms of the agreements may include non-refundable signing fees, funding for research and development, licensing fees, milestone payments and royalties on any product sales derived from collaborations. Non-refundable signing fees are recognized as services are performed over the expected term of the collaboration. Funding for research and development, where the amounts recorded are non-refundable is recognized as the related expenses are incurred. The Company evaluates all collaborative agreements on a quarterly basis to determine the appropriate revenue recognition for that period. The evaluation includes all of the potential revenue components from each specific collaborative agreement. Upon achievement of milestones, a portion of the milestone payment equal to the percentage of the collaboration completed through that date is recognized. The remainder is recognized as services are performed over the remaining term of the collaboration. Royalties are recognized when earned. Costs of revenues related to product development and license fees are classified as research and development in the consolidated statements of operations and comprehensive loss. The same customer accounted for approximately 21%, 26% and 38% of product development and license fee revenues in 2002, 2001 and 2000, respectively. One additional customer accounted for approximately 20% and 27% of product development and license fee revenues in 2002 and 2001, respectively. Additionally three different customers accounted for approximately 24%, 11% and 11% of product development and license fee revenues in 2002, 2001 and 2000, respectively.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**2. Accounting Policies (Continued)**

The Company licenses its patent rights covering phage display on a non-exclusive basis in the fields of therapeutics, antibody-based *in vitro* diagnostics, research products and others. Standard terms of the license agreements, for which the Company has no future obligations, generally include non-refundable signing fees, non-refundable annual license maintenance fees, development milestone payments and royalties on product sales. Signing fees and annual maintenance fees are recognized in equal monthly installments over the period to which the payment applies. Perpetual patent licenses are recognized immediately if the Company has no future obligations. Milestone payments under non-exclusive phage display patent licenses are recognized when the milestone is achieved and royalties are recognized when they are earned.

Revenue from National Institute of Standards and Technology and other grants to conduct research and development is recognized as eligible costs are incurred, up to the funding limit. Eligible grant related costs which have been incurred in advance of cash receipts are recorded as receivables.

Payments received that have not met the appropriate criteria for revenue recognition are recorded as deferred revenue.

*Shipping and Handling:* Shipping and handling costs are included within cost of products sold, with the related sales value included within product revenues.

*Guarantees:* In November 2002, the FASB issued FIN No. 45 "*Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*". The following is a summary of our agreements that the Company has determined are within the scope of FIN No. 45.

As permitted under Delaware law, the Company has agreements whereby the Company indemnifies its officers and directors for certain events or occurrences while the officer or director is, or was serving, at the Company request in such capacity. The term of the indemnification period is for the officers or directors lifetime. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, the Company has a Director and Officer insurance policy that limits our exposure and enables us to recover a portion of any future amounts paid. As a result of our insurance policy coverage, the Company believes the estimated fair value of these indemnification agreements is minimal. All of these indemnification agreements were grandfathered under the provisions of FIN No. 45 as they were in effect prior to December 31, 2002. Accordingly, the Company has no liabilities recorded for these agreements as of December 31, 2002.

For its chromatography separations products, the Company, through its wholly owned Biotage subsidiary, in certain of its product distribution agreements and in master purchase agreements with large pharmaceutical companies provides an indemnification with respect to the chromatography separations products. The Company generally does not provide indemnifications when its licenses its phage display technology to others. The Company does generally provide indemnifications for claims of third parties that arise out of activities that the Company performs under its biopharmaceutical product development collaboration agreements. The maximum potential amount of future payments the Company could be required to make under the indemnification provisions in some instances may be unlimited. The Company has not incurred any costs to defend lawsuits or settle claims related to any indemnification obligations. As a result, the Company believes the estimated fair value of these

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**2. Accounting Policies (Continued)**

obligations is minimal. The Company has no liabilities recorded for any of its indemnification obligations recorded as of December 31, 2002.

*Product Warranty:* The Company provides customers with a twelve-month warranty for performance in all material respects in accordance with its standard published specifications on its chromatography separation systems from the date of shipment. Estimated warranty obligations based on prior claim history, are included in the results of operations as cost of products sold and are evaluated and provided for at the time of sale.

Accrued warranty costs activity during 2002 consists of the following:

	Year ended December 31, 2002
Balance at December 31, 2001 .....	\$ 296,000
Accruals of warranties issued during the year .....	417,000
Settlements made during the year .....	<u>(397,000)</u>
Balance at December 31, 2002 .....	<u>\$ 316,000</u>

*Research and Development:* Research and development costs include all direct costs, including salaries and benefits for research and development personnel, outside consultants, costs of clinical trials, sponsored research, clinical trials insurance, other outside costs and overhead related to the development of drug candidates. These costs have been charged to research and development expense as incurred.

*Advertising:* Advertising costs are expensed as incurred. For the years ending December 31, 2002, 2001, and 2000 advertising expense was \$556,000, \$611,000 and \$287,000, respectively.

*Income Taxes:* The Company utilizes the asset and liability method of accounting for income taxes as set forth in SFAS No. 109, "Accounting for Income Taxes" (SFAS No. 109). Under this method, deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the carrying amounts and the tax basis of assets and liabilities using the current statutory tax rates.

*Translation of Foreign Currencies:* Assets and liabilities of the Company's foreign subsidiaries are translated at period end exchange rates. Amounts included in the statements of operations are translated at the average exchange rate for the period. The resulting currency translation adjustments are made directly to a separate component of stockholders' equity. For the year ending December 31, 2002, gains from transactions in foreign currencies was \$221,000 and for the years ending December 31, 2001 and 2000, losses from transactions in foreign currencies were \$278,000 and \$372,000, respectively, are included in net loss in the consolidated statements of operations and comprehensive loss and are not material for the years presented.

*Stock Options:* At December 31, 2002, the Company has a stock-based employee compensation plan, which is described more fully in Note 11. The Company accounts for the plan using the intrinsic value method prescribed under the recognition and measurement principles of APB Opinion No. 25, "Accounting for Stock Issued to Employees", and related Interpretations in accounting for its plans. Stock-based employee compensation cost is reflected in net income, as the difference between the

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**2. Accounting Policies (Continued)**

exercise price and the market value of the underlying common stock on the date of grant. The following table illustrates the effect on net income and earnings per share if the Company had applied the fair value recognition provisions of FASB Statement No. 123, "Accounting for Stock-Based Compensation", to stock-based employee compensation.

	Year Ended December 31,		
	2002	2001	2000
Net loss as reported . . . . .	\$(26,818,000)	\$(17,165,000)	\$(15,189,000)
Less: Total stock-based employee compensation expense determined under fair value based method for all awards . . . . .	<u>(8,269,000)</u>	<u>(5,644,000)</u>	<u>(950,000)</u>
Pro forma net loss . . . . .	<u>\$(35,087,000)</u>	<u>\$(22,809,000)</u>	<u>\$(16,139,000)</u>
Non cash stock-based employee compensation included in net loss as reported . . . . .	\$ 1,140,000	\$ 1,554,000	\$ 2,421,000
Basic and diluted net loss per share as reported . . . . .	\$ (1.36)	\$ (.89)	\$ (1.77)
Pro forma basic and diluted net loss per share . . . . .	\$ (1.79)	\$ (1.19)	\$ (1.88)

*Net Loss Per Share:* The Company accounts for and discloses earnings per share (EPS) under SFAS No. 128, "Earnings per Share" (SFAS No. 128). This statement specifies the computation, presentation and disclosure requirements of EPS to simplify the existing computational guidelines and increased comparability on an international basis.

Under SFAS No. 128, the Company is required to present two EPS amounts, basic and diluted. Basic EPS is calculated based on income available to common stockholders and the weighted-average number of common shares outstanding during the reporting period. Diluted EPS may include additional dilution from potential common stock, such as stock issuable pursuant to the exercise of stock options and warrants outstanding, the conversion of preferred stock and conversion of debt, unless their inclusion would be antidilutive.

*Comprehensive Income (Loss):* The Company accounts for comprehensive income (loss) under SFAS No. 130, "Reporting Comprehensive Income." The statement established standards for reporting and displaying comprehensive income and its components in a full set of general purpose financial statements. The statement required that all components of comprehensive income be reported in a financial statement that is displayed with the same prominence as other financial statements.

*Business Segments:* The Company discloses business segments under SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information" (SFAS No. 131). The statement established standards for reporting information about operating segments in annual financial statements of public enterprises and in interim financial reports issued to shareholders. It also established standards for related disclosures about products and services, geographic areas and major customers.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**2. Accounting Policies (Continued)**

*Recent Pronouncements:* In January 2003, the Financial Accounting Standards Board (FASB) issued FIN 46, *“Consolidation of Variable Interest Entities, an Interpretation of ARB 51”*. The primary objectives of FIN 46 are to provide guidance on the identification of entities for which control is achieved through means other than through voting rights (“variable interest entities” or “VIEs”) and how to determine when and which business enterprise should consolidate the VIE (the “primary beneficiary”). This new model for consolidation applies to an entity which either (1) the equity investors (if any) do not have a controlling financial interest or (2) the equity investment at risk is insufficient to finance that entity’s activities without receiving additional subordinated financial support from other parties. In addition, FIN 46 requires that both the primary beneficiary and all other enterprises with a significant variable interest in a VIE make additional disclosures. The disclosure requirements are required in all financial statements initially issued after January 31, 2003. For VIE’s created prior to February 1, 2003, the Interpretation will be effective after the first interim reporting period after June 15, 2003. For VIE’s created after January 31, 2003, the Interpretation will be effective immediately. The Company does not expect the application of this Interpretation to have a material impact on our financial statements.

In December 2002, FASB issued SFAS 148, *“Accounting for Stock-Based Compensation—Transition and Disclosure—an amendment to SFAS 123”*. SFAS 148 amends SFAS 123, Accounting for Stock-Based Compensation to provide alternative methods of transition to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based compensation and the effect of the method used on reported results. SFAS 148 is effective for fiscal years ending after December 15, 2002 with respect to the alternative transition methods permitted and the annual disclosures required. The disclosure provisions for interim financial information are effective for all periods presented in financial reports containing financial statements for interim periods beginning after December 15, 2002. Management has not yet evaluated the alternative transition methods if it were to adopt SFAS 123 under this new standard, however, the Company has complied with all current disclosure requirements.

In December 2002, the Emerging Issues Task Force (EITF) reached a final consensus on EITF Issue 00-21, *“Accounting for Revenue Arrangements with Multiple Deliverables”*. EITF 00-21 provides guidance on determining whether a revenue arrangement contains multiple deliverable items and if so, requires revenue to be allocated amongst the multiple elements different items based on fair values. EITF 00-21 also provides guidance as to when recognition of revenue for each deliverable is appropriate. The effective date of this Issue is required for revenue arrangements entered into by the Company after June 28, 2003. The Company does not expect the application of this issue to have a material impact on the financial statements.

In November 2002, the FASB issued FIN No. 45, *“Guarantor’s Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others”* an Interpretation of FASB Statements No. 5, 57, and 107 and rescission of FASB Interpretation No. 34. The Interpretation requires that a guarantor recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken by issuing the guarantee. The Interpretation also requires additional disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees it has issued, including warranties. The accounting requirements for the initial recognition of guarantees are applicable on a prospective basis for guarantees issued or



**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**2. Accounting Policies (Continued)**

modified after December 31, 2002. The disclosure requirements are effective for all guarantees outstanding, regardless of when they were issued or modified, during the first quarter of fiscal 2003. The adoption of the fair value provisions of this Statement are not expected to have a material impact on the Company's financial statements.

In June 2002, the FASB issued SFAS 146, "Accounting for Costs Associated with Exit or Disposal Activities". SFAS 146 addresses significant issues regarding the recognition, measurement, and reporting of costs that are associated with exit and disposal activities, including restructuring activities that are currently accounted for pursuant to the guidance that the Emerging Issues Task Force (EITF) has set forth in EITF Issue 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)". The scope of SFAS 146 also includes (1) costs related to terminating a contract that is not a capital lease, (2) termination benefits that employees who are involuntarily terminated receive under the terms of a one-time benefit arrangement that is not an ongoing benefit arrangement or an individual deferred-compensation contract and (3) costs to consolidate facilities or relocate employees. SFAS 146 will be effective for exit or disposal activities that are initiated after December 31, 2002. The Company does not expect the application of SFAS 146 to have a material impact on its financial position or results of operations.

**3. Inventories**

Inventories consist of the following:

	December 31,	
	2002	2001
Raw materials . . . . .	\$2,410,000	\$2,396,000
Work in process . . . . .	355,000	237,000
Finished products . . . . .	624,000	634,000
	\$3,389,000	\$3,267,000

**4. Fixed Assets**

Fixed assets consist of the following:

	December 31,	
	2002	2001
Land . . . . .	\$ 809,000	\$ 794,000
Building . . . . .	6,034,000	—
Laboratory and production equipment . . . . .	3,667,000	3,821,000
Furniture and office equipment . . . . .	1,197,000	1,261,000
Software and computers . . . . .	1,731,000	1,101,000
Leasehold improvements . . . . .	7,768,000	978,000
Leased assets . . . . .	8,399,000	4,858,000
Construction in progress . . . . .	—	5,084,000
Total . . . . .	29,605,000	17,897,000
Less: accumulated depreciation and amortization . . . . .	(7,150,000)	(4,982,000)
	\$22,455,000	\$12,915,000

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**4. Fixed Assets (Continued)**

There was \$3,557,000 and \$1,734,000 of accumulated amortization on leased assets, which includes laboratory, production and office equipment, at December 31, 2002 and 2001, respectively.

**5. Notes Receivable, Employees**

In June 1999, the Company provided a loan to an officer of the Company in the amount of \$100,000. The note, which bears interest at the Prime Rate (4.25% at December 31, 2002) plus 1.0%, is payable in June 2004, subject to acceleration, and becomes due immediately if the officer's employment is terminated other than by the Company without cause. As long as the officer remains employed by the Company, the Company will forgive \$20,000 and all accrued interest on June 14 annually. In the event of the officer's death or permanent disability, the remaining principal of the loan plus all accrued interest will be forgiven. For the years ended December 31, 2002, 2001 and 2000 interest due was forgiven in the amount of \$6,000, \$8,000 and \$9,000, respectively. For the years ended December 31, 2002, 2001 and 2000 principal was forgiven in the amount of \$20,000. At December 31, 2002 and 2001, the balance outstanding on this note was \$40,000 and \$60,000, respectively. The outstanding principal of this loan at December 31, 2002 was repaid during March 2003, after the officer resigned from the Company.

In October 1998, the Company provided a mortgage loan and pledge agreement in the amount of \$1,300,000 to its President and Chief Executive Officer, who is also Chairman of the Company's Board of Directors, to purchase a residence within commuting distance of the Company's headquarters. The loan bears interest at the Prime Rate (4.25% at December 31, 2002) less 1.5% or the applicable federal rate (3.26% at December 31, 2002), which ever is higher and is collateralized by the real estate acquired with the loan proceeds and shares of the Company's common stock owned by this officer. The agreement as amended in 2001, requires that aggregate collateral value of at least 150% of the outstanding loan principal be maintained throughout the life of the loan. Payments in the amount of \$8,220 are due monthly to the Company which are applied to interest and then principal. All remaining unpaid principal and accrued interest is payable on October 30, 2003, provided, however that it may be accelerated at any time at the discretion of the Board of Directors, including upon (i) termination of his service as Chairman of the Company and Chief Executive Officer; provided, however that in the case of death or disability payment shall not be due for at least twelve months after termination; or (ii) at any time that the Company's cash and marketable investments total less than \$10,000,000. Due to the maturity date of the note all amounts outstanding at December 31, 2002 are included in the current portion of notes receivable, employees. The balance outstanding on this note was \$1,229,000 and \$1,286,000 at December 31, 2002 and 2001, respectively.

During 1998, in connection with the sale of 78,240 shares of restricted common stock and the exercise of options to purchase 37,490 shares of common stock, the Company agreed to loan to an officer an aggregate of \$454,000 in a non-cash transaction pursuant to promissory notes, of which \$418,000 was used to purchase the related common stock and was included as a reduction to stockholders' equity. The remaining \$36,000 balance of the loan, the proceeds of which were to pay certain tax liabilities in connection with the exercise of the options, was included in notes receivable, employees. For the years ended December 31, 2000 and 1999, interest due was forgiven in the amount of \$25,000 and \$26,000, respectively. During 2001, these notes and the related interest were paid in full (see Note 11).

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**5. Notes Receivable, Employees (Continued)**

In connection with the acquisition during 1999 of Target Quest, LLC, the Company made a loan to a former employee. The loan is collateralized by common shares of Dyax stock. At December 31, 2002 and 2001, the balance outstanding on the note included in notes receivable, employee was \$10,000 and \$159,000, respectively.

The Company had additional loans to current employees of \$94,000 and \$54,000, at December 31, 2002 and 2001, respectively.

**6. Goodwill and Other Intangible Assets**

In June 2001, FASB issued SFAS No. 142, Goodwill and Other Intangible Assets. SFAS 142 requires that ratable amortization of goodwill be replaced with periodic tests of the goodwill's impairment and that intangible assets other than goodwill be amortized over their useful lives. The provisions of SFAS 142 are effective for fiscal years beginning after December 15, 2001. Pursuant to SFAS 142, the Company ceased amortizing goodwill on January 1, 2002 and completed a test for goodwill impairment during 2002. No impairment charge was required. Intangible assets other than goodwill continue to be amortized on a straight-line basis over their remaining estimated useful lives. Capitalized license rights are amortized using a systematic method over their useful lives. Useful lives are based on management's estimate of the period that the capitalized license will generate revenues directly or indirectly, currently seven years (see Note 18). Capitalized software development costs are amortized over the estimated useful lives of the related software products, currently three to five years. Patents are amortized over a period of fifteen years. The covenant not to compete is amortized over a period of five years. The Company's goodwill amortization expense was approximately \$943,000 and \$869,000 for the years ended December 31, 2001 and 2000, respectively. Adjusted net loss excluding goodwill amortization expense would have been \$16.2 million and \$14.3 million for the years ended December 31, 2001 and 2000, respectively. Adjusted basic and diluted net loss per share would have been \$0.84 and \$1.67 for the years ended December 31, 2001 and 2000, respectively. The remaining goodwill balance of \$111,000 as of December 31, 2002 and 2001 has been allocated to the Company's Separations business segment.

Goodwill and other intangible assets consist of the following:

	December 31, 2002			December 31, 2001		
	Weighted-Average Life-Years	Gross Carrying Amount	Accumulated Amortization	Weighted-Average Life-Years	Gross Carrying Amount	Accumulated Amortization
Licensed patent technology . . . . .	7	\$3,500,000	\$ 83,000	—	\$ —	\$ —
Goodwill . . . . .	—	2,452,000	2,341,000	—	2,452,000	2,341,000
Capitalized software development costs . . . . .	5	282,000	85,000	5	141,000	10,000
Patent . . . . .	15	100,000	83,000	15	100,000	76,000
Covenant not to compete . . . . .	5	75,000	68,000	5	75,000	53,000
		<u>\$6,409,000</u>	<u>\$2,660,000</u>		<u>\$2,768,000</u>	<u>\$2,480,000</u>

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**6. Goodwill and Other Intangible Assets (Continued)**

Estimated five year future amortization expense for other intangible assets as of December 31, 2002 are as follows:

2003 . . . . .	\$574,000
2004 . . . . .	568,000
2005 . . . . .	550,000
2006 . . . . .	518,000
2007 . . . . .	511,000

**7. Accounts Payable and Accrued Expenses**

Accounts payable and accrued expenses consist of the following:

	December 31,	
	2002	2001
Accounts payable . . . . .	\$ 3,429,000	\$ 5,833,000
Accrued employee compensation and related taxes . . . . .	2,928,000	2,357,000
Accrued external research and development and contract manufacturing . . . . .	2,398,000	550,000
Licensed patent technology payable . . . . .	2,000,000	—
Other accrued liabilities . . . . .	2,224,000	1,364,000
	<u>\$12,979,000</u>	<u>\$10,104,000</u>

During the third quarter of 2002, the Company severed 21 employees and recorded a charge of approximately \$650,000 related to employee severance costs. At December 31, 2002, all remaining unpaid employee severance costs equaled \$180,000 and are included in accrued employee compensation and related taxes.

**8. Long-term Obligations**

Long-term obligations consist of the following:

	December 31,	
	2002	2001
Obligation to related party . . . . .	\$ 7,000,000	—
Obligations under capital lease arrangements . . . . .	5,864,000	\$ 3,504,000
Obligations under leasehold improvement arrangements . . . . .	4,387,000	2,930,000
Obligations under promissory notes . . . . .	4,247,000	—
Present value of future minimum payments . . . . .	21,498,000	6,434,000
Less: current portion . . . . .	(3,552,000)	(2,194,000)
Long-term obligations . . . . .	<u>\$17,946,000</u>	<u>\$ 4,240,000</u>

On August 29, 2002, the Company's Biotage subsidiary signed a \$400,000 promissory note with a commercial bank to fund the purchase of furniture and fixtures. The note is payable ratably over 60 months, beginning October 1, 2002, and carries an interest rate of 7.0%. Under the terms of the note, Biotage has assigned \$400,000 to the bank as collateral, which is included in restricted cash on

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**8. Long-term Obligations (Continued)**

the Company's balance sheet. As of December 31, 2002, there was \$386,000 (included in obligations under promissory notes) outstanding under the loan, which is included in long-term obligations on the Company's balance sheet.

On May 31, 2002, the Company and Genzyme Corporation amended and restated their collaboration agreement for the development of DX-88 (the Amended Collaboration Agreement). The Company and Genzyme also executed a senior secured promissory note and security agreement under which Genzyme agreed to loan the Company up to \$7.0 million (included in obligation to related party) and the Company pledged certain tangible and intangible personal property of or arising out of the DX-88 program. The security agreement provides for additional collateral should the Company, under the Amended Collaboration Agreement, exercise its option to purchase Genzyme's interest in the application of DX-88 in cardiopulmonary bypass and other surgery, or should the Company fail to meet certain financial covenants. The financial covenants state that the Company must maintain at least \$20.0 million in cash or cash equivalents based on the Company's quarterly consolidated financial statements and that the Company maintains at least one continued listing standard for the Nasdaq National Market.

As of October 18, 2002, the Company received the \$7.0 million under this Genzyme note, which is included in long-term obligations on the Company's balance sheet. The note bears interest at the prime rate (4.25% at December 31, 2002) plus 2%. Interest is payable quarterly. The principal and all unpaid interest will be due on the maturity date of May 31, 2005. The Company may extend the maturity date to May 31, 2007 if the Amended Collaboration Agreement is in effect, no default or event of default exists and the Company satisfies the financial covenants as of the initial maturity date. As of December 31, 2002, there was \$7.0 million outstanding under the loan, which is included in long-term obligations on the Company's balance sheet.

In connection with the construction of Biotage's new facility in Charlottesville, Virginia, Biotage executed a loan agreement for approximately \$4.3 million from a commercial bank. After completion of construction during the first quarter of 2003 the note was converted to a term loan and will be repaid over 20 years with interest at a rate fixed for five-year periods based on the five-year U.S. treasury note rate in effect plus 1.58%. Interest is fixed at 5.83% for the first five years and will be adjusted once every five years thereafter, but may be adjusted earlier if Biotage fails to maintain an average non-interest bearing compensating balance of \$750,000 at the lending bank, which is included in cash and cash equivalents on the Company's balance sheet. As of December 31, 2002, there was \$3.9 million (included in obligations under promissory notes) outstanding under the loan, which is included in long-term obligations on the Company's balance sheet. Biotage drew down the remaining \$400,000 during the first quarter of 2003.

During 2001, Dyax S.A., the Company's research subsidiary located in Belgium, Dyax S.A., signed a capital lease for the purchase of qualified fixed assets. During the year ended December 31, 2002, Dyax S.A. sold to and leased back from the lender a total of \$1.7 million of laboratory and office equipment. Interest pursuant to this capital lease ranges between 4.55% and 5.60%. Principal and interest are payable quarterly over 60 months. No gain or loss was recorded as part of these transactions. Dyax S.A. was required to provide cash collateral in the amount of \$521,000, which is included in restricted cash on the Company's balance sheet. As of December 31, 2002, there was \$1.5 million (included in obligations under capital lease arrangements) outstanding under the loan, which is included in long-term obligations on the Company's balance sheet.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**8. Long-term Obligations (Continued)**

During 2001, the Company signed a capital lease and debt agreement for the purchase of qualified fixed assets and leasehold improvements. Interest pursuant to this agreement ranges between 10.01% and 10.33%. Principal and interest are payable ratably over 36 months or 42 months. Capital lease obligations are collateralized by the assets under lease. Other debt obligations are collateralized by a stand-by letter of credit for the amount financed. If at the end of any fiscal quarter the Company's unrestricted cash is less than the greater of \$25.0 million or the Company's annualized cash needs, the Company must provide an irrevocable letter of credit in the amount equal to the amount of debt financed, which was \$2.0 million at December 31, 2002. Annualized cash needs are determined by multiplying cash used in operations for the most recently ended quarter by four. The lender has no obligation to fund any further amounts. During the years ended December 31, 2002 and 2001, the Company sold to and leased back from the lender \$2.0 million and \$4.7 million, respectively, of leasehold improvements, laboratory, production and office equipment. No gain or loss was recorded as part of these transactions. As of December 31, 2002, there was \$3.2 million (included in obligations under capital lease arrangements) outstanding related to capital leases and \$2.0 million (included in obligations under leasehold improvement arrangements) outstanding related to the leasehold improvements debt agreement, totaling \$5.2 million outstanding under the loan, which is included in long-term obligations on the Company's balance sheet.

During 1997, the Company signed a capital lease agreement for the purchase of qualified fixed assets from a lender for a total of \$2.9 million of laboratory and office equipment. Interest pursuant to this agreement ranges between 10.42% and 14.02%. Principal and interest are payable ratably over 60 months. The capital lease obligations are collateralized by the assets under the lease. During the year ended December 31, 2001, the Company sold to and leased back from the lender \$100,000 of laboratory, production and office equipment. No gain or loss was recorded as part of these transactions. As of December 31, 2002, there was \$1.1 million (included in obligations under capital lease arrangements) outstanding under the loan, which is included in long-term obligations on the Company's balance sheet.

The Company also has a capital lease for equipment in The Netherlands, the former site of its European research facility. In 2000, the Company sold to the lessor and leased back \$297,000 of laboratory equipment under this facility. Interest pursuant to this agreement is at 5.60%. Principal and interest is payable monthly over 60 months. No gain or loss was recorded as part of this transaction. As of December 31, 2002, there was \$145,000 (included in obligations under capital lease arrangements) outstanding under the loan, which is included in long-term obligations on the Company's balance sheet.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**8. Long-term Obligations (Continued)**

Minimum future payments under the Company's long-term obligations as of December 31, 2002 are as follows:

2003 .....	\$ 4,796,000
2004 .....	4,285,000
2005 .....	8,968,000
2006 .....	1,008,000
2007 and thereafter .....	<u>7,525,000</u>
Total future minimum payments .....	26,582,000
Less: amount representing interest .....	<u>(5,084,000)</u>
Present value of future minimum payments .....	21,498,000
Less: current portion .....	<u>(3,552,000)</u>
Long-term obligations .....	<u><u>\$17,946,000</u></u>

**9. Operating Leases**

In June 2001, the Company entered into an agreement to initially lease approximately 67,000 square feet of laboratory and office space in Cambridge, Massachusetts. The lease commenced in the first quarter of 2002 and has an initial term of ten years, expiring February 2012. The Company was required to provide a cash-collateralized letter of credit in the amount of \$4.3 million, which may be reduced after the fifth year of the lease term. The cash collateral is included in restricted cash on the Company's balance sheet. Under the terms of the agreement, the landlord loaned the Company approximately \$2.4 million (included in obligations under leasehold improvement arrangements) to be used towards the cost of leasehold improvements, which is included in long-term obligations on the Company's balance sheet as of December 31, 2002. The loan bears interest at a rate of 12.00% and is payable in 110 equal monthly installments through February 2012. Under the terms of the lease agreement, the Company is obligated to lease an additional 24,122 square feet of space on November 1, 2007 and has the option to extend the entire lease for two additional five-year terms.

The Company has operating leases covering 25,000 square feet of manufacturing, office and storage space in Charlottesville, Virginia. The leases for the Charlottesville facility expired on January 2003. The Company leases approximately 4,000 square feet of office space in the United Kingdom under an operating lease which permits the Company to renew after each five-year period over a twenty five year period; however, should the Company elect not to renew at the end of a five year period, there is a termination fee equal to one year's rent, which has been included in the following commitment schedule in year 2005. The Company maintains approximately 1,500 square feet of office space in Japan under an operating lease, which expires in January 2005. The Company maintains approximately 10,000 square feet of laboratory and office space in Belgium under an operating lease, which expires in December 2004. The Belgium lease has three additional one-year term extension options. Additionally, the company has operating leases for automobiles and equipment expiring in July 2003 through November 2005.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**9. Operating Leases (Continued)**

Minimum future lease payments under the Company's non-cancelable operating leases as of December 31, 2002 are as follows:

2003	\$ 4,200,000
2004	4,027,000
2005	3,812,000
2006	3,629,000
2007 and thereafter	27,544,000

Rent expense for the years ended December 31, 2002, 2001 and 2000 was approximately \$3,770,000, \$1,885,000 and \$1,634,000, respectively. Rent expense for December 31, 2002 was net of sublease payments of \$719,000, there was no sublease payments during 2001 and 2000.

**10. Litigation**

The Company's first phage display patent in Europe, European Patent No. 436,597, known as the 597 Patent was ultimately revoked in 2002 in a proceeding in the European Patent Office. The Company has two divisional patent applications of the 597 Patent pending in the European Patent Office. The Company will not be able to prevent other parties from using its phage display technology in Europe if the European Patent Office does not grant the Company another patent. The Company cannot be assured that it will prevail in the prosecution of either of these patent applications.

George Pieczenik and I.C. Technologies America, Inc. sued the Company in 1999 for patent infringement of three United States patents. The complaint was initially filed against the Company in New York, dismissed for lack of jurisdiction and then refiled in the United States District Court in Massachusetts. On February 25, 2003, the District Court granted summary judgment of noninfringement in the Company's favor with respect to the three asserted patents. On March 5, 2003, the plaintiff filed a Notice of Appeal to the United States Court of Appeals for the Federal Circuit.

**11. Stockholders' Equity**

*Preferred Stock:* All of the shares of Class A Series 5 Preferred Stock were converted to common stock coincident with the Company's initial public offering. As of December 31, 2002, there were 1,000,000 shares of \$0.01 par value preferred stock authorized but undesignated.

*Common Stock:* On August 18, 2000, the Company completed its initial public offering of 4,600,000 shares of common stock at \$15.00 per share, including 600,000 shares of common stock issued pursuant to the exercise by the underwriters of their over-allotment option. The gross proceeds to the Company from the offering, including the shares sold pursuant to the exercise of the over-allotment option, were \$69.0 million. The costs associated with the initial public offering were \$6,650,000. Coincident with the initial public offering, 14,696,987 shares of preferred stock automatically converted into 11,585,454 shares of common stock. As of December 31, 2002, there were 50,000,000 shares authorized.

On March 19, 2003, the Company sold an aggregate of 4,721,625 shares of common stock in a registered directed offering for net proceeds of \$8.3 million.

*Stock Options:* The Company's 1995 Equity Incentive Plan (the "Plan") is an equity plan under which equity awards, including awards of restricted stock and incentive and nonqualified stock options to purchase shares of common stock to employees and consultants of the Company may be granted by



**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**11. Stockholders' Equity (Continued)**

action of the Compensation Committee of the Board of Directors. Although in certain circumstances granted below fair market value, options are generally granted at the current fair market value on the date of grant, generally vest ratably over a 48 month period, and expire within ten years from date of grant. At the May 16, 2002 Annual Meeting of Shareholders the Plan was amended by a shareholder vote to increase the number of shares reserved for issuance under the plan from 4.5 million to 6.5 million shares and to provide for automatic annual increases up to an aggregate amount of not more than 10.25 million shares. At December 31, 2002, there were 5,947,826 shares of common stock reserved for issuance under the Plan of which 552,174 shares remained available for future grant. Since the Plan's inception, 1,641,513 shares have been issued under the Plan.

Stock option activity for the 1995 Equity Incentive Plan is summarized as follows:

	<u>Option Shares</u>	<u>Weighted-Avg. Exercise Price</u>
Outstanding at December 31, 1999 .....	2,335,455	\$ 1.69
Granted at fair market value .....	970,379	\$18.27
Exercised .....	(480,505)	\$ 1.63
Canceled .....	<u>(62,959)</u>	<u>\$ 2.14</u>
Outstanding at December 31, 2000 .....	2,762,370	\$ 7.50
Granted at fair market value .....	1,572,735	\$11.17
Exercised .....	(380,132)	\$ 1.31
Canceled .....	<u>(277,343)</u>	<u>\$15.80</u>
Outstanding at December 31, 2001 .....	3,677,630	\$ 9.08
Granted at fair market value .....	1,366,506	\$ 2.42
Exercised .....	(224,222)	\$ 1.77
Canceled .....	<u>(513,601)</u>	<u>\$12.38</u>
Outstanding at December 31, 2002 .....	<u>4,306,313</u>	<u>\$ 6.94</u>

Summarized information about stock options outstanding at December 31, 2002 is as follows:

<u>Range of Exercise Prices</u>	<u>Options Outstanding</u>			<u>Options Exercisable</u>	
	<u>Number Outstanding</u>	<u>Weighted-Average Remaining Contractual Life-Years</u>	<u>Weighted- Average Exercise Price</u>	<u>Number Exercisable</u>	<u>Weighted- Average Exercise Price</u>
\$0.30 to \$1.36 .....	1,076,180	9.12	\$ 1.27	156,338	\$ 0.73
\$1.49 to \$1.94 .....	140,296	6.30	\$ 1.57	104,766	\$ 1.54
\$2.00 to \$2.70 .....	893,965	6.30	\$ 2.06	738,510	\$ 2.04
\$3.16 to \$8.94 .....	534,530	8.38	\$ 6.00	225,927	\$ 6.28
\$9.02 to \$10.97 .....	843,531	8.92	\$10.30	223,623	\$10.29
\$11.06 to \$14.11 .....	264,258	8.22	\$12.38	140,001	\$12.32
\$16.95 to \$19.50 .....	336,801	7.83	\$17.59	160,424	\$17.57
\$21.20 to \$27.50 .....	202,552	7.96	\$23.73	103,530	\$23.84
\$35.00 to \$48.69 .....	14,200	7.79	\$39.65	7,672	\$39.64
	<u>4,306,313</u>	<u>8.10</u>	<u>\$ 6.94</u>	<u>1,860,791</u>	<u>\$ 6.89</u>

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**11. Stockholders' Equity (Continued)**

The weighted average fair value of options granted under the Plan during 2002, 2001 and 2000, as determined under the Black-Scholes option pricing model was \$2.19, \$9.74 and \$15.78, respectively. Total options exercisable at December 31, 2002, 2001 and 2000 were 1,860,791, 1,459,937 and 1,163,895 respectively.

The fair value of each stock option granted is estimated on the grant date using the minimum value method with the following weighted average assumptions:

	Year Ended December 31,		
	2002	2001	2000
Expected option term . . . . .	6.0	6.0	6.0
Risk-free interest rate . . . . .	4.23%	4.79%	5.30%
Expected dividend yield . . . . .	None	None	None
Volatility factor . . . . .	140%	118%	75%

In 2002, 2001, and 2000, the Company recorded \$0, \$0 and \$1,494,000, respectively, of deferred compensation related to stock option grants to employees. The deferred compensation represents differences between the estimated fair value of common stock on the date of grant and the exercise price. The deferred compensation is being amortized and charged to operations over the vesting period of the related options.

*Employee Stock Purchase Plan:* The Company's 1998 Employee Stock Purchase Plan (the "Purchase Plan") as amended in May 2002, allows employees to purchase shares of common stock at a discount from fair market value. As of December 31, 2002, there were 200,000 shares of common stock reserved for issuance under the amended Purchase Plan. Rights to purchase common stock under the Purchase Plan are granted at the discretion of the Compensation Committee, which determines the frequency and duration of individual offerings under the Purchase Plan and the dates when stock may be purchased. Eligible employees participate voluntarily and may withdraw from any offering before the stock is purchased. The purchase price per share of common stock in an offering is 85% of the lesser of its fair market value at the beginning of the offering period or on the applicable exercise date and may be paid through payroll deductions. For the years ended December 31, 2002 and 2001, 46,890 and 7,025 shares had been issued under the Purchase Plan.

**12. Employee Savings and Retirement Plans**

The Company has an employee savings and retirement plan (the "Retirement Plan"), qualified under section 401(k) of the Internal Revenue Code, covering substantially all of the Company's U.S. employees. Employees may elect to contribute a portion of their pretax compensation to the Retirement Plan up to the annual maximum allowed under the Retirement Plan. In 2001, the Company began matching 50% of employee contributions up to 6% of eligible pay. Employees are 100% vested in company matching contributions immediately. For the years ended December 31, 2002, 2001 and 2000, the Company's contributions amounted to \$363,000, \$326,000 and \$0, respectively.

**13. Net Loss Per Share**

Net loss per share is computed under SFAS No. 128. Basic net loss per share is computed using the weighted average number of shares of common stock outstanding. Diluted loss per share does not differ from basic loss per share since potential common shares from the conversion of preferred stock

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**13. Net Loss Per Share (Continued)**

and exercise of stock options and warrants are antidilutive for all periods presented and therefore are excluded from the calculation of diluted net loss per share. The following potentially dilutive common shares were excluded because their effect was antidilutive:

	December 31,		
	2002	2001	2000
Stock options . . . . .	4,306,313	3,677,630	2,762,370
Unvested restricted stock . . . . .	—	—	7,134

**14. Income Taxes**

For the years ended December 31, 2002, 2001, and 2000, the Company had income tax provisions of \$0.

Temporary differences that give rise to significant deferred tax assets as of December 31, 2002 and 2001 are as follows:

	2002	2001
Deferred Tax Asset:		
Inventory valuation . . . . .	\$ 303,000	\$ 236,000
Allowance for doubtful accounts . . . . .	73,000	62,000
Depreciation and amortization . . . . .	129,000	115,000
Accrued expenses . . . . .	352,000	416,000
Other . . . . .	306,000	881,000
Deferred revenue . . . . .	2,602,000	1,514,000
Research credit carryforwards . . . . .	5,439,000	2,404,000
Net operating loss carryforwards . . . . .	35,862,000	27,894,000
Valuation allowance . . . . .	<u>(45,066,000)</u>	<u>(33,522,000)</u>
Net deferred tax asset . . . . .	<u>\$ —</u>	<u>\$ —</u>

As of December 31, 2002, the Company had federal net operating loss (NOL) and research and experimentation credit carryforwards of approximately \$91.0 million and \$4.9 million, respectively, which may be available to offset future federal income tax liabilities and expire at various dates from 2004 through 2022. The Company has recorded a deferred tax asset of approximately \$1.5 million reflecting the benefit of deductions from the exercise of stock options. This deferred asset has been fully reserved until it is more likely than not that the benefit from the exercise of stock options will be realized. The benefit from this \$1.5 million deferred tax asset will be recorded as a credit to additional paid-in capital if any when realized. As required by SFAS No. 109, management of the Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets, which are comprised principally of NOL and research and experimentation credit carryforwards. Management has determined at this time that it is more likely than not that the Company will not recognize the benefits of federal and state deferred tax assets and, as a result, a valuation allowance of approximately \$45.1 million has been established at December 31, 2002.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**14. Income Taxes (Continued)**

Ownership changes, as defined in the Internal Revenue Code, may have limited the amount of NOL carryforwards that can be utilized annually to offset future taxable income. Subsequent ownership changes could further affect the limitation in future years.

As of December 31, 2002, the Company's foreign subsidiaries had NOL carryforwards of approximately \$1.8 million, which expire over various periods, for which a full valuation allowance has been provided.

**15. Related Party Transactions**

The President, Chief Executive Officer and Chairman of the Board of the Company is also an outside director of Genzyme Corporation and was a consultant to Genzyme until 2001. In 1996, the Company entered into a sublease agreement with Genzyme for laboratory and office facilities in Cambridge, Massachusetts, which was extended to and terminated in April 2002. Rent expense of \$162,000, \$682,000 and \$615,000 was recorded in each year ended December 31, 2002, 2001 and 2000, respectively. During 1996, the Company signed two patent license agreements with Genzyme under the Company's standard license terms. The Company recorded license revenues of \$50,000, for each year ended December 31, 2002, 2001 and 2000, in connection with the maintenance fees on these two agreements. As of December 31, 2002 and 2001, the related accounts receivable balance was \$0 and \$50,000, respectively.

In October 1998, the Company and Genzyme also entered into a joint development and commercialization agreement for DX-88, the Company's proprietary therapeutic compound for the treatment of chronic inflammatory diseases, with initial development to be focused on the treatment of hereditary angioedema (HAE). On May 31, 2002, the Company and Genzyme amended this development and commercialization agreement. The Company is now responsible for funding the development of DX-88 for the treatment of HAE through the first Phase II clinical trial for HAE (the Initial Program). Genzyme has an option to acquire a 50% interest in the DX-88 program upon the Company's completion of the Initial Program, and will have a period of 60 days after review of the data to exercise its option. If Genzyme exercises its option, it will be responsible for 50% of the development costs incurred subsequent to completion of the Initial Program. Upon dosing the first patient in a pivotal clinical trial of DX-88 for HAE, Genzyme will be obligated to pay the Company one-half of the development costs in excess of \$6.0 million that were incurred by the Company through completion of the Initial Program. Through December 31, 2002, the Company had incurred approximately \$11.0 million of development costs in the program. On May 31, 2002, The Company and Genzyme also executed a senior secured promissory note and security agreement (see also Note 8) under which Genzyme agreed to loan the Company up to \$7.0 million and the Company pledged certain tangible and intangible personal property of or arising out of the DX-88 program. As of December 31, 2002, the related long-term obligation was \$7.0 million with accrued interest outstanding of \$114,000. At December 31, 2002, Genzyme owns approximately 2.7% of the Company's common stock outstanding.

See also Note 5, Notes Receivable, Employees.

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**16. Business Segments**

The Company discloses business segments under SFAS No. 131. Segment data does not include allocation of corporate administrative costs to each of its operating segments. The Company evaluates the performance of its segments and allocates resources to them based on losses before corporate administrative costs, interest and taxes.

The Company has two reportable segments: (i) Separations and (ii) Biopharmaceutical (previously known as Therapeutics/Diagnostics). The Separations segment, which is conducted through the Company's wholly owned subsidiary, Biotage, Inc., develops, manufactures and sells chromatography separations systems. The Biopharmaceutical segment is principally focused on the discovery, development and commercialization of therapeutic products. It also licenses its proprietary technology to third parties and licenses affinity ligands developed using the Company's phage display technology to third parties for biopharmaceutical purification and other applications.

The Company's reportable segments are strategic business units that offer different products and services. They are managed separately because each business requires different technologies and marketing strategies.

The following table presents certain segment financial information and the reconciliation of segment financial information to consolidated totals as of:

<u>Year ended December 31, 2002</u>	<u>Separations</u>	<u>Biopharmaceutical</u>	<u>Total</u>
Revenue from external customers . . . .	\$23,158,000	\$ 17,750,000	\$ 40,908,000
Segment loss from operations . . . . .	\$ (220,000)	\$(18,140,000)	\$(18,360,000)
Depreciation and amortization . . . . .	\$(1,017,000)	\$ (1,886,000)	\$ (2,903,000)
Segment assets . . . . .	\$22,479,000	\$ 18,167,000	\$ 40,646,000
<u>Year ended December 31, 2001</u>	<u>Separations</u>	<u>Biopharmaceutical</u>	<u>Total</u>
Revenue from external customers . . . .	\$18,803,000	\$14,237,000	\$ 33,040,000
Segment loss from operations . . . . .	\$ (2,574,000)	\$ (9,460,000)	\$(12,034,000)
Depreciation and amortization . . . . .	\$ (716,000)	\$ (1,573,000)	\$ (2,289,000)
Segment assets . . . . .	\$16,767,000	\$ 6,662,000	\$ 23,429,000
<u>Year ended December 31, 2000</u>	<u>Separations</u>	<u>Biopharmaceutical</u>	<u>Total</u>
Revenue from external customers . . . .	\$15,782,000	\$ 9,434,000	\$ 25,216,000
Segment loss from operations . . . . .	\$ (3,192,000)	\$ (7,011,000)	\$(10,203,000)
Depreciation and amortization . . . . .	\$ (465,000)	\$ (1,293,000)	\$ (1,758,000)
Segment assets . . . . .	\$ 9,221,000	\$ 3,020,000	\$ 12,241,000

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**16. Business Segments (Continued)**

	Year ended December 31,		
	2002	2001	2000
<b>Reconciliations:</b>			
Loss from operations:			
Loss from operations from reportable segments	\$(18,360,000)	\$(12,034,000)	\$(10,203,000)
Unallocated amounts:			
Corporate expenses	(7,705,000)	(7,284,000)	(6,977,000)
Other (expense) income, net	(753,000)	2,153,000	1,991,000
Consolidated net loss	\$(26,818,000)	\$(17,165,000)	\$(15,189,000)
	Year ended December 31,		
	2002	2001	2000
Depreciation and amortization:			
Depreciation and amortization for reportable segments	\$ (2,903,000)	\$ (2,289,000)	\$ (1,758,000)
Unallocated amounts:			
Corporate depreciation and amortization	(947,000)	(201,000)	(120,000)
Consolidated depreciation and amortization	\$ (3,850,000)	\$ (2,490,000)	\$ (1,878,000)
	December 31,		
	2002	2001	2000
Assets:			
Segment assets	\$ 40,646,000	\$ 23,429,000	\$ 12,241,000
Unallocated amounts:			
Corporate assets	33,260,000	58,012,000	79,164,000
Consolidated assets	\$ 73,906,000	\$ 81,441,000	\$ 91,405,000

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**16. Business Segments (Continued)**

The Company operates in the geographic segments of the United States ("U.S."), Europe and Asia as indicated in the table below. During 2001, the Company began operations in Asia.

	2002 (in 000's)				
	U.S.	Europe	Asia	Elimination	Total
Revenues . . . . .	\$ 37,446	\$4,862	\$1,955	\$ (3,355)	\$ 40,908
Net loss . . . . .	\$(21,712)	\$ (798)	\$ 26	\$ (4,334)	\$(26,818)
Long-lived assets . . . . .	\$ 23,886	\$2,196	\$ 122	—	\$ 26,204
Total assets . . . . .	\$ 80,476	\$3,851	\$ 241	\$(10,662)	\$ 73,906

	2001 (in 000's)				
	U.S.	Europe	Asia	Elimination	Total
Revenues . . . . .	\$ 31,256	\$8,160	\$1,003	\$(7,379)	\$ 33,040
Net loss . . . . .	\$(14,201)	\$ 103	\$ (406)	\$(2,661)	\$(17,165)
Long-lived assets . . . . .	\$ 12,072	\$1,015	\$ 116	—	\$ 13,203
Total assets . . . . .	\$ 85,440	\$3,170	\$ 705	\$(7,874)	\$ 81,441

	2000 (in 000's)				
	U.S.	Europe	Asia	Elimination	Total
Revenues . . . . .	\$ 24,837	\$3,872	\$ —	\$(3,493)	\$ 25,216
Net loss . . . . .	\$(13,093)	\$ (979)	—	\$(1,117)	\$(15,189)
Long-lived assets . . . . .	\$ 4,451	\$ 750	—	—	\$ 5,201
Total assets . . . . .	\$ 92,674	\$2,611	—	\$(3,880)	\$ 91,405

**17. Comprehensive Income (Loss)**

Accumulated other comprehensive income (loss) is calculated as follows:

	Year Ended December 31,		
	2002	2001	2000
Accumulated other comprehensive income (loss):			
Foreign currency translation adjustment:			
Balance at beginning of period . . . . .	\$ 94,000	\$(27,000)	\$(108,000)
Change during period . . . . .	410,000	121,000	81,000
Balance at end of period . . . . .	<u>\$504,000</u>	<u>\$ 94,000</u>	<u>\$ (27,000)</u>

**18. Collaborative and License Agreements**

On October 16, 2002, the Company entered into a cross-licensing agreement with XOMA Ireland Limited under which the Company received a license to use XOMA's antibody expression technology to develop antibody products for itself and for its collaborators. The Company also received a license from XOMA to produce antibodies under the XOMA patents. In exchange for the license rights to XOMA's antibody expression technology, the Company agreed to pay a technology license fee of \$3.5 million due over six installments through December 15, 2003, and to pay royalties in connection with the sale

**Dyax Corp. and Subsidiaries**  
**Notes to Consolidated Financial Statements (Continued)**

**18. Collaborative and License Agreements (Continued)**

of any of the Company's antibody products. The Company also granted XOMA a license to its phage display patents and agreed to provide XOMA at its request, to be made to the Company within 18 months from the effective date of the agreement, with one of the Company's antibody phage display libraries. The technology license fee is capitalized and being amortized on a straight-line basis over its useful life. Useful life is based on management's estimate of the period that the capitalized license will generate revenues directly or indirectly, of seven years. As of December 31, 2002, the remaining \$2.0 million unpaid license obligation was included in accounts payable and accrued expenses on the Company's balance sheet.

On May 31, 2002, the Company and Genzyme Corporation amended their collaboration agreement for the development and commercialization of DX-88. Under the collaboration agreement, the Company has an option until March 31, 2003 to purchase Genzyme's interest in the application of DX-88 for the prevention of blood loss and other systemic inflammatory responses in cardiopulmonary bypass and other surgery. The Company intends to exercise its option to purchase Genzyme's interest in the cardiopulmonary bypass and other surgery indication in the first quarter of 2003, which will require the Company to pay \$1.0 million to Genzyme in the second quarter of 2003. When the Company exercises the option, the security agreement provides that Genzyme release its security interest in the portion of the DX-88 program relating to the cardiopulmonary bypass and other surgery indication and that the Company pledge a percentage of its interest in its wholly owned subsidiary, Biotage, as additional collateral for the Genzyme loan (see Note 8).

See also Note 16, related party Transactions.

**19. Unaudited Quarterly Operating Results**

The following is a summary of unaudited quarterly results of operations for the two years ended December 31, 2002 and 2001:

<u>Year ended December 31, 2002</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
	(in thousands, except per share)			
Total revenues . . . . .	\$ 8,886	\$10,622	\$10,536	\$10,864
Loss from operations . . . . .	\$(7,027)	\$(7,657)	\$(5,592)	\$(5,789)
Net loss . . . . .	\$(7,064)	\$(7,702)	\$(5,675)	\$(6,377)
Basic and diluted net loss per share . . . . .	\$ (0.36)	\$ (0.39)	\$ (0.29)	\$ (0.32)
<u>Year ended December 31, 2001</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
	(in thousands, except per share)			
Total revenues . . . . .	\$ 7,068	\$ 8,209	\$ 9,046	\$ 8,717
Loss from operations . . . . .	\$(4,292)	\$(4,398)	\$(4,497)	\$(6,131)
Net loss . . . . .	\$(3,426)	\$(3,789)	\$(4,017)	\$(5,933)
Basic and diluted net loss per share . . . . .	\$ (0.18)	\$ (0.20)	\$ (0.21)	\$ (0.31)



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

None.

**PART III**

**ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE COMPANY**

The response to this item is incorporated herein by reference from the discussion responsive thereto under the captions "Election of Directors", "Section 16(a) Beneficial Reporting Compliance" and "Executive Officers and Key Employees" in the Company's Definitive Proxy Statement relating to the 2003 Annual Meeting of Stockholders (the 2003 "Proxy Statement").

**ITEM 11. EXECUTIVE COMPENSATION**

The response to this item is incorporated herein by reference from the discussion responsive thereto under the following captions in the 2003 Proxy Statement: "Election of Directors—Director Compensation," "Executive Compensation" and "Compensation Committee Interlocks and Insider Participation."

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The response to this item is incorporated herein by reference in part from the discussion responsive thereto under the caption "Share Ownership" in the 2003 Proxy Statement.

The following table provides information about the securities authorized for issuance under the Company's equity compensation plans as of December 31, 2002:

**Equity Compensation Plan Information**

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights</u>	<u>Weighted-average exercise price of outstanding options, warrants and rights</u>	<u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</u>
	(a)	(b)	(c)
Equity compensation plans approved by security holders(1): . . . . .	4,306,313(2)	\$6.94	1,906,131(3)
Equity compensation plans not approved by security holders: . . . . .	—	—	—
<b>Totals: . . . . .</b>	<b><u>4,306,313(2)</u></b>	<b><u>\$6.94</u></b>	<b><u>1,906,131(3)</u></b>

- (1) Consists of the Amended and Restated 1995 Equity Incentive Plan and the 1998 Employee Stock Purchase Plan.
- (2) Does not include purchase rights accruing under the 1998 Employee Stock Purchase Plan because the purchase price (and therefore the number of shares to be purchased) will not be determined until the end of the purchase period, which is June 30, 2003.
- (3) Includes 146,085 shares issuable under the 1998 Employee Stock Purchase Plan, of which up to 146,085 are issuable in connection with the current offering period which ends on June 30, 2003. The remaining shares consist of 1,760,046 under the 1995 Amended and Restated Equity Incentive Plan, which amount reflects the automatic increase of 1,207,872 shares that occurred on January 1, 2003 under the terms of the Plan. Under the 1995 Amended and Restated Equity Incentive Plan,

effective date July 13, 1995, the number of shares issuable is automatically increased every January 1 by an amount equal to the lesser of (i) 1,250,000 shares, (ii) 5% of the fully diluted outstanding shares of Common Stock of the Company on such date or (iii) such lesser amount as may be determined by resolution of the board of directors at any date before or within 90 days after January 1 of the respective year; provided, however, that the maximum aggregate number of shares received since inception under the plan shall not exceed 10,250,000 shares. No incentive stock options may be granted under the plan more than ten years after the effective date. The plan may be amended, suspended, or terminated by the Compensation Committee of the Board of Directors at any time, subject to any stockholder approval.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

The response to this item is incorporated herein by reference from the discussion responsive thereto under the caption "Certain Relationships and Related Transactions" in the 2003 Proxy Statement.

**PART IV**

**ITEM 14. CONTROLS AND PROCEDURES**

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we have evaluated the effectiveness of the design and operation of our disclosure controls and procedures within 90 days of the filing date of this annual report. Based on their evaluation, our principal executive officer and principal financial officer concluded that these controls and procedures are effective in timely alerting them to material information required to be disclosed by us in the reports that we file with the SEC. There were no significant changes in our internal controls or in other factors that could significantly affect these controls subsequent to the date of their evaluation.

**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K**

**(a) 1. FINANCIAL STATEMENTS**

The financial statements are included under Part II, Item 8 of this Report.

**2. FINANCIAL STATEMENTS SCHEDULE**

**SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS**

**For the years ended December 2002, 2001, and 2000**

**(In Thousands)**

	<u>Balance at Beginning of Period</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance at End of Period</u>
<i>Allowance for Doubtful Accounts:</i>				
2002 . . . . .	\$214	\$234	\$192	\$256
2001 . . . . .	\$130	\$ 90	\$ 6	\$214
2000 . . . . .	\$129	\$ 22	\$ 21	\$130

	<u>Balance at Beginning of Period</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance at End of Period</u>
Accrued warranty costs:				
2002 .....	\$296	\$417	\$397	\$316
2001 .....	\$146	\$488	\$338	\$296
2000 .....	\$146	\$161	\$161	\$146
	<u>Balance at Beginning of Period</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance at End of Period</u>
Deferred Tax Asset Valuation Allowance:				
2002 .....	\$33,522	\$11,544	—	\$45,066
2001 .....	\$27,596	\$ 5,926	—	\$33,522
2000 .....	\$21,916	\$ 5,680	—	\$27,596

### 3. EXHIBITS

The exhibits are listed below under Part IV, Item 15(c) of this Report.

#### (b) REPORTS ON FORM 8-K

We did not file any Current Reports on Form 8-K during the quarter ended December 31, 2002.

#### (c) EXHIBITS

<u>Exhibit No.</u>	<u>Description</u>
3.1	Restated Certificate of Incorporation of the Company. Filed as Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended September 30, 2000 and incorporated herein by reference.
3.2	Amended and Restated By-laws of the Company. Filed as Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended September 30, 2000 and incorporated herein by reference.
3.3	Certificate of Designations Designating the Series A Junior Participating Preferred Stock of the Company. Filed as Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 000-24537) and incorporated herein by reference.
3.4	Certificate of Correction to the restated Certificate of Incorporation of the Company. Filed as Exhibit 3.4 to the Company's Amended Annual Report on Form 10-K/A (File No. 000-24537) for the year ended December 31, 2001 and incorporated herein by reference.
4.1	Specimen Common Stock Certificate. Filed as Exhibit 4.1 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
4.2	Rights Agreement, dated June 27, 2001 between American Stock Transfer & Trust Company, as Rights Agent, and the Company. Filed as Exhibit 4.1 to the Company's Current Report on Form 8-K (File No. 000-24537) and incorporated herein by reference.
10.1	Amended and Restated 1995 Equity Incentive Plan, as amended on August 18, 2000. Filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended September 30, 2000 and incorporated herein by reference.

Exhibit No.	Description
10.2	1998 Employee Stock Purchase Plan. Filed as Exhibit 10.2 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
10.3	The 1995 Amended and Restated Equity Incentive Plan Inland Revenue Approved Sub-Plan for the United Kingdom, as amended on October 26, 2001. Filed herewith.
10.4 *	Employment Letter Agreement, dated September 1, 1999, between Stephen S. Galliker and the Company. Filed as Exhibit 10.3 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
10.5 *	Loan and Pledge Agreement, dated October 30, 1998, between Henry E. Blair and the Company. Filed as Exhibit 10.10 to the Company's Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 000-24537) and incorporated herein by reference.
10.6	Lease Agreement, dated April 8, 1991, between Bridge Gate Real Estates Limited, Harforde Court Management Limited and the Company. Filed as Exhibit 10.18 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
10.7	Master Lease Agreement, dated December 30, 1997, between Transamerica Business Credit Corporation and the Company. Filed as Exhibit 10.21 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
10.8	Form of Sale and Leaseback Agreement, dated December 30, 1997, between Transamerica Business Credit Corporation and the Company. Filed as Exhibit 10.22 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
10.9	Form of License Agreement (Therapeutic Field) between the Licensee and the Company. Filed as Exhibit 10.23 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
10.10	Form of License Agreement (Antibody Diagnostic Field) between the Licensee and the Company. Filed as Exhibit 10.24 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
10.11†	License Agreement, dated January 24, 2001, between Debiopharm S.A. and the Company. Filed as Exhibit 10.26 to the Company's Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 000-24537) and incorporated herein by reference.
10.12	Form of Indemnification Agreement by and between certain directors and executive officers of the Company and the Company. Filed as Exhibit 10.32 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.
10.13	Amended and Restated Registration Rights Agreement, dated as of February 12, 2001, between holders of the Company's capital stock named therein and the Company. Filed as Exhibit 10.33 to the Company's Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 000-24537) and incorporated herein by reference.
10.14	Master Loan and Security Agreement, dated June 30, 2000, between Transamerica Business Credit Corporation and the Company. Filed as Exhibit 10.35 to the Company's Registration Statement on Form S-1 (File No. 333-37394) and incorporated herein by reference.

Exhibit No.	Description
10.15†	Collaboration and License Agreement, dated October 31, 2000, between Bracco Holding, B.V. and Bracco International, B.V. and the Company. Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended September 30, 2000 and incorporated herein by reference.
10.16	Lease, dated June 13, 2001, between the Massachusetts Institute of Technology and the Company. Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended June 30, 2001 and incorporated herein by reference.
10.17	Master Lease Agreement and related documents between the Company and General Electric Capital Corporation dated as of May 1, 2001. Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended March 31, 2002 and incorporated herein by reference.
10.18	Loan Agreement and related documents, relative to \$4,250,000 Industrial Revenue Bond financing dated as of April 1, 2002, among the Company, the Industrial Development Authority of Albermarle County, Virginia and Virginia National Bank. Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended March 31, 2002 and incorporated herein by reference.
10.19	Amended and Restated Collaboration Agreement between Genzyme Corporation and the Company dated May 31, 2002. Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended June 30, 2002 and incorporated herein by reference.
10.20	Senior Secured Promissory Note between Genzyme Corporation and the Company dated May 31, 2002. Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended June 30, 2002 and incorporated herein by reference.
10.21	Security Agreement between Genzyme Corporation and the Company dated May 31, 2002. Filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q (File No. 000-24537) for the quarter ended June 30, 2002 and incorporated herein by reference.
10.22†	License Agreement between XOMA Ireland Limited and the Company dated October 16, 2002. Filed herewith.
10.23*	Employment Letter Agreement, dated September 27, 2002, between David B. Patteson and the Company. Filed herewith.
21.1	Subsidiaries of the Company. Filed herewith.
23.1	Consent of PricewaterhouseCoopers LLP, independent accountants. Filed herewith.
99.1	Important Factors That May Affect Future Operations and Results. Filed herewith.
99.2	Certification pursuant to 18 U.S.C. Section 1350. Filed herewith.

\* Indicates a contract with management.

† This Exhibit has been filed separately with the Commission pursuant to an application for confidential treatment. The confidential portions of this Exhibit have been omitted and are marked by an asterisk.



<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ JOHN W. LITTLECHILD</u> John W. Littlechild	Director	March 27, 2003
<u>/s/ ALIX MARDUEL</u> Alix Marduel	Director	March 27, 2003
<u>/s/ DAVID J. MCLACHLAN</u> David J. McLachlan	Director	March 27, 2003

**Certification Pursuant to §240.13a-14 or §240.15d-14 of the Securities Exchange Act of 1934**

I, Henry E. Blair, certify that:

1. I have reviewed this annual report on Form 10-K of Dyax Corp.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 27, 2003

/s/ HENRY E. BLAIR

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Henry E. Blair  
*Chief Executive Officer*



**Certification Pursuant to §240.13a-14 or §240.15d-14 of the Securities Exchange Act of 1934**

I, Stephen S. Galliker, certify that:

1. I have reviewed this annual report on Form 10-K of Dyax Corp.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 27, 2003

/s/ STEPHEN S. GALLIKER

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Stephen S. Galliker  
*Chief Financial Officer*

# Corporate Information

## Directors

### Henry E. Blair

Chairman, President and Chief Executive Officer, Dyax Corp.

### Constantine E. Anagnostopoulos, Ph.D.

Managing General Partner, Gateway Associates, LP

### James W. Fordyce

Managing Partner, Fordyce & Gabrielson, LLC

### Thomas L. Kempner

Chairman and Chief Executive Officer, Loeb Partners Corporation

### Henry R. Lewis, Ph.D.

Former Director, Genzyme Corporation

### John W. Littlechild

General Partner, HealthCare Ventures

### Alix Marduel, M.D.

Managing Partner, Alta Partners

### David J. McLachlan

Senior Advisor and Former EVP and Chief Financial Officer, Genzyme Corporation

### Gregory D. Phelps

President and Chief Executive Officer, Ardaís Corporation

## Executive Officers and Key Employees

### Henry E. Blair\*

Chairman, President and Chief Executive Officer

### Stephen S. Galliker\*

EVP Finance and Administration and Chief Financial Officer

### David B. Patteson\*

President and Chief Executive Officer, Biotage Inc. and EVP, Dyax Corp.

### Lynn G. Baird, Ph.D.\*

SVP Development

### Robert C. Ladner, Ph.D.

SVP and Chief Scientific Officer

### Jack H. Morgan\*

SVP Corporate Development and Business Operations

### Anthony H. Williams, M.D.\*

SVP Medical Affairs and Clinical Operations

## Transfer Agent

American Stock Transfer & Trust Company  
59 Maiden Lane  
New York, NY 10038

## Legal Counsel

Palmer & Dodge LLP  
111 Huntington Avenue  
Boston, MA 02199

## Independent Accountants

PricewaterhouseCoopers LLP  
One Post Office Square  
Boston, MA 02109

## Annual Meeting of Shareholders

Dyax's 2003 Annual Meeting of Shareholders will be held at 2:00 p.m. EST on Thursday, May 15th at Dyax Corp., 300 Technology Square, 8th Floor, Cambridge, MA. You are cordially invited to attend.

## Stock Listing

Common stock has been traded on the Nasdaq Stock Market under the symbol DYAX since our initial public offering in August 14, 2000.

The following table gives the quarterly high and low sales prices of our common stock since going public.

	2000		2001		2002	
	High	Low	High	Low	High	Low
First Quarter	-	-	\$20.94	\$6.56	\$11.38	\$3.10
Second Quarter	-	-	\$19.99	\$6.81	\$ 4.68	\$3.20
Third Quarter	\$45.31	\$18.50	\$21.24	\$6.05	\$ 4.20	\$1.65
Fourth Quarter	\$54.12	\$16.50	\$11.99	\$6.59	\$ 2.68	\$1.05

## Safe Harbor

This annual report contains forward-looking statements regarding Dyax Corp., including statements regarding its revenues, results of operations, financial position, research and development expenditures and programs, clinical trials and collaborations. Statements that are not historical facts are based on Dyax's current expectations, beliefs, assumptions, estimates, forecasts and projections for Dyax and the industry and markets in which Dyax competes. Such statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions, which are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed in such forward-looking statements. Important factors which may affect future revenues, operating results, financial position, research and development programs, clinical trials and collaborations include Dyax's dependence on the expertise, effort, priorities and contractual obligations of its collaborators in the development, clinical trials, manufacture, marketing, sales and distribution of biopharmaceuticals developed by Dyax or its collaborators; the risk that biopharmaceuticals developed by Dyax or its collaborators may not show therapeutic effect or an acceptable safety profile in clinical trials or could take a significantly longer time to gain regulatory approval than Dyax expects or may never gain approval; Dyax's ability to obtain and maintain intellectual property protection for its products and technologies; the development of technologies or products superior to Dyax's technologies or products; and other risk factors described or referred to in Dyax's most recent Form 10-K and other periodic reports filed with the Securities and Exchange Commission. Dyax cautions investors not to place undue reliance on the forward-looking statements contained in this annual report. These statements speak only as of the date of this annual report, and Dyax undertakes no obligation to update or revise these statements, except as may be required by law.

Dyax and the Dyax logo are the registered trademarks of Dyax Corp. Biotage, Horizon, and FLASH and Purification by Design are trademarks of Biotage, Inc., a Dyax subsidiary.



# Dyax

100 Technology Square

Cambridge, MA 02139

617-225-2500

[www.dyax.com](http://www.dyax.com)

## Other Offices

Dyax SA, Liege, Belgium

Storage, Inc., Charlottesville, VA

Storage UK Ltd., Hertford, England

Storage Japan, Ltd., Tokyo, Japan

Storage GmbH, Dusseldorf, Germany