CYTOGEN CORP
Form 10-K/A
September 19, 2003

SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K/A
(Amendment No. 2)

FOR ANNUAL AND TRANSITION REPORTS
PURSUANT TO SECTIONS 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

(Mark One)
[X] 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 000-14879

CYTOGEN CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

Delaware	22-2322400
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
650 College Road East, Princeton, New Jersey	08540
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code (609) 750-8200

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

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

Common Stock, $0.01 par value per share

(Title of Class)

Preferred Stock Purchase Rights, $0.01 par value per share

(Title of Class)

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

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes X No
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The aggregate market value of the registrant's voting shares of Common Stock held by non-affiliates of the registrant on June 28, 2002, based on $10.70 per share, the last reported sale price on the NASDAQ National Market on that date, was $92,517,375.

The number of shares of Common Stock, $.01 par value, of the registrant outstanding as of March 1, 2003 was 8,813,832 shares.

The following documents are incorporated by reference into the Annual Report on Form 10-K: Portions of the registrant's definitive Proxy Statement for its 2003 Annual Meeting of Stockholders are incorporated by reference into Part III of this Report.

TABLE OF CONTENTS

EXPLANATORY NOTE

This Amendment No. 2 on Form 10-K/A ("Amendment No. 2") amends the Annual Report on Form 10-K, as previously amended (the "Form 10-K") of Cytogen Corporation (the "Company" or "Cytogen") for its fiscal year ended December 31, 2002. Amendment No. 2 is being filed to: (i) amend the Company's disclosure in "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations", under the sub-heading "Liquidity and Capital Resources" of the Form 10-K, to include certain additional information regarding the Company's Contract Manufacturing Agreement with Laureate Pharma L.P.; and (ii) amend "Part IV, Item 15. Exhibits, Financial Statements, and Reports on Form 8-K" of the Form 10-K, to include additional information that was previously redacted from the Contract Manufacturing Agreement, filed as Exhibit 10.49 to the Form 10-K, in connection with the Company's request for confidential treatment.

PART I

Item 1. Business

Overview

Cytogen Corporation of Princeton, New Jersey is a product-driven, oncology-focused biopharmaceutical company. We market proprietary and licensed oncology products through our in-house sales force: ProstaScint(R) (a monoclonal antibody-based imaging agent used to image the extent and spread of prostate cancer) and NMP22(R) BladderChek(TM) (a point-of-care test for bladder cancer detection). We have also developed Quadramet(R), a skeletal targeting therapeutic radiopharmaceutical for the relief of bone pain in prostate and other types of cancer, for which we receive royalties on product sales through Berlex Laboratories, the United States affiliate of Schering AG Germany, which markets the product in the United States. Our pipeline comprises product candidates at various stages of clinical development, including fully human monoclonal antibodies and cancer vaccines based on PSMA (prostate specific membrane antigen) technology, which we exclusively licensed from Memorial Sloan-Kettering Cancer Center. We also conduct research in cell signaling through our AxCell Biosciences research subsidiary in Newtown, Pennsylvania.

In August 2000, we expanded our product pipeline by entering into marketing, license and supply agreements with Advanced Magnetics, Inc. for Combidex(R), which is an investigational magnetic resonance imaging (MRI) contrast agent that assists in the differentiation of metastatic from non-metastatic lymph nodes. We hold exclusive United States marketing rights to Combidex. Advanced Magnetics is continuing its discussions with the FDA relating to outstanding issues regarding an approvable letter received from the FDA dated June 2000, in an effort to bring Combidex to market.

We are integrating our expertise in molecular and cellular biology, biochemistry, bioinformatics, pharmacology and clinical development to create targeted technologies for cancer therapy and diagnosis. In this regard, we are developing product candidates based on prostate specific membrane antigen, or PSMA, which is a cell-surface protein that is abundantly expressed on prostate cancer cells at all stages of disease, including advanced or metastatic disease.

The PSMA gene was first discovered by scientists at Memorial Sloan-Kettering Cancer Center. From this technology, we have put one product on the market (ProstaScint) and are building a robust pipeline of potential products in

research and development. These pipeline products are focused primarily on novel vaccine and antibody cancer therapy, initially in the area of prostate cancer. In December 2002, the PSMA Development Company LLC, a joint venture between Cytogen and Progenics Pharmaceuticals, Inc., announced the initiation of a Phase I clinical trial for the testing of a novel therapeutic prostate cancer vaccine directed against PSMA.

PSMA is also present at high levels on the newly formed blood vessels (neovasculature) needed for the growth and survival of many types of solid tumors. If PSMA-targeted therapies can destroy or prevent formation of these new blood vessels, we believe that such therapies may prove valuable in treating a broad range of cancers.

Further research and development efforts are carried out through AxCell, which remains engaged in the research and development of novel biopharmaceutical products using its collection of proprietary signal transduction pathway information, despite significant reductions in AxCell's workforce, which we implemented in September 2002.

AxCell uses its proprietary technology as a tool to provide academic, governmental and commercial collaborators with vital information about signal transduction pathways that can be used for drug discovery and development. AxCell provides this information rapidly and efficiently, using the proprietary methods and systems that AxCell developed to identify signal transduction pathways. We have successfully leveraged our technology through collaborations with Mount Sinai School of Medicine, National Cancer Institute, Kimmel Cancer Center at Thomas Jefferson University, University of Muenster in Germany and Celgene Corporation. These collaborations increase our research resources, improve our technological strength and establish valuable development relationships with potential commercial opportunities.

The Company was incorporated in Delaware on March 3, 1980 under the name Hybridex, Inc. and changed its name to Cytogen Corporation on April 1, 1980. Our executive offices are located at 650 College Road East, Suite 3100, Princeton, New Jersey 08540 and our telephone number is 609-750-8200.

On October 25, 2002, we received approval from our stockholders at a duly called and held special meeting of stockholders to effect a reverse split of our common stock. Our Board of Directors thereafter approved a one-for-ten reverse split of our outstanding, issued and authorized shares of common stock, which became effective on October 25, 2002. All numbers set forth in this Annual Report on Form 10-K reflect the effect of such one-for-ten reverse stock split.

ProstaScint(R) and OncoScint(R) are registered United States trademarks of Cytogen Corporation. All other trade names, trademarks or servicemarks appearing in this Annual Report on Form 10-K are the property of their respective owners, and not the property of Cytogen Corporation or any of our subsidiaries. Quadramet(R) is a trademark of The Dow Chemical Company used under license by Cytogen.

We also maintain a website at http://www.cytogen.com. We provide an internet link on our website to the Securities and Exchange Commission's website where you can find documents that we file with the SEC, including our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to such reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act. Such documents are posted as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Alternatively, we will provide electronic or paper copies of our filings free of

charge upon request.

PROSTATE CANCER AND ONCOLOGY

Background

Prostate cancer is the most common type of cancer found in American men, other than skin cancer. The American Cancer Society estimates that there will be about 220,900 new cases of prostate cancer in the United States in the year 2003, and estimates that 28,900 men will die of the disease this year. Prostate cancer is the second leading cause of cancer death in men, exceeded only by lung cancer.

Although men of any age may be diagnosed with prostate cancer, it is found most often in men over 50. It is estimated that more than 70% of all prostate cancers are diagnosed in men over the age of 65. Prostate cancer is almost twice as common among African-American men as it is among caucasian American men. It is also most common in North America and northwestern Europe. It is less common in Asia, Africa, and South America.

We find encouragement in the overall vitality of the oncology market and believe future growth lies in identification of new in-licensing opportunities. While large pharmaceutical companies tend to concentrate on products with market potential larger than that of typical anticancer drugs; selected niche products which compliment our oncology focus may fit well within Cytogen's product portfolio.

We currently market the following proprietary and licensed oncology products:

Product	Description	Status	2002 Sales or Royalty Revenue ($ millions)		Future Growth
ProstaScint(R) (Capromab Pendetide)	Monoclonal antibody-based imaging agent used to image the extent and spread of prostate cancer	Developed and marketed by Cytogen in the United States	$7.92	-	Fusion imag combining P images with tomography) (magnetic r scans in a
				-	Utilization ProstaScint guide thera ("image-gui to enhance targeting f such as br cryotherapy beam radiat intensity m radiation t
Quadramet(R) (Samarium Sm-153	Skeletal targeting therapeutic	Developed by Cytogen based	$1.84	-	New clinica supporting

Lexidronam Injection)	radiopharmaceutical for the relief of bone pain in prostate and other types of cancer	upon technology licensed from Dow Chemical, marketed by Berlex Laboratories, the United States affiliate of Schering AG Germany, in the United States		-	and earlier Quadramet i cancers
				-	Novel resea combination other thera chemotherap bisphophona
				-	Establishin Quadramet a to target a primary bon
				-	Increased m sales penet radiation a oncologists
NMP22(R) BladderChek(TM) (nuclear matrix protein-22)	A point-of-care in vitro diagnostic test for bladder cancer	Developed by Matritech, Inc., marketed to urologists by Cytogen in the United States	Not material, Cytogen began introducing to physicians in November 2002	-	Food and Dr Administrat for expande aid in diag

In January 2003, we provided Draximage Inc., the radiopharmaceutical subsidiary of Draxis Health Inc., with notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with respect to both of Draximage's BrachySeedTM I-125 and BrachySeedTM Pd-103 products. Effective January 24, 2003, we no longer accept or fill new orders for the BrachySeed I-125 and BrachySeed Pd-103 products.

Technology

PSMA

Prostate specific membrane antigen, or PSMA, is a transmembrane protein that may be used as an important marker associated with prostate cancer. Memorial Sloan-Kettering Cancer Center identified PSMA using a monoclonal antibody supplied by us. A patent entitled "Prostate Specific Membrane Antigen" was issued to Sloan-Kettering Institute for Cancer Research, an affiliate of Memorial Sloan-Kettering Cancer Center, and we acquired the exclusive worldwide license covering this technology. A murine monoclonal antibody directed against PSMA is the basis of our ProstaScint imaging product. PSMA has also been found to be present in the new blood vessels formed in association with a variety of other major solid tumors. We believe that, due to the unique characteristics of this antigen, technologies utilizing PSMA can yield novel products for the treatment and diagnosis of cancer.

In 1999, we entered into a joint venture with Progenics Pharmaceuticals, Inc. to develop in vivo immunotherapeutic products utilizing PSMA. These product candidates include a therapeutic prostate cancer vaccine utilizing the PSMA gene and a vector delivery system, a recombinant form of the PSMA protein as a basis of immune stimulation, and antibody-based immunotherapies for prostate cancer.

We believe that these product candidates, if successfully developed, could play an important role in the treatment of prostate cancer. We believe there are significant unmet needs for treatment and monitoring of this disease. In addition, we intend to evaluate the utility of these therapies, as an anti-angiogenesis approach, in other cancers where PSMA is expressed in association with tumor neovasculative such as in breast, colon, lung and other cancers.

The joint venture is owned equally by Progenics Pharmaceuticals, Inc. and us. We have exclusively licensed to the joint venture certain immunotherapeutic applications of our PSMA patent rights and know-how. Progenics has funded the first $3 million of development costs of the program in addition to $2.0 million in supplemental capital contributions funded at certain dates. Beginning in December 2001, we and Progenics began sharing costs of the program. In 2002, we incurred expenses of $2.9 million relating to programs at the joint venture compared to $332,000 in 2001. The joint venture is funded by equal capital contributions from each of Progenics and Cytogen in accordance with an annual budget approved by the joint venture representatives from each such party. As of March 28, 2003, the parties are in the process of negotiating the 2003 annual budget for the joint venture and have agreed that the operating budget for 2003 will be no less than the 2002 operating expenses for the joint venture. Contract research and development services provided by Progenics to the joint venture during 2002 were in accordance with a services agreement between the parties. As of March 28, 2003, the parties are negotiating the terms of a new services agreement and believe that if mutual agreement is not achieved, the parties can successfully negotiate with outside third parties for necessary services.

We have North American marketing rights to products developed by the joint venture and a right of first negotiation with respect to marketing activities in any territory outside North America. We anticipate initiation of marketing efforts for any product developed upon approval by the FDA or requisite foreign regulatory bodies, as applicable. If approved, we anticipate marketing these products with our own sales force and will be reimbursed by the joint venture for these costs. We will split the net profit equally with Progenics for any products developed by the joint venture.

During 2001, the joint venture entered into a worldwide exclusive licensing agreement with AlphaVax Human Vaccines, Inc. to use the AlphaVax Replicon Vector (ArV(TM)) system to create a therapeutic prostate cancer vaccine incorporating the PSMA antigen. Also in 2001, the joint venture entered into a collaboration with Abgenix, Inc. to use the company's XenoMouse(TM) technology for generating fully human antibodies to PSMA. As a result of such collaboration, the joint venture successfully created human monoclonal antibodies that target PSMA.

In December 2002, the PSMA Development Company LLC announced the initiation of a Phase I clinical trial for the testing of a novel therapeutic prostate cancer vaccine directed against PSMA.

We licensed PSMA through our subsidiary, Prostagen, Inc., to Northwest Biotherapeutics, Inc., for development of ex vivo dendritic cell based immunotherapy of prostate cancer. In 2000, we executed a new sublicense agreement with Northwest Biotherapeutics Inc. clarifying their rights to make and use PSMA for ex vivo prostate cancer immunotherapy. In December 2002, we announced that we had regained our rights to ex vivo prostate cancer immunotherapy using PSMA, in connection with the termination of our agreement with Northwest Biotherapeutics, Inc. We are encouraged by efforts to date demonstrating a favorable safety and clinical response in prostate cancer patients treated using PSMA-based ex vivo immunotherapy. Based on this information, we will seek other corporate collaborations or partnerships to help us realize the clinical and commercial potential of this approach.

Independent of our joint venture, we obtained exclusive, world-wide licenses from Molecular Staging, Inc. for technology to be used in developing in vitro diagnostic tests using both PSMA and PSA. Molecular Staging's Rolling Circle Amplification Technology (RCAT(TM)) is a novel, patented process that creates new diagnostic opportunities. RCAT is a highly sensitive, quantitative and efficient amplification method that allows the user to detect the presence of target molecules in a wide array of testing formats. It offers a practical method that allows solid phase recognition and detection of target molecules either directly, on a cell or on a biochip. We have established the proof of concept of using the RCAT technology in a PSA serving assay and are investigating the optional contribution of reagents (i.e., monoclonal antibody pairs) using a similar approach for PSMA.

AxCell Biosciences

A majority of the drugs on the market today are agents that interact with cell surface receptors. Surface receptors, however, are generally associated with multiple intracellular signaling pathways and, as a result, drugs targeting these receptors are less specific to the disease, leading to reduced efficacy and/or unwanted side effects. By targeting intracellular proteins downstream from the surface receptor, a drug can more precisely initiate the desired cellular response, leading to treatments with greater efficacy and fewer side effects. Many proteins along these intracellular pathways communicate with each other through structurally and functionally defined modules called `domains' and their respective binding partners called `ligands'. The modular and well-defined nature of these domain-ligand interactions makes them ideal drug targets for developing small inhibitory molecules.

One of the historical challenges to design small molecule inhibitors for domain-ligand interactions is the fact that domains are highly homologous within each domain `family' making it difficult to develop a highly specific inhibitor for a particular interaction. Our subsidiary, AxCell, overcomes this problem through the exact determination of specificity boundaries for each domain-ligand interaction. This biochemical approach integrates parallel synthesis of peptides, protein expression and high-throughput screening methodology combined with tools of bioinformatics.

AxCell has the only high throughput platform for the systematic identification and characterization of domain-mediated intracellular pathways, which can be combined with many levels of biological information to understand how they work together in a systems biology approach. Using its proprietary technologies, AxCell has made significant technical progress over the past several years and, despite a significant reduction in its workforce, which we implemented in September 2002, is currently applying its pathway content and knowledge to accelerate the development of targeted drugs in certain therapeutic categories through both internal efforts and external research collaborations with corporate, government and academic institutions.

Marketed products

We have three actively marketed products: ProstaScint, a monoclonal antibody-based imaging agent used to image the extent and spread of prostate cancer; Quadramet, a skeletal targeting therapeutic radiopharmaceutical for relief of bone pain from cancer that has spread to the bone from the primary tumor; and NMP22 BladderChek, a point-of-care test which aids in the diagnosis of bladder cancer.

ProstaScint

Prostate cancer is the most common type of cancer found in American men, other than skin cancer. The American Cancer Society estimates that there will be about

220,900 new cases of prostate cancer in the United States in the year 2003, and that about 28,900 men will die of this disease. Prostate cancer is the second leading cause of cancer death in men, exceeded only by lung cancer. Although men of any age may be diagnosed with prostate cancer, it is found most often in men over 50. It is estimated that more than 70% of all prostate cancers are diagnosed in men over the age of 65.

ProstaScint is a diagnostic, murine-based monoclonal antibody which is linked to the radioisotope Indium-111 as an imaging agent which localizes in the body specifically targeting PSMA. ProstaScint utilizes our proprietary targeted delivery system, employing whole monoclonal antibodies, which directs Indium-111 to malignant prostate tumor sites. A radioisotope is an element which, because of nuclear instability, undergoes radioactive decay and emits radiation. We supply ProstaScint to hospitals, diagnostic imaging centers and radiopharmacies.

Due to the selective expression of PSMA, the ProstaScint imaging procedure can aid in the detection of the extent and spread of prostate cancer in the body. ProstaScint is approved for marketing in the United States in two clinical settings: as a diagnostic imaging agent in newly diagnosed patients with

biopsy-proven prostate cancer thought to be clinically localized after standard diagnostic evaluation and who are at high risk for spread of their disease to pelvic lymph nodes and for use in post-prostatectomy patients in whom there is a high suspicion that the cancer has recurred.

When deciding on an initial course of therapy for diagnosed prostate cancer, physicians must first determine the extent of disease in the patient. The accuracy of this information is vital in deciding upon an appropriate course of therapy. Prior to the availability of ProstaScint, determining whether newly diagnosed disease was limited to the prostate or had spread beyond the gland was based upon statistical inference from the biopsy appearance of the tumor and the patient's serum level of PSA. Conventional imaging methods such as CT (computed tomography) or MR (magnetic resonance) are all relatively insensitive because they rely on identifying significant changes to normal anatomic structure to indicate the presence of disease. The ProstaScint disease images are based upon expression of the PSMA molecule and, therefore, may identify disease not readily detectable with conventional procedures.

During an imaging procedure, ProstaScint is administered intravenously into the patient. The antibody in ProstaScint travels through the bloodstream and binds to specific antigens expressed by the tumors being studied. The radioactivity from the isotope that has been attached to the antibody can be detected from outside the body by a gamma camera. Gamma cameras are found in nuclear medicine departments. The image captured by the camera assists in the identification of the location of the radiolabeled pharmaceutical thus identifying the sites of tumors. Clinical studies conducted to date by physicians on our behalf indicate that ProstaScint may provide new and useful information not available from other conventional diagnostic modalities regarding the existence, location and extent of a specific disease throughout the body.

In the United States, following initial therapy, prostate cancer patients are monitored to ascertain changes in the level of serum PSA. In this setting, a rise in PSA is evidence of recurrence of the patient's prostate cancer. Knowledge of the extent and location of disease recurrence is important in choosing the most appropriate form of treatment. The National Comprehensive Cancer Network (NCCN), a consortium of leading cancer hospitals, included ProstaScint imaging as a tool in its Practice Guidelines for recurrent prostate cancer in both its 2001 and 2002 edition. Guidelines such as these are published to serve as the practice standard for the oncology community.

We believe that future growth and market penetration of ProstaScint is largely dependent upon, among other things, the implementation and continued research of new product applications, such as: (i) combining or fusing ProstaScint with CT or MR scans in a digital overlay ("fusion imaging"); and (ii) using ProstaScint scans to guide therapy ("image-guided therapy") to enhance therapy targeting, including brachytherapy, cryotherapy, and external beam radiation, such as intensity modulated radiation therapy (IMRT), an advanced and more powerful form of therapy that uses computers to focus radiation more precisely on the target.

NMP22 BladderChek

In October 2002, we entered into a five-year agreement with Matritech Inc. to be the sole distributor for Matritech's NMP22 BladderChek device to urologists and oncologists in the United States. Retention of exclusivity rights depends upon meeting certain minimum annual purchases. NMP22 BladderChek is a point-of-care antibody-based diagnostic test for bladder cancer that requires only a few drops of a patient's urine. NMP22 BladderChek returns results in thirty minutes and provides urologists with an adjunct technology to cystoscopy, a clinical procedure for the visual identification of tumors in the bladder. NMP22 BladderChek is approved for sale in the United States. During November 2002, we began promoting NMP22 BladderChek to urologists in the United States using our in-house sales force.

OncoScint CR/OV

We discontinued marketing, selling and producing OncoScint CR/OV, a monoclonal antibody diagnostic imaging agent for spread of colorectal and ovarian cancer, at the end of 2002. The market for OncoScint CR/OV for colorectal cancer diagnosis has been negatively affected by positron emission tomography, or "PET", scans. The sensitivity of the PET scan in colon cancer appears to be similar or higher than the OncoScint CR/OV scan.

Quadramet

Quadramet is a cancer therapeutic agent for the relief of pain in patients with metastatic bone lesions that image on conventional bone scan, a routinely performed nuclear medicine procedure. Quadramet consists of a radioactive isotope, Samarium-153, which emits beta radiation, and a chelating agent, EDTMP, which targets the drug to sites of new bone formation.

Once tumors have metastasized to the skeleton, they continue to grow and cause destruction of the adjacent bone. This erosion of bone stimulates new bone formation which encircles the metastatic tumor. By targeting these areas of bone formation, Quadramet delivers site-specific radiation, which may result in significant pain reduction. According to American Cancer Society and National Cancer Institute statistics, about half of all people with cancer (other than skin cancer) will have bone metastasis at some point in the course of their disease. Bone metastasis is one of the most frequent causes of cancer related pain.

Quadramet has many characteristics which we believe are advantageous for the treatment of cancer bone pain, including early onset of pain relief, lasting up to four months with a single injection; predictability of recovery from bone marrow toxicity; ease of administration; and length of pain relief. In addition, due to its pharmacokinetic properties, the radioactive plasma half-life is approximately five to six hours. Quadramet is administered as a single intravenous injection on an outpatient basis and directly targets sites of new bone formation which include those areas in the skeleton that have been invaded by metastatic tumors. Quadramet exhibits selective uptake in bone with little or no detectable accumulation in soft tissue.

We believe that the future growth and market penetration of Quadramet is largely dependent upon, among other things: (i) new clinical data supporting the expanded and earlier use of Quadramet in various cancers and in combination with other therapies, such as chemotherapy and bisphophonates; (ii) establishing the use of Quadramet at higher doses to target and treat primary bone cancers; and (iii) increased marketing and sales penetration to radiation and medical oncologists.

Current competitive treatments for severe bone cancer pain include narcotic analgesics, external beam radiation therapy, bisphosphonates, Metastron and Novantrone.

BrachySeed

In December 2000, we entered into a 10-year agreement with Draximage Inc., the radiopharmaceutical subsidiary of Draxis Health, Inc. to market and distribute Draximage's BrachySeed implants in the United States. On January 24, 2003, we provided Draximage with notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with respect to both of Draximage's BrachySeed I-125 and BrachySeed Pd-103 products. Effective January 24, 2003, we no longer accept or fill new orders for the BrachySeed I-125 and BrachySeed Pd-103 products.

Oncology Product Sales, Marketing and Distribution

ProstaScint is a technique-dependent product that requires a high degree of proficiency in nuclear imaging technology in order to correctly image and interpret the scan. We have established a network of accredited nuclear medicine imaging centers through our PIE, or Partners In Excellence Program. Each PIE site receives rigorous training and proficiency evaluations. As of December 31, 2002, there were 396 such sites qualified to perform ProstaScint imaging, including National Cancer Institute-designated Comprehensive Cancer Centers. ProstaScint may only be used at qualified PIE sites. We plan to add PIE sites on a selective basis in order to ensure that new and existing sites are adequately qualified maintaining a high level of competence. At the present time, we bear partial expense of the qualification of new sites.

The primary objective of our dedicated sales force is to promote our products to urologists, radiation oncologists and nuclear medicine physicians. Within this field force are technical specialists who assist in the training of nuclear medicine technologists and nuclear medicine physicians including the qualification process for nuclear imaging centers to perform ProstaScint imaging. We depend on our own sales force for the sale and marketing of ProstaScint and NMP22 BladderChek. The distribution of ProstaScint and NMP22 BladderChek is handled by outside contractors. We also rely on Berlex for the sale, marketing and distribution of Quadramet in the United States.

During 2000, we terminated our co-marketing arrangement with the Bard Urological Division of CR Bard Company, Inc with respect to the marketing of ProstaScint. In 1999, we reached an agreement with Bard to phase out the co-marketing agreement so that we could undertake direct marketing responsibility for the product. We took this step because of our view that a highly-trained and dedicated internal sales force would be able to market our high technology products most effectively, and to build an internal marketing capability for possible future products. The transition was completed by mid-year 2000.

In October 1998, we entered into an exclusive agreement with Berlex Laboratories, Inc. for the marketing of Quadramet, after terminating our previous marketing relationship with the radiopharmaceutical division of DuPont

Merck. Berlex re-launched Quadramet in March 1999, and maintains a sales force that targets its sales efforts on the oncological community. Pursuant to our agreement with Berlex, we are entitled to royalty payments based on net sales of the Quadramet product and milestone payments based upon sales levels achieved. We are also required to pay royalties or guaranteed contractual minimum payments, whichever is greater, and future payments upon the achievement of certain milestones, to The Dow Chemical Company, the owner of the technology upon which we developed Quadramet.

Corporate Partners, Strategic Alliances and License Agreements

Our strategy is to use alliances with other companies to increase our financial resources, reduce risk and retain an appropriate level of ownership of products currently in development. In addition, through alliances with other pharmaceutical and biotechnology companies, we may obtain funding, expand existing programs, learn of new technologies, and gain additional expertise in developing and marketing products.

Abgenix, Inc.

During 2001, the PSMA Development Company LLC, a joint venture between Cytogen and Progenics Pharmaceuticals, Inc., entered into an agreement with Abgenix, Inc. regarding the development of fully human antibodies to PSMA using Abgenix's XenoMouse technology.

Advanced Magnetics, Inc.

In August 2000, Cytogen and Advanced Magnetics, Inc. mutually terminated a previously negotiated agreement pursuant to which Cytogen was to acquire Advanced Magnetics. Instead, the two companies entered into marketing, licensing and supply agreements. Under such agreements, we acquired exclusive United States rights to two product candidates, Combidex (for all applications) and imaging agent Code 7228 (for oncology applications only). Combidex, a MRI contrast agent for the detection of lymph node metastases, received an approvable letter in June 2000 from the FDA, subject to certain conditions, following a priority review. Advanced Magnetics is continuing its discussions with the FDA relating to outstanding issues regarding such approvable letter in an effort to bring Combidex to market. At this time, Advanced Magnetics does not intend to develop Code 7228 for oncology imaging.

Under the terms of our License and Marketing Agreement with Advanced Magnetics, we issued 200,000 shares of common stock to Advanced Magnetics. Of such 200,000 shares, 25,000 are being held in escrow pending the achievement of certain milestones relating to Combidex and 25,000 are being held in escrow pending the achievement of certain milestones relating to Code 7228. The remaining 150,000 shares were transferred to Advanced Magnetics, subject to certain restrictions, such restrictions having subsequently expired.

Our License and Marketing Agreement with Advanced Magnetics will continue until August 25, 2010, and shall thereafter automatically renew for successive five year periods, unless notice of non-renewal or termination is given by us or Advanced Magnetics, 90 days prior to the commencement of any renewal period.

There can be no assurance that Advanced Magnetics will receive FDA approval to market products licensed by Cytogen.

AlphaVax

In 2001, the PSMA Development Company LLC, our joint venture with Progenics Pharmaceuticals, Inc., entered into a development and license agreement with AlphaVax to utilize their proprietary viral vector technology to deliver the

PSMA gene systemically. This agreement contains certain up-front, maintenance, milestone and royalty payments. We believe that this technology, if successfully deployed, may have important advantages in targeting immune stimulating cells in vivo which impact on the progression of cancer.

Berlex Laboratories, Inc.

In October 1998, we entered into a license agreement with Berlex Laboratories, Inc. regarding the sales, marketing and distribution of Quadramet, a radiopharmaceutical product used to provide pain relief from cancer spreading to the bone. As consideration for the rights granted, Berlex Laboratories agreed to pay us royalties based on net sales, as defined in the agreement. This agreement will expire twenty years from the date of execution or on the date of expiration of the last to expire licensed patent, whichever is later.

Elan Corporation, plc

In January 1996, we entered into a license agreement granting Elan worldwide rights to a group of peptides and associated technology for orally administered drugs that are transported across the gastrointestinal epithelium, as well as rights to other orally delivered drugs derived from related research programs. Elan is responsible for the further development and commercialization of this technology. We are entitled to royalties from sales of any product developed and commercialized based on this technology.

Matritech

In October 2002, we entered into a five-year agreement with Matritech Inc. to be the sole distributor for Matritech's NMP22 BladderChek test to urologists and oncologists in the United States. Retention of exclusivity rights depends upon meeting certain minimum annual purchases. NMP22 BladderChek is a point-of-care antibody test for bladder cancer detection that requires only a few drops of a patient's urine. NMP22 BladderChek returns results in thirty minutes and provides urologists with an adjunct technology to cystoscopy, a clinical procedure for the visual identification of tumors in the bladder. NMP22 BladderChek is approved for sale in the United States. During November 2002, we began promoting NMP22 BladderChek to urologists in the United States using our in-house sales force.

Memorial Sloan-Kettering Cancer Center

In 1993, we began a development program with Memorial Sloan-Kettering Cancer Center involving PSMA and our proprietary monoclonal antibody. In November 1996, we exercised an option for, and obtained, an exclusive worldwide license to this technology.

Northwest Biotherapeutics, Inc.

We licensed PSMA through our subsidiary, Prostagen, Inc., to Northwest Biotherapeutics, Inc., for development of in vitro dendritic cell based immunotherapy of prostate cancer. Prostagen also licensed exclusive PSMA manufacturing rights for immunotherapy to Northwest Clinicals, LLC, a corporation formed and co-owned by Northwest Biotherapeutics and Prostagen. Such manufacturing rights license agreement with Northwest Clinicals, LLC was terminated and the manufacturing rights thereunder returned to Cytogen. In 2000, we executed a new sublicense agreement with Northwest Biotherapeutics Inc. clarifying their rights to make and use PSMA for ex vivo prostate cancer immunotherapy. In December 2002, we announced that we had regained our rights to ex vivo prostate cancer immunotherapy using PSMA, in connection with the

termination of our agreement with Northwest Biotherapeutics, Inc.

Progenics Pharmaceuticals, Inc.

In 1999, we entered into a joint venture with Progenics Pharmaceuticals, Inc. to develop products utilizing our PSMA technology. The products currently under development include, among others, a therapeutic prostate cancer vaccine utilizing a PSMA protein/adjuvant approach. In December 2002, the joint venture announced the initiation of a Phase I clinical trial for the testing of a novel therapeutic prostate cancer vaccine directed against PSMA. We are also developing through this joint venture, antibody-based immunotherapies for prostate cancer. We believe that these drugs, if successfully developed, could play an important role in the treatment of advanced prostate cancer and other cancers where PSMA is expressed, such as in breast, colon lung and other cancers.

The Dow Chemical Company

In March 1993, we obtained an exclusive license from The Dow Chemical Company to North American rights to use Quadramet as a therapeutic radiopharmaceutical for metabolic bone disease or tumor regression for cancer caused by metastatic or primary cancer in bone in humans, and for the treatment of disease characterized by osteoblastic response in humans. In November 1998, Dow also extended our exclusive rights for use of Quadramet in treating advanced rheumatoid arthritis to Europe, Japan and other countries in addition to North America.

Draxis Health, Inc.

In December 2000, we entered into a 10-year agreement with Draximage Inc., the radiopharmaceutical subsidiary of Draxis Health, Inc. to market and distribute Draximage's BrachySeed implants in the United States. On January 24, 2003, we provided Draximage with notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with respect to both of Draximage's BrachySeed I-125 and BrachySeed Pd-103 products. Effective January 24, 2003, we no longer accept or fill new orders for the BrachySeed I-125 and BrachySeed Pd-103 products.

PRODUCT CONTRIBUTION TO REVENUES

ProstaScint and Quadramet account for, and prior to its discontinuation in January 2003, BrachySeed accounted for, a significant percentage of our total revenues. For the years ended December 31, 2002, 2001 and 2000, revenues related to ProstaScint accounted for approximately 61%, 65% and 66%, respectively, of our total revenues; revenues related to Quadramet accounted for approximately 14%, 18% and 19%, respectively, of our total revenues; and revenues related to BrachySeed accounted for approximately 19% of our total revenues during the year ended December 31, 2002 and 7% of our total revenues during the year ended December 31, 2001.

On January 24, 2003, we provided Draximage with notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with respect to both of Draximage's BrachySeed I-125 and BrachySeed Pd-103 products.

RESEARCH AND DEVELOPMENT

Our research and development expenditures include our share of the costs incurred to develop PSMA through our joint venture with Progenics Pharmaceuticals, payments we made to customer sponsored research programs,

payments to DSM Biologics for the development of a new manufacturing process for ProstaScint and the cost to develop the signal transduction pathway research program at AxCell. Our expenses for research and development activities were:

- 2002 -- $ 10.5 million
- 2001 -- $ 10.4 million
- 2000 -- $ 7.0 million

We intend to pursue research and development activities having commercial potential and to review all of our programs to determine whether possible market opportunities, near and longer term, provide an adequate return to justify the commitment of human and economic resources to their initiation or continuation. During 2002, we incurred $551,000 of expenses for the DSM development program, $3.6 million for the signal transduction pathway program at AxCell and a stock-based milestone payment of $2.0 million related to the progress of the dendritic cell prostate cancer clinical trials at Northwest. In addition to the $7.6 million of research and development expense incurred during 2002, we recognized $2.9 million of expenses related to our share of the losses from our joint venture with Progenics. The joint venture is funded by equal capital contributions from each of Progenics and Cytogen in accordance with an annual budget approved by the joint venture representatives from each such party. As of March 28, 2003, the parties are in the process of negotiating the 2003 annual budget for the joint venture and have agreed that the operating budget for 2003 will be no less than the 2002 operating expenses for the joint venture. Contract research and development services provided by Progenics to the joint venture during 2002 were in accordance with a services agreement between the parties. As of March 28, 2003, the parties are negotiating the terms of a new services agreement and believe that if mutual agreement is not achieved, the parties can successfully negotiate with outside third parties for necessary services.

COMPETITION

The biotechnology and pharmaceutical industries are subject to intense competition, including competition from large pharmaceutical companies, biotechnology companies and other companies, universities and research institutions. Our existing therapeutic products compete with the products of a wide variety of other firms, including firms that provide products used in more traditional treatments or therapies, such as external beam radiation, chemotherapy agents and narcotic analgesics. In addition, our existing and potential competitors may be able to develop technologies that are as effective as, or more effective than those offered by us, which would render our products noncompetitive or obsolete. Moreover, many of our existing and potential competitors have substantially greater financial, marketing, sales, manufacturing, distribution and technological resources than we do. Our existing and potential competitors may be in the process of seeking FDA or foreign regulatory approval for their respective products or may also enjoy substantial advantages over us in terms of research and development expertise, experience in conducting clinical trials, experience in regulatory matters, manufacturing efficiency, name recognition, sales and marketing expertise and distribution channels. We believe that competition for our products is based upon several factors, including product efficacy, safety, cost-effectiveness, ease of use, availability, price, patent position and effective product promotion.

We expect competition to intensify in the fields in which we are involved, as technical advances in such fields are made and become more widely known. We cannot assure you, however, that we or our collaborative partners will be able to develop our products successfully or that we will obtain patents to provide protection against competitors. Moreover, we cannot assure you that our

competitors will not succeed in developing therapeutic products that circumvent our products or that these competitors will not succeed in developing technologies or products that are more effective than those developed by us. In addition, many of these companies may have more experience in establishing third-party reimbursement for their products. Accordingly, we cannot assure you that we will be able to compete effectively against existing or potential competitors or that competition will not have a material adverse effect on our business, financial condition and results of operations.

The market for therapeutic and diagnostic products that address prostate and bladder cancer is large. Our most significant competitors are major pharmaceutical companies, radiopharmaceutical distributors and biotechnology companies. There is one marketed product that competes with our ProstaScint product, which is 18-F fluorodeoxyglucose-PET (FDG), a Positron Emission Tomography (PET) imaging agent which is produced and distributed by various radiopharmaceutical suppliers, such as PETnet and Syncor International Corporation (now Cardinal Health Nuclear Pharmacy Services). We also face competition in the diagnostic bladder cancer market from Polymedco which produces BTAstat(R), a competitive product to NMP22 BladderChek, which we have licensed from Matritech. Matritech has retained rights to market and may market the point-of-care NMP22 BladderChek test directly to physicians other than urologists and oncologists, such as primary care physicians.

Additionally, we face competition in the development of PSMA-related technology and products primarily from Millenium Pharmaceuticals, Inc. and Medarex, Inc.

These competitors, many of which have substantially greater resources than ours, operate large, well-funded cancer research and development programs, and have significant expertise in manufacturing, testing, regulatory matters and marketing.

MANUFACTURING

Our products must be manufactured in compliance with regulatory requirements and at commercially acceptable costs. ProstaScint was manufactured at a current good manufacturing practices, or cGMP, compliant manufacturing facility in Princeton, New Jersey which is operated by Laureate Pharma L.P. (formerly Bard BioPharma L.P.). An Establishment License Application for the facility was approved by the FDA for the manufacture of ProstaScint in October 1996. Our manufacturing agreement with Laureate expired in January 2002. In July 2000, we entered into a Development and Manufacturing Agreement with DSM Biologics Company B.V., pursuant to which DSM conducted certain development activities with respect to ProstaScint for testing and evaluation purposes. Our intention was that DSM would replace the arrangement with Laureate, with respect to the manufacture of ProstaScint.

In January 2003, we entered into a new Contract Manufacturing and Supply Agreement with Laureate Pharma L.P., pursuant to which Laureate will manufacture, and supply us with, ProstaScint, through December 31, 2003. Notwithstanding the terms of such contract, we cannot be certain that Laureate will satisfactorily perform its obligations thereunder or that Laureate will be able to supply ProstaScint to us on commercially satisfactory terms, if at all. Our failure to procure a sufficient supply of ProstaScint will have a material

adverse effect on our business, financial condition and results of operations. As of December 31, 2002 we had a sufficient level of ProstaScint, inventory on hand for ten months.

Our manufacturing arrangement with Laureate is subject to FDA oversight. Any failure of Laureate to comply with FDA requirements will have a material adverse

effect on our business, financial condition and results of operations.

Quadramet is manufactured by Bristol-Myers Squibb (BMS) (formerly DuPont), pursuant to an agreement with both Berlex and Cytogen.

Raw materials and suppliers

The active raw materials used for the manufacture of our ProstaScint product include antibodies. We intend that the raw materials needed for our ProstaScint product will be supplied by Laureate Pharma L.P., the same contract manufacturer that we intend will make ProstaScint.

With respect to some components of Quadramet, particularly Samarium153 and EDTMP, such raw materials are provided to BMS by outside suppliers. BMS obtains its requirements for Samarium153 from one supplier. Alternative sources for these components may not be readily available. If BMS cannot obtain sufficient quantities of these components on commercially reasonable terms, or in a timely manner, it would be unable to manufacture Quadramet on a timely and cost-effective basis, which could have a material adverse effect on our business, financial condition and results of operations.

On January 24, 2003, we provided Draximage with notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with respect to both of Draximage's BrachySeed I-125 and BrachySeed Pd-103 products.

Pursuant to the terms of our distribution agreement with Matritech, we rely on Matritech as the sole supplier of NMP22 BladderChek. Matritech uses independent contractors to manufacture the product. If Matritech fails to, or is unable to provide the product, we could experience a material adverse effect on our business, financial condition and results of operations.

PATENTS AND PROPRIETARY RIGHTS

We believe that our success depends in part on our ability to protect our products and technology through patents and trade secrets. Accordingly, our policy is to pursue a vigorous program of securing and maintaining patent and trade secret protection to preserve our right to exploit the results of our research and development activities and, to the extent it may be necessary or advisable, to exclude others from appropriating our proprietary technology.

We aggressively protect our proprietary technology by selectively seeking patent protection in a worldwide program. In addition to the United States, we file patent applications in Canada, major European countries, Japan and additional foreign countries on a selective basis to protect inventions important to the development of our business. We believe that the countries in which we have obtained and are seeking patent coverage for our proprietary technology represent the major focus of the pharmaceutical industry in which we and certain of our licensees will market our respective products. We also rely on trade secrets, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our proprietary position.

As of December 31, 2002, we owned or licensed over 40 United States patents and additional pending United States patent applications, and over 45 corresponding issued foreign patents and additional corresponding pending foreign patent applications.

The issued patents owned or exclusively licensed by us cover various aspects of our technology and therapeutic products and the methods for their production and use, including various aspects of ProstaScint, Quadramet, and NMP22 BladderChek. We have obtained a patent term extension on U.S. 5,162,504, the patent directed to ProstaScint to October 28, 2010. In addition, there is a patent term

extension on U.S. 4,898,724, the patent directed to Quadramet to March 28, 2011.

We have entered into several license agreements under which we are exclusively licensed to certain patents and patent applications. In particular, we acquired an exclusive license from Memorial Sloan-Kettering Institute for certain patents and patent applications covering PSMA. We are also the exclusive licensee of certain United States patents and applications owned by DOW covering Quadramet.

We both co-own with and are the exclusive licensee of the University of North Carolina at Chapel Hill of certain patents and pending applications, covering aspects of proteomics technology, including our phage display.

We also currently own or are licensed under the following trademarks and servicemarks: ProstaScint(R); Quadramet(R); NMP22(R) BladderChek(TM); and Combidex(R).

We also rely upon, and intend to continue to rely upon, trade secrets, unpatented proprietary know-how and continuing technological innovation to develop and maintain our competitive position. It is our policy to require our employees, consultants, licensees, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees, the agreements provide that all inventions conceived by the individual shall be our exclusive property. There can be no assurance, however, that these agreements will provide meaningful protection or adequate remedies for the our trade secrets in the event of unauthorized use or disclosure of such information.

We believe that our valuable proprietary information is protected to the fullest extent practicable; however, we cannot assure you that:

- additional patents will be issued to us in any or all appropriate jurisdictions;

- litigation will not be commenced seeking to challenge our patent protection or that challenges will not be successful;

- our processes or products do not or will not infringe upon the patents of third parties; or

- the scope of patents issued will successfully prevent third parties from developing similar and competitive products.

The technology applicable to our products is developing rapidly. A substantial number of patents have been issued to other biotechnology companies. In addition, competitors have filed applications for, or have been issued, patents and may obtain additional patents and proprietary rights relating to products or processes that are competitive with ours. In addition, others may have filed patent applications and may have been issued patents to products and to technologies potentially useful to us or necessary to commercialize our products or to achieve our business goals. We cannot assure you that we will be able to obtain licenses of patents on acceptable terms.

We cannot predict how any patent litigation will affect our efforts to develop, manufacture or market our products.

We are defendants in litigation filed against us in the United States Federal

Court for the District of New Jersey with respect to claims that our ProstaScint product infringes a third-party patent and we have disclosed certain information regarding such lawsuit under the caption "Legal Proceedings", herein.

GOVERNMENT REGULATION AND PRODUCT TESTING

The development, manufacture and sale of medical products utilizing our technology are governed by a variety of federal, state and local statutes and regulations in the United States and by comparable laws and agency regulations in most foreign countries. Our three actively marketed products consist of a biologic (ProstaScint), a drug (Quadramet, a therapeutic radiopharmaceutical) and a Premarket Approval ("PMA") device (NMP22(R) BladderChek(TM)). Future applications for these may include expanded indications and could result in additional drugs, biologics, PMA devices or combination products. Our product development pipeline contains various other products, the majority of which will likely be classified as new drugs or biologics.

In the United States, medical products that we currently market or intend to develop are regulated by the Federal Food, Drug, and Cosmetic Act ("FDC Act") and the Public Health Service Act, and by the Food and Drug Administration (the "FDA") rules and regulations promulgated thereunder. These laws and regulations require, among other things, carefully controlled research and preclinical and clinical testing of products, government notification, review and/or approval prior to investigating or marketing the product, inspection and/or licensing of manufacturing and production facilities, adherence to current Good Manufacturing

Practices ("cGMP"), and compliance with products specifications, reporting, advertising, promotion, export, packaging, labeling and other applicable regulations.

The FDC Act requires that our products be manufactured in FDA registered facilities subject to inspection. The manufacturer must be in compliance with cGMP which imposes certain procedural and documentation requirements upon us and our manufacturing partners with respect to manufacturing and quality control activities. To ensure full technical compliance with such regulations, a manufacturer must spend funds, time and effort in the areas of production and quality control. Noncompliance with cGMP can result in, among other things, fines, injunctions, civil penalties, recalls or seizures of products, total or partial suspension of production, failure of the government to grant approval for marketing, withdrawal, suspension or revocation of marketing approvals and criminal prosecution. Any failure by us or our manufacturing partners to comply with the requirements of cGMP could have a material adverse effect on our business, financial condition and results of operations.

FDA approval of our proposed products, including a review of the manufacturing processes and facilities used to produce such products, will be required before such products may be marketed in the United States. The process required by the FDA before drug, biological or PMA device products may be approved for marketing in the United States generally involves (i) preclinical laboratory and animal tests under the FDA's good laboratory practice regulations, (ii) submission to the FDA of an Investigational New Drug Application ("IND") (for a drug or biologic) or Investigational Device Exemption ("IDE") (for a device), which must become effective before clinical trials may begin, (iii) human clinical trial(s) to establish the safety and efficacy of the product for its intended indication, (iv) submission to the FDA of a marketing application (New Drug Application ("NDA") for drug, Biologics License Application ("BLA") for biologic and PMA for device) and (v) FDA review of the marketing application in order to determine, among other things, whether, for a new drug or device, the product is safe and effective for its intended uses, or whether, for a biological product, the product is safe, pure and potent and the facility in which it is manufactured,

processed, packed or held meets standards designed to assure the product's continued safety, purity, and potency. Radiopharmaceutical drugs and biologics are subject to additional requirements pertaining to the description and support of their indications for use, and the evaluation of product effectiveness and safety, including radiation safety. There is no assurance that the FDA review of marketing applications will result in product approval on a timely basis, or at all.

Clinical trials for drugs and biologics typically are performed in three phases to evaluate the safety and efficacy of the product. In Phase I, a product is tested in a small number of patients primarily for safety at one or more dosages. Phase II evaluates, in addition to safety, the efficacy of the product against particular diseases in a patient population that is generally somewhat larger than Phase I. Clinical trials of certain diagnostic and cancer therapeutic agents may combine Phase I and Phase II into a single Phase I/II study. In Phase III, the product is evaluated in a larger patient population sufficient to generate data to support a claim of safety and efficacy within the meaning of the FDC Act. Permission by the FDA must be obtained before clinical testing can be initiated within the United States. This permission is obtained by submission of an IND application which typically includes, among other things, the results of in vitro and non-clinical testing and any previous human testing done elsewhere. The FDA has 30 days to review the information submitted and makes a final decision whether to permit clinical testing with the drug or biologic. However, this process can take longer if the FDA raises questions or asks for additional information regarding the Investigational New Drug application.

There can be no assurance that submission of an IND or IDE will result in the ability to commence clinical trials. In addition, FDA may place a clinical trial on hold or terminate it if, among other reasons, it concludes that clinical subjects are being exposed to an unacceptable health risk. After completion of in vitro, non-clinical and clinical testing, authorization to market a drug, biologic or device must be granted by FDA. The FDA grants permission to market through the review and approval of either an NDA, BLA or PMA.

An NDA is an application to the FDA to market a new drug. A BLA is an application to the FDA to market a biological product. An NDA or BLA, depending on the submission, must contain, among other things, information on chemistry, manufacturing controls and potency and purity; nonclinical pharmacology and toxicology; human pharmacokinetics and bioavailability and clinical data. The new drug or biologic may not be marketed in the United States until the FDA has approved the NDA or BLA. In addition, for both NDAs and BLAs, the application will not be approved until the FDA conducts a manufacturing inspection and approves the applicable manufacturing process for the drug or biologic. A PMA is an application to the FDA to market certain medical devices, which must be approved in order for the product to be marketed. It must be supported by valid scientific evidence, which typically includes extensive data, including pre-clinical data and clinical data from well-controlled or partially controlled clinical trials, to demonstrate the safety and effectiveness of the device. Product and manufacturing and controls specification and information must also be provided.

Both the studies and the preparation and prosecution of these applications in front of the FDA are expensive and time consuming, and each may take several years to complete. Difficulties or unanticipated costs may be encountered by us or our licensees in their respective efforts to secure necessary governmental approval or licenses, which could delay or preclude us or our licensees from marketing their products. There can be no assurance that approvals of our proposed products, processes or facilities will be granted on a timely basis, or at all. Limited indications for use or other conditions could also be placed on

any approvals that could restrict the commercial applications of products. With respect to patented products or technologies, delays imposed by the government approval process may materially reduce the period during which we will have the exclusive right to exploit them, because patent protection lasts only for a limited time, beginning on the date the patent is first granted in the case of United States patent applications filed prior to June 6, 1995, and when the patent application is first filed in the case of patent applications filed in the United States after June 6, 1995, and applications filed in the European Economic Community. We intend to seek to maximize the useful life of our patents under the Patent Term Restoration Act of 1984 in the United States and under similar laws if available in other countries.

Certain of our future products may be regulated by FDA as combination products. Combination products are products comprised of a combination of two or more different types of components, e.g., drug/device, device/biologic, drug/device/biologic, or are comprised of two or more separate different types of products packaged together for use, or two or more different types of products packaged separately but labeled for use in combination with one another. The regulation of a combination product is determined by the product's primary mode of action; for example, a combination drug/device that has a primary mode of action as a drug would be regulated by the Center for Drugs under a new drug application. In some cases, however, consultative reviews and/or separate approvals by each agency Center with jurisdiction over a component may be required. The product designation, approval pathway, and submission requirements for a combination product may be difficult to predict, and the approval process may be fraught with unanticipated delays and difficulties. In addition, post-approval requirements may be more extensive than for single entity products. Even if products such as ProstaScint or Quadramet that we intend to develop for use with other separately regulated products are not regulated as combination products, they may be subject to similar multi-Center consultative reviews and additional post-market requirements.

Once a product is approved by the FDA, we are required to maintain approval status of the product by providing certain updated safety and efficacy information at specified intervals. Product changes as well as any change in a manufacturing process or equipment that has a substantial potential to adversely affect the safety or effectiveness of the product for a drug or biologic, or, for a device, the use of a different facility for manufacturing where such change affects safety and effectiveness, would necessitate additional FDA review and approval. Post approval changes in labeling, packaging or promotional materials may also necessitate further FDA review and approval. Additionally, we are required to meet other requirements specified by the FDA Act including but not limited to cGMPs, enforced by periodic inspections, adverse event reporting, requirements governing labeling and promotional materials, and the maintenance of records. Failure to comply with these requirements or the occurrence of unanticipated safety effects from the products during commercial marketing, could lead to the need for product marketing restriction, product withdrawal or recall, or other voluntary or FDA-initiated action, which could delay further marketing until the products are brought into compliance. Similar laws and regulations apply in most foreign countries where these products may be marketed.

Violations of the FDC Act, Public Health Service Act, or regulatory requirements at any time during the product development process, approval process, or after approval may result in agency enforcement actions, including voluntary or mandatory recall, license suspension or revocation, premarket approval withdrawal, seizure of products, fines, injunction and/or civil or criminal penalties. Any agency enforcement action could have a material adverse effect on us.

Orphan Drug Act

The Orphan Drug Act is intended to provide incentives to manufacturers to develop and market drugs and biologics for rare diseases or conditions affecting fewer than 200,000 persons in the United States at the time of application for orphan drug designation. A drug that receives orphan drug designation and is the first product to receive FDA marketing approval for a particular indication is entitled to orphan drug status, which confers a seven-year exclusive marketing period in the United States for that indication. Clinical testing requirements for orphan drugs are the same as those for products that have not received orphan drug designation but manufacturers may receive grants or tax credits for research, as well as protocol assistance. Under the Orphan Drug Act, the FDA cannot approve any application by another party to market an identical product for treatment of an identical indication unless the holder consents, the party has a license from the holder of orphan drug status, or the holder of orphan drug status is unable to assure an adequate supply of the drug. However, a drug that is considered by FDA to be different from a particular orphan drug is not

barred from sale in the United States during the seven-year exclusive marketing period even if it receives marketing approval for the same product claim. In addition, holders of orphan drug status must notify FDA of any decision to discontinue active pursuit of drug approval or biologics license, or, if such approval or license is in effect, notify FDA at least one year prior to any discontinuance of product production.

Fraud and Abuse

We are subject to various federal and state laws pertaining to health care fraud and abuse, including anti-kickback laws and physician self-referral laws. Violations of these laws are punishable by criminal and/or civil sanctions, including, in some instances, imprisonment and exclusion from participation in federal and state health care programs, including Medicare, Medicaid and VA health programs. Because of the far-reaching nature of these laws, there can be no assurance that the occurrence of one or more violations of these laws would not result in a material adverse effect on our financial condition and results of operations.

Anti-Kickback Laws. Our operations are subject to federal and state anti-kickback laws. Certain provisions of the Social Security Act, that are commonly known collectively as the Medicare Fraud and Abuse Statute, prohibit entities, such as us, from knowingly and willingly offering, paying, soliciting or receiving any form of remuneration in return for the referral of items or services reimbursable by any federal health care program, or in return for the recommendation, arrangement, purchase, lease or order of items or services that are covered by federal health care programs. Violation of the Medicare Fraud and Abuse Statute is a felony, punishable by fines up to $25,000 per violation and imprisonment for up to five years or both. In addition, the Department of Health and Human Services may impose civil penalties of up to $50,000 per act and up to three times the remuneration offered and exclude violators from participation in Medicare or state health programs. Many states have adopted similar prohibitions against payments intended to induce referrals to Medicaid and other third party payor patients.

Physician Self-Referral Laws. We are also subject to federal and state physician self-referral laws. Federal physician self-referral legislation (known as the Stark law) prohibits, subject to certain exceptions, a physician from referring Medicare or Medicaid patients to an entity providing "designated health services including, among other things, certain radiology and radiation therapy services, and clinical laboratory services" in which the physician or a member of his immediate family has an ownership or investment interest, or with which the physician has entered into a compensation arrangement. The Stark law also prohibits the entity receiving the referral from billing any good or service

furnished pursuant to an unlawful referral. The penalties for violations include a prohibition on payment by these government programs and civil penalties of as much as $15,000 for each violative referral and $100,000 for participation in a circumvention scheme." Various state laws also contain similar provisions and penalties.

False Claims Laws. Under separate statutes, submission of claims for payment that are false or fraudulent may lead to civil money penalties, criminal fines and imprisonment, and/or exclusion from participation in Medicare, Medicaid and other federally funded state health programs. These false claims statutes include the Federal False Claims Act, which allows any person to bring suit alleging false or fraudulent Medicare or Medicaid claims or other violations of the statute and to share in any amounts paid by the entity to the government in fines or settlement. Such suits, known as qui tam actions, have increased significantly in recent years causing greater numbers of health care companies to have to defend a false claim action, pay fines or be excluded from the Medicare, Medicaid or other federal or state health care programs as a result of any investigation arising out of such action.

Other regulations

In addition to regulations enforced by FDA, and federal and state laws pertaining to health care fraud and abuse, we are also subject to regulation under the state and local authorities and other federal statutes and agencies including the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act and the Nuclear Regulatory Commission.

Foreign regulatory approval

The regulatory approval process in Europe has changed over the past few years. There are two regulatory approval processes in Europe for products developed by us. Beginning in 1995, the centralized procedure became mandatory for all biotechnology products. Under this regulatory scheme, the application is reviewed by two scientific project leaders referred to as the rapporteur and co-rapporteur, respectively. Their roles are to prepare assessment reports of safety and efficacy and for recommending the approval for full European Union marketing.

The second regulatory scheme, referred to as the Mutual Recognition Procedure, is a process whereby a product's national registration in one member state within the European Union may be "mutually recognized" by other member states within the European Union.

Substantial requirements, comparable in many respects to those imposed under the Food Drug and Cosmetic Act, will have to be met before commercial sale is permissible in most countries. There can be no assurance, however, as to whether or when governmental approvals, other than those already obtained, will be obtained or as to the terms or scope of those approvals.

HEALTH CARE REIMBURSEMENT

Our business, financial condition and results of operations will continue to be affected by the efforts of governments and third-party payors to contain or reduce the costs of healthcare through various means. There have been, and we expect that there will continue to be, federal and state proposals to implement government control of pricing and profitability of therapeutic and diagnostic imaging agents. The Centers for Medicare and Medicaid Services (CMS) have introduced significant changes in product descriptors, codes and reimbursement values. Although it is not possible to predict or identify all of the risks

relating to such changes, we believe that such risks include, but are not limited to: (i) increasing price pressures (including those imposed by rules and practices of managed care groups and institutional and governmental purchasers); and (ii) judicial decisions and government laws related to Medicare, Medicaid, healthcare reform, radiopharmaceutical, pharmaceutical and device reimbursement, and price in general. In addition, an increasing emphasis on managed care has and will continue to increase the pressure on pricing of these products. While we cannot predict whether legislative or regulatory proposals will be adopted or the effects proposals or managed care efforts may have on our business, the announcement of proposals and the adoption of proposals or efforts could have a material adverse effect on our business, financial condition and results of operations. Further, to the extent proposals or efforts have a material adverse effect on other companies that are our prospective corporate partners, our ability to establish strategic alliances may be materially and adversely affected. In certain foreign markets, the pricing and profitability of our products generally are subject to government controls.

Sales of our products depend in part on the availability of reimbursement to the consumer from third-party payors, including Medicare, Medicaid, and private health insurance plans. Third-party payors are increasingly challenging the reimbursement values of medical products and services. To the extent we succeed in bringing products to market, we cannot assure you that these products will be considered cost-effective and that reimbursement to consumers will be available or sufficient to allow us to sell our products on a competitive basis. Reimbursement by a third-party payor may depend on a number of factors, including the payor's determination that our products are clinically useful and cost-effective, medically necessary and not experimental or investigational. Since reimbursement approval is required from each payor individually, seeking approvals can be a time consuming and costly process which could require us to provide supporting scientific, clinical and cost-effectiveness data for the use of our products to each payor separately. If we or our collaborators are unable to secure adequate third party reimbursement for our products, there would be material adverse effect on its business, financial condition and results of operations.

CUSTOMERS

During the year ended December 31, 2002, we received 55% of our total revenues from four customers, as follows: 16% from Berlex Laboratories, 18% from Mallinckrodt Medical, Inc., 12% from Medi-Physics and 9% from Syncor International Corporation (now Cardinal Health Nuclear Pharmacy Services).

EMPLOYEES

As of March 1, 2003, we employed 49 persons, 48 of whom are employed full-time and 1 of whom is employed part-time. Of such 49 persons, 6 were employed in our subsidiary, AxCell, 2 in regulatory, 5 in clinical activities, 12 in administration and management, and 24 in marketing and sales. The employees in marketing and sales included 6 Regional Oncology Specialists and 12 Regional and Territory Managers. We believe that we have been successful in attracting skilled and experienced employees. None of our employees is covered by a collective bargaining agreement. All of our employees have executed confidentiality agreements. We consider relations with our employees to be excellent.

ADDITIONAL FACTORS THAT MAY AFFECT FUTURE RESULTS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risks and uncertainties described below together with the other information included or incorporated by reference in

this Annual Report on Form 10-K in your decision as to whether to invest in our common stock. If any of the following risks or uncertainties actually occur, our business, financial condition and operating results could be significantly and adversely affected. If that happens, the price of our common stock could decline, and you could lose all or part of your investment.

We Have a History of Operating Losses and an Accumulated Deficit and Expect To Incur Losses in the Future.

We have a history of operating losses since our inception. We had a net loss of $15.7 million for the year ended December 31, 2002 and had a net loss of $12.1 million for the year ended December 31, 2001. The loss for the year ended December 31, 2002 included: (i) a $2.9 million charge for our share of development costs at the PSMA Development Company LLC, a joint venture with Progenics for the development of in vivo immunotherapies utilizing the prostate specific membrane antigen, or PSMA; (ii) a non-cash charge of $1.7 million to write-off the carrying value of the licensing fees associated with BrachySeed I-125 and BrachySeed Pd-103; (iii) a non-cash milestone payment of $2.0 million related to the progress of ex vivo dendritic cell prostate cancer clinical trials at Northwest Biotherapeutics, Inc.; (iv) a non-cash charge of $516,000 resulting from an other than temporary decline in the fair value of an investment in Northwest Biotherapeutics, Inc. common stock; and (v) a charge of $869,000 related to the restructuring of our AxCell Biosciences subsidiary in September 2002. Beginning in December 2001, we began to equally share the costs of the PSMA Development Company LLC and we expect to incur significant and increasing costs in the future to fund our share of the joint venture. We had a net loss of $27.3 million for the year ended December 31, 2000 which included one-time, non-cash charges of $13.1 million for the acquisition of product candidate rights and $4.3 million for the cumulative effect of an accounting change following the adoption of Securities and Exchange Commission Staff Accounting Bulletin No. 101. We had an accumulated deficit of $356.4 million as of December 31, 2002.

In order to develop and commercialize our technologies, particularly our prostate specific membrane antigen, or PSMA, technology, and expand our oncology products, we expect to incur significant increases in our expenses over the next several years. As a result, we will need to generate significant additional revenue to become profitable.

Our ability to generate and sustain significant additional revenues or achieve profitability will depend upon the factors discussed elsewhere in this "Additional Factors That May Affect Future Results" Section, as well as numerous other factors outside of our control, including:

- development of competing products that are more effective or less costly than ours;

- our ability to develop and commercialize our own products and technologies; and

- our ability to achieve increased sales for our existing products and sales for any new products.

As a result, we may never be able to generate or sustain significant additional revenue or achieve profitability.

We Are Heavily Dependent On Market Acceptance Of ProstaScint and Quadramet For Near-Term Revenues.

We expect ProstaScint and Quadramet to account for a significant percentage of our product-related revenues in the near future. For the year ended December 31, 2002, revenues from ProstaScint and Quadramet accounted for approximately 78% of

our product related revenues. In 2002, our product-related revenue included revenue from BrachySeed, which accounted for 20% of our product related revenue. In January 2003, we served notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with Draximage with respect to both the BrachySeed I-125 and BrachySeed Pd-103 products. As a result, effective January 24, 2003, we no longer accept or fill new orders for the BrachySeed products.

Because our marketed products contribute the majority of our product-related revenues, our business, financial condition and results of operations depend on their acceptance as safe, effective and cost-efficient alternatives to other available treatment and diagnostic protocols by the medical community, including:

- health care providers, such as hospitals and physicians; and

- third-party payors, including Medicare, Medicaid, private insurance carriers and health maintenance organizations.

Our customers, including technologists and physicians, must successfully complete our Partners in Excellence Program, or PIE Program, a proprietary training program designed to promote the correct acquisition and interpretation of ProstaScint images. This product is technique dependent and requires a learning commitment on the part of users. We cannot assure you that additional technologists and physicians will make this commitment or otherwise accept this product as part of their treatment practices.

Berlex Laboratories, Inc. markets Quadramet in the United States through an agreement with us entered into in October 1998. We cannot assure you that Berlex will be able to successfully market Quadramet or that this agreement will result in significant revenues for us in the future.

We cannot assure you that ProstaScint or Quadramet will achieve additional market acceptance on a timely basis, or at all. If ProstaScint or Quadramet do not achieve broader market acceptance, we may not be able to generate sufficient revenue to become profitable.

The Reduced Workforce At AxCell May Not Be Able To Implement AxCell's Business Plan.

In September 2002, we implemented the restructuring of our subsidiary, AxCell Biosciences Corporation, in an effort to reduce expenses and position Cytogen for stronger long-term growth in oncology. As a result, we reduced our staff at AxCell by seventy-five percent, suspended certain projects at AxCell and implemented other cost-saving measures.

The technologies under development at AxCell are complex and remain commercially unproven. Even if we are able to develop and commercialize a product through AxCell, there are a limited number of pharmaceutical companies and biotechnology companies that are potential customers for such technology or product.

Although we believe that we have retained the AxCell personnel who are key to achieving AxCell's goals and implementing its strategies, we cannot be certain that such reduced workforce will be able to implement AxCell's current business plan. The further loss of any of AxCell's personnel could have a material adverse effect on AxCell's ability to achieve its goals.

We May Need To Raise Additional Capital, Which May Not Be Available.

We have incurred negative cash flows from operations since inception. We

expended, and will need to continue to expend, substantial funds to complete our planned product development efforts, including our PSMA programs. Our future capital requirements and the adequacy of our available funds depend on many factors, including:

- successful commercialization of our products;
- acquisition of complementary products and technologies;
- magnitude, scope and results of our product development efforts;
- progress of preclinical studies and clinical trials;
- progress toward regulatory approval for our products;
- costs of filing, prosecuting, defending and enforcing patent claims and other intellectual property rights;
- competing technological and market developments; and
- expansion of strategic alliances for the sale, marketing and distribution of our products.

We may raise additional capital through public or private equity offerings, debt financings or additional collaborations and licensing arrangements. Additional financing may not be available to us when needed, or, if available, we may not be able to obtain financing on terms favorable to our stockholders or us. If we raise additional capital by issuing equity securities, the issuance will result in ownership dilution to our stockholders. If we raise additional funds through

collaborations and licensing arrangements, we may be required to relinquish rights to certain of our technologies or product candidates or to grant licenses on unfavorable terms. If we relinquish rights or grant licenses on unfavorable terms, we may not be able to develop or market products in a manner that is profitable to us. If adequate funds are not available, we may not be able to conduct research activities, preclinical studies, clinical trials or other activities relating to the successful commercialization of our products on a timely basis, if at all, with the result that our business could be significantly and adversely affected.

Our Products, Generally, Are In The Early Stages Of Development And Commercialization And We May Never Achieve The Revenue Goals Set Forth In Our Business Plan.

We began operations in 1980 and have been engaged primarily in research directed toward the development, commercialization and marketing of products to improve diagnosis and treatment of cancer and other diseases. In October 1996, we introduced for commercial use our ProstaScint imaging agent. In March 1997, we introduced for commercial use our Quadramet therapeutic product. In 2001, we launched the iodine version of BrachySeed. In May 2002, we launched the palladium version of BrachySeed. In November 2002, we began promoting NMP22 BladderChek to urologists in the United States. In January 2003, we discontinued our marketing and sale of the BrachySeed products.

Our PSMA technologies are still in the early stages of development. We have significantly reduced operations at our AxCell subsidiary, which is responsible for the development certain of our technologies. We may be unable to develop or commercialize these products and technologies.

Our business is therefore subject to the risks inherent in the development of an

early stage biopharmaceutical business enterprise, such as the need:

- to obtain sufficient capital to support the expenses of developing our technology and commercializing our products;
- to ensure that our products are safe and effective;
- to obtain regulatory approval for the use and sale of our products;
- to manufacture our products in sufficient quantities and at a reasonable cost;
- to develop a sufficient market for our products; and
- to attract and retain qualified management, sales, technical and scientific staff.

The problems frequently encountered using new technologies and operating in a competitive environment also may affect our business. If we fail to properly address these risks and attain our business objectives, our business could be significantly and adversely affected.

Our PSMA Product Development Program Is Novel And, Consequently, Inherently Risky.

We are subject to the risks of failure inherent in the development of product candidates based on new technologies, including our PSMA technology. These risks include the possibility that:

- the technologies we use will not be effective;
- our product candidates will be unsafe;
- our product candidates will fail to receive the necessary regulatory approvals;
- the product candidates will be hard to manufacture on a large scale or will be uneconomical to market; and
- we will not successfully overcome technological challenges presented by our potential new products.

Our other research and development programs involve similarly novel approaches to human therapeutics. Consequently, there is no precedent for the successful commercialization of therapeutic products based on our PSMA technologies. We

cannot assure you that any products will be successfully developed from our PSMA technology. If we fail to develop such products for the reasons set forth above or for any other reason, our business could be significantly and adversely affected.

All of Our Potential Oncology Products Will Be Subject To The Risks Of Failure Inherent In The Development Of Diagnostic Or Therapeutic Products Based On New Technologies.

Product development for cancer treatment involves a high degree of risk. We cannot assure you that the product candidates we develop, pursue or offer will prove to be safe and effective, will receive the necessary regulatory approvals, will not be precluded by proprietary rights of third parties or will ultimately achieve market acceptance. These product candidates will require substantial

additional investment, laboratory development, clinical testing and regulatory approvals prior to their commercialization. We cannot assure you that we will not experience difficulties that could delay or prevent the successful development, introduction and marketing of new products.

Before we obtain regulatory approvals for the commercial sale of any of our products under development, we must demonstrate through preclinical studies and clinical trials that the product is safe and efficacious for use in each target indication. The results from preclinical studies and early clinical trials may not be predictive of results that will be obtained in large-scale testing. We cannot assure you that our clinical trials will demonstrate the safety and efficacy of any products or will result in marketable products. A number of companies in the biotechnology industry have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. Clinical trials or marketing of any potential diagnostic or therapeutic products may expose us to liability claims for the use of these diagnostic or therapeutic products. We may not be able to maintain product liability insurance or sufficient coverage may not be available at a reasonable cost. In addition, as we develop diagnostic or therapeutic products internally, we will have to make significant investments in diagnostic or therapeutic product development, marketing, sales and regulatory compliance resources. We will also have to establish or contract for the manufacture of products, including supplies of drugs used in clinical trials, under the current Good Manufacturing Practices, or cGMP, of the FDA. We also cannot assure you that product issues will not arise following successful clinical trials and FDA approval.

The rate of completion of clinical trials also depends on the rate of patient enrollment. Patient enrollment depends on many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites and the eligibility criteria for the study. Delays in planned patient enrollment may result in increased costs and delays, which could have a harmful effect on our ability to develop the products in our pipeline. If we are unable to develop and commercialize products on a timely basis or at all, our business could be significantly and adversely affected.

Competition In Our Field Is Intense And Likely To Increase.

We face, and will continue to face, intense competition from one or more of the following entities:

- pharmaceutical companies;
- biotechnology companies;
- bioinformatics companies;
- diagnostic companies;
- academic and research institutions; and
- government agencies.

All of our lines of business are subject to significant competition from organizations that are pursuing technologies and products that are the same as or similar to our technology and products. Many of the organizations competing with us have greater capital resources, research and development staffs and facilities and marketing capabilities.

Before we recover development expenses for our products and technologies, the products or technologies may become obsolete as a result of technological developments by others or us. Our products could also be made obsolete by new technologies, which are less expensive or more effective. We may not be able to

make the enhancements to our technology necessary to compete successfully with newly emerging technologies and failure to do so could significantly and adversely affect our business.

We Rely Heavily On Our Collaborative Partners.

Our success depends in significant part upon the success of our collaborative partners. We have entered into the following agreements for the sale, marketing, distribution and manufacture of our products, product candidates and technologies:

- license from The Dow Chemical Company relating to the Quadramet technology;
- sub-license and marketing agreement with Berlex Laboratories, Inc. relating to the Quadramet technology which we licensed from The Dow Chemical Company;
- agreement for manufacture of Quadramet by Bristol Myers Squibb (formerly The DuPont Pharmaceuticals Company);
- joint venture with Progenics Pharmaceuticals for the development of PSMA for in vivo immunotherapy for prostate and other cancers;
- licensing agreement with Molecular Staging for technology to be used in developing in vitro diagnostic tests using PSMA and prostate specific antigen, or PSA;
- a Supply Agreement with Laureate Pharma L.P. for the production of our ProstaScint product;
- an agreement with Matritech to market and distribute NMP22 BladderChek to urologists and oncologists in the United States;
- marketing, license and supply agreements with Advanced Magnetics, Inc. related to Combidex and Code 7228;
- a License Agreement between our joint venture, PSMA Development Company LLC, and AlphaVax Human Vaccines, Inc.; and
- a Collaboration Agreement between our joint venture and Abgenix, Inc.

Because our collaborative partners are responsible for certain of our sales, marketing, manufacturing and distribution activities, these activities are outside our direct control. We cannot assure you that our partners will perform their obligations under these agreements with us or that our partners will not enter into arrangements with third parties that may negatively impact the economic benefit we hope to derive from their agreements with us. For example, Matritech retained the ability to market its NMP22 BladderChek to primary care physicians and others and has begun such marketing efforts. In the event that our collaborative partners do not successfully market and sell our products, are entitled to enter into third party arrangements that may economically disadvantage us, or breach their obligations under our agreements, our products may not be commercially successful, any success may be delayed and new product development could be inhibited with the result that our business could be significantly and adversely affected.

Our Business Could Be Harmed If Our Collaborative Arrangements Expire Or Are Terminated Early.

We cannot assure you that we will be able to maintain our existing collaborative arrangements. If they expire or are terminated, we cannot assure you that they will be renewed or that new arrangements will be available on acceptable terms, if at all. In January 2003, we provided Draximage Inc. with notice of our intent to terminate our Product Manufacturing and Supply Agreement and License Agreement with Draximage relating to the BrachySeed products.

In addition, we cannot assure you that any new arrangements or renewals of existing arrangements will be successful, that the parties to any new or renewed agreements will perform adequately or that any former or potential collaborators will not compete with us.

We cannot assure you that our existing or future collaborations will lead to the development of product candidates or technologies with commercial potential, that we will be able to obtain proprietary rights or licenses for proprietary rights for our product candidates or technologies developed in connection with these arrangements or that we will be able to ensure the confidentiality of proprietary rights and information developed in such arrangements or prevent the public disclosure thereof.

The Termination Of One Or More License Agreements That Are Important In The Manufacture Of Our Current Products And New Product Research And Development Activities Would Harm Our Business.

We are a party to license agreements under which we have rights to use technologies owned by other companies in the manufacture of our products and in our proprietary research, development and testing processes. We are the exclusive licensee of certain patents and patent applications held by the University of North Carolina at Chapel Hill covering part of the technology used in the proteomics program and of certain patents and patent applications held by the Memorial Sloan-Kettering Institute covering PSMA. We also depend upon the enforceability of our license with The Dow Chemical Company with respect to Quadramet. If the licenses were terminated, we may not be able to find suitable alternatives to this technology on a timely basis or on reasonable terms, if at all. The loss of the right to use these technologies that we have licensed would significantly and adversely affect our business.

We Have Limited Sales, Marketing And Distribution Capabilities For Our Products.

We have established an internal sales force that is responsible for marketing and selling ProstaScint and NMP22 BladderChek. However, such internal sales force has limited sales, marketing and distribution capabilities for our products, compared to those of many of our competitors. We depend on Berlex Laboratories, Inc. for the sale, marketing and distribution of Quadramet in the United States. In locations outside the United States, we have not established a selling presence. If we are unable to establish and maintain significant sales, marketing and distribution efforts, either internally or through arrangements with third parties, our business may be significantly and adversely affected.

There Are Risks Associated With The Manufacture And Supply Of Our Products.

If we are to be successful, our products will have to be manufactured by contract manufacturers in compliance with regulatory requirements and at costs acceptable to us. We cannot assure you that we will be able to arrange for the manufacture of our products on commercially reasonable terms. If we are unable to successfully arrange for the manufacture of our products and product candidates, we will not be able to successfully commercialize our products and our business will be significantly and adversely affected.

ProstaScint was manufactured at a cGMP compliant manufacturing facility operated by Laureate Pharma L.P. (formerly Bard BioPharma L.P.). We had access to Purdue's facility for continued manufacturing of the product until January 2002. We have built our inventory of ProstaScint to meet our product requirements in the short term. We entered into a Development and Manufacturing Agreement with DSM in July 2000, which we intended would replace our arrangement with Laureate with respect to ProstaScint. We entered into a new Contract Manufacturing Agreement with Laureate Pharma L.P. in January 2003. Our failure to maintain a long term supply agreement on commercially reasonable terms will have a material adverse effect on our business, financial condition and results of operations.

Quadramet is manufactured by Bristol-Myers Squibb (BMS) (formerly DuPont), pursuant to an agreement with both Berlex and Cytogen. Some components of Quadramet, particularly Samarium153 and EDTMP, are provided to BMS by outside suppliers. Due to radioactive decay, Samarium153 must be produced on a weekly basis. BMS obtains its requirements for Samarium153 from one supplier. Alternative sources for these components may not be readily available. If BMS cannot obtain sufficient quantities of the components on commercially reasonable terms, or in a timely manner, it would be unable to manufacture Quadramet on a timely and cost-effective basis, which could have a material adverse effect on our business, financial condition and results of operations.

Pursuant to the terms of our distribution agreement with Matritech, we rely on Matritech as the sole supplier of NMP22 BladderChek. Matritech uses independent contractors to manufacture the product. If Matritech fails to, or is unable to provide the product, we could experience a material adverse effect on our business, financial condition and results of operations.

The Company, our contract manufacturers and testing laboratories are required to adhere to United States Food & Drug Administration regulations setting forth requirements for cGMP, and similar regulations in other countries, which include

extensive testing, control and documentation requirements. Ongoing compliance with cGMP, labeling and other applicable regulatory requirements is monitored through periodic inspections and market surveillance by state and federal agencies, including the FDA, and by comparable agencies in other countries. Failure of our contract vendors or us to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of the government to grant premarket clearance or premarket approval of drugs, delays, suspension or withdrawal of approvals, seizures or recalls of products, operating restrictions and criminal prosecutions any of which could significantly and adversely affect our business.

Failure Of Consumers To Obtain Adequate Reimbursement From Third-Party Payors Could Limit Market Acceptance And Affect Pricing Of Our Products.

Our business, financial condition and results of operations will continue to be affected by the efforts of governments and other third-party payors to contain or reduce the costs of healthcare. There have been, and we expect that there will continue to be, a number of federal and state proposals to implement government control of pricing and profitability of therapeutic and diagnostic imaging agents such as our products. In addition, an emphasis on managed care increases possible pressure on pricing of these products. While we cannot predict whether these legislative or regulatory proposals will be adopted, or the effects these proposals or managed care efforts may have on our business, the announcement of these proposals and the adoption of these proposals or efforts could affect our stock price or our business. Further, to the extent these proposals or efforts have an adverse effect on other companies that are our prospective corporate partners, our ability to establish necessary strategic alliances may be harmed.

Sales of our products depend in part on reimbursement to the consumer from third-party payors, including Medicare, Medicaid and private health insurance plans. Third-party payors are increasingly challenging the prices charged for medical products and services. We cannot assure you that our products will be considered cost-effective and that reimbursement to consumers will continue to be available, or will be sufficient to allow us to sell our products on a competitive basis. Approval of our products for reimbursement by a third-party payor may depend on a number of factors, including the payor's determination that our products are clinically useful and cost-effective, medically necessary and not experimental or investigational. Reimbursement is determined by each payor individually and in specific cases. The reimbursement process can be time consuming. If we cannot secure adequate third-party reimbursement for our products, our business could be significantly and adversely affected.

If We Are Unable To Comply With Applicable Governmental Regulation We May Not Be Able To Continue Our Operations.

Any products tested, manufactured or distributed by us or on our behalf pursuant to FDA approvals are subject to pervasive and continuing regulation by numerous regulatory authorities, including primarily the FDA. We may be slow to adapt, or we may never adapt to changes in existing requirements or adoption of new requirements or policies. Our failure to comply with regulatory requirements could subject us to enforcement action, including product seizures, recalls, withdrawal, suspension, or revocation of approvals, restrictions on or injunctions against marketing our products based on our technology, and civil and criminal penalties. We cannot assure you that we will not be required to incur significant costs to comply with laws and regulations in the future or that laws or regulations will not create an unsustainable burden on our business.

Numerous federal, state and local governmental authorities, principally the FDA, and similar regulatory agencies in other countries, regulate the preclinical testing, clinical trials, manufacture and promotion of any compounds or agents we or our collaborative partners develop, and the manufacturing and marketing of any resulting drugs. The product development and regulatory approval process is lengthy, expensive, uncertain and subject to delays.

The regulatory risks we face also include the following:

- any compound or agent we or our collaborative partners develop must receive regulatory agency approval before it may be marketed as a drug in a particular country;

- the regulatory process, which includes preclinical testing and clinical trials of each compound or agent in order to establish its safety and efficacy, varies from country to country, can take many years and requires the expenditure of substantial resources;

- in all circumstances, approval of the use of previously unapproved radioisotopes in certain of our products requires approval of either the Nuclear Regulatory Commission or equivalent state regulatory agencies. A radioisotope is an unstable form of an element which undergoes radioactive decay, thereby emitting radiation which may be used, for example, to image or destroy harmful growths or tissue. We cannot assure you that such approvals will be obtained on a timely basis, or at all;

- data obtained from preclinical and clinical activities are susceptible to varying interpretations which could delay, limit or prevent

regulatory agency approval; and

- delays or rejections may be encountered based upon changes in regulatory agency policy during the period of product development and/or the period of review of any application for regulatory agency approval. These delays could adversely affect the marketing of any products we or our collaborative partners develop, impose costly procedures upon our activities, diminish any competitive advantages we or our collaborative partners may attain and adversely affect our ability to receive royalties.

We cannot assure you that, even after this time and expenditure, regulatory agency approvals will be obtained for any compound or agent developed by or in collaboration with us. Moreover, regulatory agency approval for a product or agent may entail limitations on the indicated uses that could limit the potential market for any such product. Furthermore, if and when such approval is obtained, the marketing, manufacture, labeling, packaging, reporting, storage, advertising and promotion and record keeping related to our products would remain subject to extensive regulatory requirements. Discovery of previously unknown problems with a drug, its manufacture or its manufacturer may result in restrictions on such drug, manufacture or manufacturer, including withdrawal of the drug from the market. Failure to comply with regulatory requirements could result in fines, injunctions, seizures, recalls, suspension or withdrawal of regulatory approvals, operating restrictions and criminal prosecution.

The United States Food, Drug and Cosmetics Act requires (i) that our products be manufactured in FDA registered facilities subject to inspection, and (ii) that we comply with cGMP, which imposes certain procedural and documentation requirements upon us and our manufacturing partners with respect to manufacturing and quality assurance activities. If we or our contract partners do not comply with cGMP we may be subject to sanctions, including fines, injunctions, civil penalties, recalls or seizures of products, total or partial suspension of production, product recalls, failure of the government to grant premarket clearance or premarket approval for drugs, withdrawal of marketing approvals and criminal prosecution.

We Could Be Negatively Impacted By Future Interpretation Or Implementation Of Federal And State Fraud And Abuse Laws, Including Anti-Kickback Laws, The Federal Stark Law And Other Federal And State Anti-referral Laws.

We are subject to various federal and state laws pertaining to health care fraud and abuse, including anti-kickback laws and physician self-referral laws. Violations of these laws are punishable by criminal and/or civil sanctions, including, in some instances, imprisonment and exclusion from participation in federal and state health care programs, including Medicare, Medicaid and Veterans Administration health programs. We have not been challenged by a governmental authority under any of these laws and believe that our operations are in compliance with such laws. However, because of the far-reaching nature of these laws, we may be required to alter one or more of our practices to be in compliance with these laws. Health care fraud and abuse regulations are complex and even minor, inadvertent irregularities can potentially give rise to claims that the statute has been violated. Any violations of these laws could result in a material adverse effect on our business, financial condition and results of operations. If there is a change in law, regulation or administrative or judicial interpretations, we may have to change our business practices or our existing business practices could be challenged as unlawful, which could have a material adverse effect on our business, financial condition and results of operations.

We could become subject to false claims litigation under federal statutes, which can lead to civil money penalties, criminal fines and imprisonment, and/or exclusion from participation in Medicare, Medicaid and other federal and state

health care programs. These false claims statutes include the False Claims Act, which allows any person to bring suit alleging false or fraudulent claims under federal programs or contracts claims or other violations of the statute and to share in any amounts paid by the entity to the government in fines or settlement. Such suits, known as qui tam actions, have increased significantly in recent years and have increased the risk that a health care company will have to defend a false claim action, pay fines or be excluded from the Medicare program, Medicaid programs or other federal and state health care programs as a result of an investigation arising out of such action. We cannot assure you that we will not become subject to such litigation or, if we are not successful in

defending against such actions, that such actions will not have a material adverse effect on our business, financial condition and results of operations.

We Depend On Attracting And Retaining Key Personnel.

We are highly dependent on the principal members of our management and scientific staff. The loss of their services might significantly delay or prevent the achievement of development or strategic objectives. Our success depends on our ability to retain key employees and to attract additional qualified employees. Competition for personnel is intense, and we cannot assure you that we will be able to retain existing personnel or attract and retain additional highly qualified employees in the future.

During 2002, we announced numerous changes to members of our senior management. H. Joseph Reiser, Ph.D. who held the position of President and Chief Executive Officer of the Company from April 1998 until December 2002, was replaced by Michael D. Becker, our former Vice President of Business Development. Mr. Becker was also unanimously elected to serve on our Board of Directors. Dr. Reiser has remained a member of our Board of Directors. In addition, Lawrence R. Hoffman, our Vice President and Chief Financial Officer since July 2000, left the Company to pursue other opportunities as of December 31, 2002. Ms. Thu Dang, our Director of Finance, was subsequently promoted to Vice President of Finance.

Additionally, in the first quarter of 2003: (i) William Goeckeler, our Vice President of Research and Development, was promoted to Vice President of Operations; (ii) Deborah Kaminsky, our Vice President of Sales and Marketing, will shift her work focus, and will serve as our Vice President of Business Development; (iii) Rita Auld, our Director of Human Resources, was promoted to Vice President of Human Resources and Administration and Corporate Secretary; and (iv) Corey Jacklin assumed the responsibilities of Senior Director of Sales.

We have an employee retention agreement with our President and Chief Executive Officer, Michael D. Becker. We do not have similar retention agreements with our other key personnel. If we are unable to hire and retain personnel in key positions, our business could be significantly and adversely affected unless qualified replacements can be found.

Our Business Exposes Us To Potential Liability Claims That May Exceed Our Financial Resources, Including Our Insurance Coverage, And May Lead To The Curtailment Or Termination Of Our Operations.

Our business is subject to product liability risks inherent in the testing, manufacturing and marketing of our products. We cannot assure you that product liability claims will not be asserted against us, our collaborators or our licensees. While we currently maintain product liability insurance in amounts we believe are adequate, we cannot assure you that such coverage will be adequate to protect us against future product liability claims or that product liability insurance will be available to us in the future on commercially reasonable terms, if at all. Furthermore, we cannot assure you that we will be able to

avoid significant product liability claims and adverse publicity. If liability claims against us exceed our financial resources we may have to curtail or terminate our operations.

Our Business Involves Environmental Risks That May Result In Liability.

We are subject to a variety of local, state, federal and foreign government regulations relating to storage, discharge, handling, emission, generation, manufacture and disposal of toxic, infectious or other hazardous substances used to manufacture our products. If we fail to comply with these regulations, we could be liable for damages, penalties or other forms of censure and our business could be significantly and adversely affected.

Our Intellectual Property Is Difficult To Protect.

Our business and competitive positions are dependent upon our ability to protect our proprietary technology. Because of the substantial length of time and expense associated with development of new products, we, like the rest of the biopharmaceutical industry, place considerable importance on obtaining and maintaining patent and trade secret protection for new technologies, products and processes. We have filed patent applications for our technology for diagnostic and therapeutic products and the methods for its production and use.

The patent positions of pharmaceutical, biopharmaceutical and biotechnology companies, including us, are generally uncertain and involve complex legal and factual questions. Our patent applications may not protect our technologies and products because, among other things:

- there is no guarantee that any of our pending patent applications will result in issued patents;
- we may develop additional proprietary technologies that are not patentable;
- there is no guarantee that any patents issued to us, our collaborators or our licensors will provide a basis for a commercially viable product;
- there is no guarantee that any patents issued to us or our collaborators will provide us with any competitive advantage;
- there is no guarantee that any patents issued to us or our collaborators will not be challenged, circumvented or invalidated by third parties; and
- there is no guarantee that any patents previously issued to others or issued in the future will not have an adverse effect on our ability to do business.

In addition, patent law in the technology fields in which we operate is uncertain and still evolving, and we cannot assure you as to the degree of protection that will be afforded any patents we are issued or license from others. Furthermore, we cannot assure you that others will not independently develop similar or alternative technologies, duplicate any of our technologies, or, if patents are issued to us, design around the patented technologies developed by us. In addition, we could incur substantial costs in litigation if we are required to defend ourselves in patent suits by third parties or if we initiate such suits. We cannot assure you that, if challenged by others in

litigation, the patents we have been issued, or which have been assigned or have been licensed from others will not be found invalid. We cannot assure you that our activities would not infringe patents owned by others. Defense and prosecution of patent matters can be expensive and time-consuming and, regardless of whether the outcome is favorable to us, can result in the diversion of substantial financial, managerial and other resources. An adverse outcome could:

- subject us to significant liability to third parties;
- require us to cease any related research and development activities and product sales; or
- require us to obtain licenses from third parties.

We cannot assure you that any licenses required under any such third-party patents or proprietary rights would be made available on commercially reasonable terms, if at all. Moreover, the laws of certain countries may not protect our proprietary rights to the same extent as the laws of the United States. We cannot predict whether us or our competitors' pending patent applications will result in the issuance of valid patents which may significantly and adversely affect our business.

We Cannot Be Certain That Our Security Measures Protect Our Unpatented Proprietary Technology.

We also rely upon trade secret protection for some of our confidential and proprietary information that is not subject matter for which patent protection is available. To help protect our rights, we require all employees, consultants, advisors and collaborators to enter into confidentiality agreements that require disclosure, and in most cases, assignment to us, of their ideas, developments, discoveries and inventions, and that prohibit the disclosure of confidential information to anyone outside Cytogen or our subsidiaries. We cannot assure you, however, that these agreements will provide adequate protection for our trade secrets, know-how or other proprietary information or prevent any unauthorized use or disclosure.

We Are Currently Subject To Patent Litigation.

On March 17, 2000, we were served with a complaint filed against us in the United States Federal Court for the District of New Jersey by M. David Goldenberg ("Goldenberg") and Immunomedics, Inc. (collectively "Plaintiffs"). The litigation claims that our Prostascint product infringes a patent purportedly owned by Goldenberg and licensed to Immunomedics. We believe that

ProstaScint does not infringe this patent, and that the patent is invalid and unenforceable. The patent sought to be enforced in the litigation has now expired; as a result, the claim even if successful would not result in an injunction barring the continued sale of ProstaScint or affect any other of our products or technology. In addition, we have certain rights to indemnification against litigation and litigation expenses from the inventor of technology used in ProstaScint, which may be offset against royalty payments on sales of ProstaScint. However, given the uncertainty associated with litigation, we cannot give any assurance that the litigation could not result in a material expenditure to us. On December 17, 2001, Cytogen filed a motion for summary judgment of non-infringement of the asserted claims of the patent-in-suit. The Plaintiffs opposed that motion and filed their own cross-motion for summary judgment of infringement. On July 3, 2002, the Court denied both parties' summary judgment motions, with leave to renew those motions after presenting

expert testimony and legal argument based upon that testimony. Subsequently, the Court heard expert testimony and further argument, and received further briefing, and the parties' renewed summary judgment motions are pending. The Court has not indicated when it expects to issue a ruling.

Our Stock Price Has Been And May Continue To Be Volatile, And Your Investment In Our Stock Could Decline In Value Or Fluctuate Significantly.

The market prices for securities of biotechnology and pharmaceutical companies have historically been highly volatile, and the market has from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. The market price of our common stock has fluctuated over a wide range and may continue to fluctuate for various reasons, including, but not limited to, announcements concerning our competitors or us regarding:

- results of clinical trials;
- technological innovations or new commercial products;
- changes in governmental regulation or the status of our regulatory approvals or applications;
- changes in earnings;
- changes in health care policies and practices;
- developments or disputes concerning proprietary rights;
- litigation or public concern as to safety of the our potential products; and
- changes in general market conditions.

These fluctuations may be exaggerated if the trading volume of our common stock is low. These fluctuations may or may not be based upon any of our business or operating results. Our common stock may experience similar or even more dramatic price and volume fluctuations which may continue indefinitely.

The following table sets forth the high and low sale prices for our common stock for each of the quarters in the period beginning January 1, 2000 through December 31, 2002 as reported on the Nasdaq National Market, and as adjusted for our one-for-ten reverse stock split effected October 25, 2002:

Quarter Ended	High	Low
March 31, 2000	$218.13	$26.25
June 30, 2000	$106.25	$38.13
September 30, 2000	$113.75	$55.00
December 31, 2000	$71.88	$20.00
March 31, 2001	$65.63	$23.13
June 30, 2001	$61.00	$21.88
September 30, 2001	$53.90	$19.00
December 31, 2001	$45.50	$20.50
March 31, 2002	$34.70	$21.10
June 30, 2002	$22.40	$9.10
September 30, 2002	$11.50	$3.20
December 31, 2002	$8.44	$2.68

We Have Adopted Various Anti-Takeover Provisions Which May Affect The Market

Price Of Our Common Stock.

Our Board of Directors has the authority, without further action by the holders of common stock, to issue from time to time, up to 5,400,000 shares of preferred stock in one or more classes or series, and to fix the rights and preferences of the preferred stock. Pursuant to these provisions, we have implemented a stockholder rights plan by which one preferred stock purchase right is attached to each share of common stock, as a means to deter coercive takeover tactics and to prevent an acquirer from gaining control of us without some mechanism to secure a fair price for all of our stockholders if an acquisition was completed. These rights will be exercisable if a person or group acquires beneficial ownership of 20% or more of our common stock and can be made exercisable by action of our board of directors if a person or group commences a tender offer which would result in such person or group beneficially owning 20% or more of our common stock. Each right will entitle the holder to buy one one-thousandth of a share of a new series of our junior participating preferred stock for $20. If any person or group becomes the beneficial owner of 20% or more of our common stock (with certain limited exceptions), then each right not owned by the 20% stockholder will entitle its holder to purchase, at the right's then current exercise price, common shares having a market value of twice the exercise price. In addition, if after any person has become a 20% stockholder, we are involved in a merger or other business combination transaction with another person, each right will entitle its holder (other than the 20% stockholder) to purchase, at the right's then current exercise price, common shares of the acquiring company having a value of twice the right's then current exercise price.

We are subject to provisions of Delaware corporate law which, subject to certain exceptions, will prohibit us from engaging in any "business combination" with a person who, together with affiliates and associates, owns 15% or more of our common stock for a period of three years following the date that the person came to own 15% or more of our common stock unless the business combination is approved in a prescribed manner.

These provisions of the stockholder rights plan, our certificate of incorporation, and of Delaware law may have the effect of delaying, deterring or preventing a change in control of Cytogen, may discourage bids for our common stock at a premium over market price and may adversely affect the market price, and the voting and other rights of the holders, of our common stock.

The Liquidity Of Our Common Stock Could Be Adversely Affected If We Are Delisted From The Nasdaq National Market.

On August 14, 2002, we announced that we had received notification from the Nasdaq Stock Market, Inc. that our common stock had closed below the minimum $1.00 per share requirement for the previous 30 consecutive trading days as required under Marketplace Rule 4450(a)(5). In accordance with Marketplace Rule 4450 (e)(2), we were provided with 90 calendar days, or until November 12, 2002, to regain compliance by having the bid price for our common stock close at $1.00 or greater for a minimum period of 10 consecutive trading days.

On September 26, 2002, we announced that our Board of Directors unanimously approved, and recommended to our stockholders, a proposal that would give the Board of Directors authority to effect a reverse stock split of our common stock, at a ratio of up to one-for-ten at any time prior to December 31, 2002. A special meeting of our stockholders was held on October 25, 2002 to consider such recommendation. Pursuant to the authority granted to our Board of Directors at the special meeting, on October 25, 2002, we implemented a one-for-ten reverse split of our outstanding and authorized shares of common stock.

We subsequently achieved compliance with Nasdaq Marketplace Rule 4450(a)(5), and received a letter from Nasdaq notifying us of such compliance on November 11, 2002.

We cannot assure you that we will continue to maintain compliance with this Marketplace Rule, or any other Listing Standards which may apply to us, and as such, we may once again face delisting from the Nasdaq National Market in the future. Specifically, we cannot assure you that we will be able to maintain compliance with the minimum equity and market value of listed securities requirements for continued listing on the Nasdaq National Market as set forth in Marketplace Rule 4310(c)(2)(B).

In the event that we are unable maintain compliance with all relevant Nasdaq listing standards, our securities may be subject to delisting from the Nasdaq National Market. If such delisting occurs, the market price and market liquidity of our common stock may be adversely affected.

Alternatively, if faced with such delisting, we may submit an application to transfer the listing of our common stock to the Nasdaq SmallCap Market. The Nasdaq SmallCap Market also has a $1.00 minimum bid price requirement.

If our common stock is delisted by Nasdaq, our common stock would be eligible to trade on the OTC Bulletin Board maintained by Nasdaq, another over-the-counter quotation system, or on the pink sheets where an investor may find it more difficult to dispose of or obtain accurate quotations as to the market value of our common stock. In addition, we would be subject to a rule promulgated by the Securities and Exchange Commission that, if we fail to meet criteria set forth in such rule, imposes various practice requirements on broker-dealers who sell securities governed by the rule to persons other than established customers and accredited investors. Consequently, such rule may deter broker-dealers from recommending or selling our common stock, which may further affect the liquidity of our common stock.

Delisting from Nasdaq will make trading our common stock more difficult for investors, potentially leading to further declines in our share price. It would also make it more difficult for us to raise additional capital. Further, if we are delisted we would also incur additional costs under state blue sky laws in connection with any sales of our securities. These requirements could severely limit the market liquidity of our common stock and the ability of our shareholders to sell our common stock in the secondary market.

A Large Number Of Our Shares Are Eligible For Future Sale Which May Adversely Impact The Market Price Of Our Common Stock.

A large number of shares of our common stock are already outstanding, issuable upon exercise of options and warrants, or the achievement of certain milestones under previously completed acquisitions and may be eligible for resale, which may adversely affect the market price of our common stock. As of December 31, 2002 we had 8,758,235 shares of common stock outstanding, which number of shares: (i) includes an aggregate of 241 shares of common stock to be issued to prior holders of securities of CytoRad Incorporated and Cellcor, Inc., which we acquired in 1995, upon each such holders respective exchange of such securities; (ii) excludes 50,000 shares of common stock previously issued by us and currently held in escrow pending release, upon certain conditions, to Advanced Magnetics, who currently maintains voting control of such securities; and (iii) excludes 32,538 shares previously issued by us and currently held for issuance by the custodian of our Employee Stock Purchase Plan to the participants thereunder, in the event they elect to purchase such shares. An additional 472,106 shares of common stock are issuable upon the exercise of outstanding stock options and an additional 32,363 shares of common stock are issuable upon the exercise of outstanding warrants. Substantially all of such shares subject to outstanding options and warrants will, when issued upon exercise thereof, be

available for immediate resale in the public market pursuant to either a currently effective registration statement under the Securities Act of 1933, as amended, or pursuant to Rule 144 or Rule 701 promulgated thereunder. In addition, there are 68,510 additional shares of common stock reserved for future issuance under our current stock options plans, 7,569 additional shares of common stock reserved for issuance under our 401(k) Plan and 22,751 additional shares of common stock reserved for the future issuance under our employee bonus plan. All such reserved shares have been registered with the Securities and Exchange Commission pursuant to currently effective registration statements. In addition, there are 81,429 additional shares of common stock, subject to certain adjustments, reserved for future issuance in connection with the issuance of a convertible promissory note, having a seven (7) year maturity, to ELAN Corporation, plc in August 1998.

In connection with our acquisition of Prostagen, Inc. in June 1999, we issued 205,000 unregistered shares of our common stock to the then stockholders of Prostagen, which shares may be sold from time to time pursuant to Rule 144 under the Securities Act. Such stockholders also have certain piggyback registration rights with respect to these shares of common stock. An additional 127,699 shares have been issued in 2002 and were subsequently registered on a registration statement on Form S-3. An additional $2.0 million worth of Cytogen common stock, which we are obligated to register under the Securities Act of 1933, as amended, may be issued if certain milestones are achieved in the PSMA development programs.

On October 25, 2001, we filed with the Securities and Exchange Commission a shelf registration statement on Form S-3 covering one million (1,000,000) shares of our common stock. 297,066 and 416,670 of such registered shares were issued to the State of Wisconsin Investment Board in private offering transactions in each of January 2002 and June 2002, respectively.

Availability of a significant number of additional shares of our common stock could depress the price of our common stock.

Because We Do Not Intend to Pay Any Cash Dividends On Our Shares of Common Stock, Our Stockholders Will Not Be Able to Receive a Return on Their Shares Unless They Sell Them.

We have never paid or declared any cash dividends on our common stock or other securities and intend to retain any future earnings to finance the development and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. Unless we pay dividends, our stockholders will not be able to receive a return on their shares unless they sell them.

Item 2. Properties

In August 2002, we moved our offices from 600 College Road East to 650 College Road East in Princeton, New Jersey. We currently sublease approximately 11,500 square feet of administrative space in Princeton, New Jersey. The sublease on this space expires in July 2005. We intend to remain in Princeton, New Jersey for the foreseeable future.

We also lease approximately 9,200 square feet of laboratory and office space in Newtown, Pennsylvania, which is occupied by our AxCell Biosciences subsidiary, under a lease expiring in 2004. In February 2001, we expanded the AxCell facility by amending the lease to include approximately an additional 5,700 square feet, which additional lease space will expire in September 2006. We

sublease approximately 2,400 square feet of the Axcell space to another company. Such sublease will expire in August 2006.

We own substantially all of the equipment used in our laboratories and offices. We believe our facilities are adequate for our operations at present.

Item 3. Legal Proceedings

On March 17, 2000, we were served with a complaint filed against us in the United States Federal Court for the District of New Jersey by M. David Goldenberg ("Goldenberg") and Immunomedics, Inc. (collectively "Plaintiffs"). The litigation claims that our Prostascint product infringes a patent purportedly owned by Goldenberg and licensed to Immunomedics. We believe that ProstaScint does not infringe this patent, and that the patent is invalid and unenforceable. The patent sought to be enforced in the litigation has now expired; as a result, the claim even if successful would not result in an injunction barring the continued sale of ProstaScint or affect any other of our products or technology. In addition, we have certain rights to indemnification against litigation and litigation expenses from the inventor of technology used in ProstaScint, which may be offset against royalty payments on sales of ProstaScint. However, given the uncertainty associated with litigation, we cannot give any assurance that the litigation could not result in a material expenditure to us. On December 17, 2001, Cytogen filed a motion for summary judgment of non-infringement of the asserted claims of the patent-in-suit. The Plaintiffs opposed that motion and filed their own cross-motion for summary judgment of infringement. On July 3, 2002, the Court denied both parties' summary judgment motions, with leave to renew those motions after presenting expert testimony and legal argument based upon that testimony. Subsequently, the Court heard expert testimony and further argument, and received further briefing, and the parties' renewed summary judgment motions are pending. The Court has not indicated when it expects to issue a ruling.

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

On October 25, 2002, we held a special meeting of our stockholders, during which meeting our stockholders duly approved a reverse stock split of our issued, authorized and outstanding shares of common stock, up to a ratio of one-for-ten at the discretion of our Board of Directors. Other information relating to the matters voted upon at the special meeting and the number of votes cast for, against and withheld with respect to each such matter is contained in our Current Report on Form 8-K which was filed with the Commission on October 25, 2002. There were no broker non-votes with respect to either proposal presented to our stockholders at the special meeting.

PART II

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

Our common stock is traded on the Nasdaq National Market under the trading symbol "CYTO."

The table below sets forth the high and low bid information for our common stock for each of the calendar quarters indicated, as reported on the Nasdaq National Market. Such quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission, may not represent actual transactions and have been

adjusted to reflect the Company's one-for-ten reverse stock split executed October 25, 2002.

2001	High	Low
First Quarter	$65.31	$23.13
Second Quarter	60.90	21.88
Third Quarter	53.80	19.00
Fourth Quarter	44.60	20.50

2002		
First Quarter	$34.40	$21.10
Second Quarter	22.00	9.10
Third Quarter	11.00	3.10
Fourth Quarter	8.40	3.30

As of March 1, 2003, there were approximately 960 holders of record of our common stock and there were approximately 43,515 beneficial holders of our common stock.

We have never paid any cash dividends on our common stock and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We intend to retain any future earnings to fund the development and growth of our business. Any future determination to pay dividends will be at the discretion of the board of directors.

On December 17, 2002, we issued options to purchase 200,000 shares of our common stock, $0.01 par value per share, to Michael D. Becker, in connection with, and upon his promotion to, President and Chief Executive Officer of the Company. The exercise price of such options is $3.54 per share, the fair market value of our common stock on the date of grant. 50,000 of such options were granted under our 1995 Stock Option Plan and vested immediately upon grant, and the remaining 150,000 options were granted outside of any stock option plan and will vest in three equal tranches, based upon Mr. Becker's achievement of certain milestones that will be established by our Board of Directors.

We believe that the issuance of the Options to Mr. Becker was exempt from registration under Section 4(2) of the Securities Act of 1933, as amended, as a transaction not involving any public offering.

Item 6. Selected Financial Data

The following selected financial information has been derived from our audited consolidated financial statements for each of the five years in the period ended December 31, 2002. The selected financial data set forth below should be read in conjunction with the consolidated financial statements, including the notes thereto, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and other information provided elsewhere in this report.

	Year Ended December		
	2002	2001	2000
Statements of Operations Data:		(All amounts in thousands,	
Revenues:			
Product sales	$ 10,626	$ 8,782	$ 7,523

Royalties	1,842	2,063	2,004
License and contract	463	912	1,024
Total revenues	12,931	11,757	10,551
Operating Expenses:			
Cost of product and contract manufacturing revenues	4,748	4,216	4,513
Impairment of intangible assets(1)	1,729	-	-
Research and development	7,605	10,091	6,957
Acquisition of marketing and technology rights (2)	-	-	13,241
Equity loss in PSMA LLC	2,886	332	-
Equity loss in Targon subsidiary	-	-	-
Selling and marketing	5,846	6,314	6,126
General and administrative	5,401	4,864	4,934
Total operating expenses	28,215	25,817	35,771
Operating loss	(15,284)	(14,060)	(25,220)
Loss on investment	(516)	-	-
Gain on sale of laboratory and manufacturing facilities	-	-	-
Gain on sale of Targon subsidiary	-	-	-
Other income (expense)	101	857	611
Loss before income taxes and cumulative effect of accounting change	(15,699)	(13,203)	(24,609)
Income tax benefit	-	(1,103)	(1,625)
Income (loss) before cumulative effect of accounting change	(15,699)	(12,100)	(22,984)
Cumulative effect of accounting change (3)	-	-	(4,314)
Net income (loss)	(15,699)	(12,100)	(27,298)
Dividends, including deemed dividends on preferred stock	-	-	-
Net income (loss) to common stockholders	$(15,699)	$(12,100)	$(27,298)
Net income (loss) per common share:			
Basic and diluted net income (loss) before cumulative effect of accounting change	$ (1.85)	$ (1.56)	$ (3.13)
Cumulative effect of accounting change (3)	-	-	(0.59)
Basic and diluted net income (loss)	$ (1.85)	$ (1.56)	$ (3.72)
Weighted average common shares outstanding:			
Basic	8,466	7,778	7,334
Diluted	8,466	7,778	7,334
Pro forma amounts assuming accounting change is applied retroactively:			

Net loss to common stockholders.....	$(22,984)
Basic and diluted net loss per common share.....	$ (3.13)

Consolidated Balance Sheet Data:	December 31, 2002	2001	2000	1
		(in thousands)		
Cash, short-term investments and restricted cash...	$ 14,725	$ 11,309	$ 11,993	$ 1
Total assets.....	19,894	21,492	20,416	1
Long-term liabilities.....	2,614	2,291	2,374	
Accumulated deficit.....	(356,380)	(340,681)	(328,581)	(30
Stockholders' equity.....	10,588	11,214	7,218	1

(1) Reflects a non-cash charge to write off the carrying value of the licensing fees associated with BrachySeed I-125 and BrachySeed Pd-103.

(2) In August 2000, the Company licensed product rights from Advanced Magnetics, Inc. In June 1999, the Company acquired Prostagen, Inc.

(3) In 2000, the Company recorded a non-cash charge for the cumulative effect related to the adoption of SEC Staff Accounting Bulletin No. 101. See Note 1 of the Consolidated Financial Statements.

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

The following discussion contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of historical facts, included in this Annual Report on form 10-K regarding our strategy, future operations, financial position, future revenues, projected costs, prospects, plans and objectives of management are forward-looking statements. The words "anticipates," "believes," "estimates," "expects," "intends," "may," "plans," "projects," "will," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such forward-looking statements involve a number of risks and uncertainties and investors are cautioned not to put any undue reliance on any forward-looking statement. We cannot guarantee that we will actually achieve the plans, intentions or expectations disclosed in any such forward-looking statements. Factors that could cause actual results to differ materially, include, but are not limited to those identified under the caption "Additional Factors That May Affect Future Results", provided elsewhere in this report. Investors are cautioned not to put undue reliance on any forward looking statement.

Cautionary Statement

Our actual results may differ materially from our historical results of operations and those discussed in the forward-looking statements for various

reasons, including, but not limited to, our ability to: (i) access the capital markets in the near term and in the future for continued funding of our operations including existing and new projects and to maintain the listing of our common stock on the Nasdaq National Market; (ii) attract and retain personnel needed for business operations and strategic plans; (iii) carry out our business and financial plans; (iv) attract, and the ultimate success of, strategic partnering arrangements, collaborations, and acquisition candidates; (v) successfully develop and commercialize in-licensed products such as NMP22 BladderChek, including programs designed to facilitate the use of our products, such as the Partners in Excellence or PIE Program; (vi) establish and successfully complete clinical trials where required for product approval; (vii) obtain foreign regulatory approvals for products and to establish marketing arrangements in countries where approval is obtained; (viii) demonstrate, over time, the efficacy and safety of our products; (ix) determine and implement the appropriate strategic initiative for our AxCell Biosciences subsidiary; and (x) fund development necessary for existing products and for the pursuit of new product opportunities. Additional risks that we face include, but are not limited to: (i) the risk of whether marketable and valuable products result from our development activities; (ii) the possibility that we may not be able to adequately protect our intellectual property portfolio; (iii) the degree of competition we may face from existing or new products; (iv) the risks associated with obtaining the necessary regulatory approvals; (v) the ability of Advanced Magnetics to satisfy the conditions specified by the FDA regarding approval to market Combidex in the United States; (vi) shifts in the regulatory environment affecting sale of our products such as third-party payor reimbursement issues and dependence on our partners for development of certain projects; (vii) competitive products and technologies; (viii) price pressure; and (ix) other factors discussed in our press releases and from time-to-time in our other filings with the Securities and Exchange Commission. Any forward-looking statements made by us do not reflect the potential impact of any future

acquisitions, mergers, dispositions, joint ventures or investments we may make. We do not assume, and specifically disclaim, any obligation to update any forward-looking statements, and these statements represent our current outlook only as of the date given.

The following discussion and analysis should be read in conjunction with the Financial Statements and related notes thereto contained elsewhere herein, as well as from time to time in our other filings with the Securities and Exchange Commission.

Significant Events in 2002

In September 2002, in an effort to reduce expenses and position Cytogen for stronger long-term growth in oncology, we restructured our AxCell Biosciences subsidiary. Management intends that the plan, which included a 75% reduction of AxCell's workforce, will allow continued research related to the role of novel proteins and signal transduction pathways in disease progression through both external collaborations and internal data mining. While AxCell continues to pursue opportunities in the area of signal transduction research, the restructuring reinforces our corporate objectives of developing and marketing oncology products.

In October 2002, we entered into a five-year agreement with Matritech Inc. to be the sole distributor for Matritech's NMP22 BladderChek test to urologists and oncologists, in the United States. Retention of exclusivity rights depends upon meeting certain minimum annual purchases. NMP22 BladderChek is a point-of-care test for bladder cancer that requires only a few drops of a patient's urine.

NMP22 BladderChek returns results in thirty minutes and provides urologists with an adjunct technology to cystoscopy, a clinical procedure for the visual identification of tumors in the bladder, for improved detection and early diagnosis. During November 2002, we began promoting NMP22 BladderChek to urologists in the United States, using our in-house urologic focused sales force.

On October 25, 2002, upon the receipt of approval of our stockholders at a duly called and held special meeting of stockholders, our Board of Directors authorized and implemented a reverse stock split of our issued, outstanding and authorized shares of common stock at a ratio of one-for-ten. As a result of the reverse split, one new share of common stock was issued for every ten shares of common stock held by stockholders of record as of the close of business on October 25, 2002. The reverse split was intended, in part, to help increase the market price of our common stock above the minimum $1.00 per share as required by the Nasdaq National Market's maintenance listing standards. On November 11, 2002, we announced that we had received notification from the Nasdaq Stock Market, Inc. that we had regained compliance with such listing standards regarding minimum bid price.

On December 17, 2002, we announced that H. Joseph Reiser, Ph.D. resigned his position as our President and Chief Executive Officer, for personal reasons, effective immediately. Dr. Reiser had served in such capacities since April 1998, and has, since his resignation, remained a member of our Board of Directors. Michael D. Becker, our Vice President of Business Development, was unanimously elected by our Board of Directors to serve as Dr. Reiser's replacement as President and Chief Executive Officer. Mr. Becker was also unanimously elected to serve as a member of our Board of Directors.

Also, on December 17, 2002, we announced that Lawrence Hoffman, our Vice President and Chief Financial Officer resigned his position with the Company to pursue other opportunities, effective December 31, 2002. Mr. Hoffman had served in such capacity since July 2000. Ms. Thu Dang, our Director of Finance was promoted to the position of Vice President of Finance, effective January 1, 2003.

Other recent management changes include:

- William Goeckeler, our Vice President of Research and Development, was promoted to Vice President of Operations. Mr. Goeckeler has been with the Company since April 1994;

- Deborah Kaminsky, our Vice President of Sales and Marketing will shift her focus as our Vice President of Business Development. Ms. Kaminsky has been with the Company since December 2000;

- Rita Auld, our Director of Human Resources, was promoted to Vice President of Human Resources and Administration and Corporate Secretary. Ms. Auld has been with the Company since October 2000; and

- Corey Jacklin, who has been with the Company since January 2003, assumed the responsibilities of Senior Director of Sales.

In January 2003, we provided Draximage with notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with respect to both of Draximage's BrachySeed I-125 and BrachySeed Pd-103 products. We launched BrachySeed I-125 and BrachySeed Pd-103 in February 2001 and May 2002, respectively. Effective January 24, 2003, we no longer accept or fill new orders for the BrachySeed I-125 and BrachySeed Pd-103 products.

RESULTS OF OPERATIONS

Years ended December 31, 2002, 2001 and 2000

Revenues

Total revenues were $12.9 million in 2002, $11.8 million in 2001 and $10.6 million in 2000. The increase in 2002 from 2001 and 2000 was primarily due to higher product related revenues from increased sales of ProstaScint and BrachySeed, partially offset by lower license and contract revenues. In January 2003, we served notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with Draximage with respect to the BrachySeed I-125 and BrachySeed Pd-103 products. As a result, effective January 24, 2003, we no longer accept or fill new orders for the BrachySeed products. Product related revenues, including product sales and royalty revenues, accounted for 96%, 92% and 90% of revenues in 2002, 2001 and 2000, respectively. License and contract revenues accounted for the remainder of revenues.

Product related revenues were $12.5 million, $10.8 million and $9.5 million in 2002, 2001 and 2000, respectively. The increase in 2002 from 2001 and 2000 was due primarily to an increase in the sale of ProstaScint and BrachySeed I-125 and Pd-103. Effective January 24, 2003, we discontinued selling and marketing the BrachySeed products.

Sales from ProstaScint were $7.9 million, $7.6 million and $7.0 million in 2002, 2001 and 2000, respectively, and accounted for 64%, 70% and 74% of the product related revenues, respectively. Beginning in July 2000, we assumed sole responsibility for selling and marketing ProstaScint from Bard Urological Division of C.R. Bard Inc., our former co-marketing partner. We believe that future growth and market penetrations of ProstaScint is dependent upon, among other things, the implementation and continued research of new product applications, such as: (i) combining or fusing ProstaScint with CT (computed tomography) or MRI (magnetic resonance imaging) scans in a digital overlay ("fusion imaging"); (ii) using ProstaScint scans to guide therapy ("image-guided therapy"), which is not limited to enhancing the placement of brachytherapy seeds, but can also be applied to cryosurgery and external beam radiation, such as intensity modulated radiation therapy (IMRT), an advanced and more powerful form of therapy that uses computers to focus radiation more precisely on the target; and (iii) competitive reimbursement by federal and private agencies. There can be no assurance, however, that such initiatives will significantly increase the sale of ProstaScint.

Sales of BrachySeed were $2.5 million in 2002, compared to $779,000 in 2001 and accounted for 20% of product related revenues during 2002, compared to 7% of product related revenues during 2001. We launched BrachySeed I-125 in February 2001 and BrachySeed Pd-103 in May 2002. The increase in 2002 over the prior period was due to increased market penetration of BrachySeed products, the agreements for which were subsequently terminated as described above. As a result, effective January 24, 2003, we no longer accept or fill new orders for the BrachySeed I-125 and BrachySeed Pd-103.

Royalties from Quadramet were $1.8 million, $2.1 million and $2.0 million in 2002, 2001 and 2000, respectively, and accounted for 15%, 19% and 21% of product related revenues, respectively. We believe that the future growth and market penetration of Quadramet is largely dependent upon, among other things: (i) new clinical data supporting the expanded and earlier use of Quadramet in various cancers and in combination with other therapies, such as chemotherapy and bisphophonates; (ii) establishing the use of Quadramet at higher doses to target and treat primary bone cancers; and (iii) increased marketing and sales penetration to radiation and medical oncologists. Quadramet is currently

marketed by our marketing partner, Berlex Laboratories Inc. Although we believe that Berlex is an advantageous marketing partner, there can be no assurance that Quadramet will achieve greater market penetration on a timely basis or result in significant revenues for us.

Sales from OncoScint CR/OV were $182,000, $363,000 and $519,000 in 2002, 2001 and 2000, respectively. The market for OncoScint CR/OV for diagnosis of colorectal disease has been negatively affected by positron emission tomography or "PET" scans which have shown the same or higher sensitivity than OncoScint CR/OV. Accordingly, we discontinued selling OncoScint at the end of 2002 in order to focus on our other oncology products.

The initial sales of NMP22 BladderChek were $14,000 in 2002. During the fourth quarter of 2002, we entered into a five-year agreement with Matritech Inc. for Cytogen to be the sole distributor for Matritech's NMP22 BladderChek test to urologists and oncologists in the United States. Retention of exclusivity rights depends upon meeting certain minimum annual purchases. We began introducing NMP22 BladderChek to urologists during November 2002.

Effective January 1, 2000, we adopted U.S. Securities and Exchange Commission Staff Accounting Bulletin No. 101 "Revenue Recognition in Financial Statements" ("SAB 101") which requires up-front, non-refundable license fees to be deferred and recognized over the performance period. The cumulative effect of adopting SAB 101 resulted in a one-time, non-cash charge of $4.3 million or $0.59 per share in 2000, which reflects the deferral of an up-front license fee received from Berlex, net of associated costs, related to the licensing of Quadramet recognized in 1998 and a license fee for certain applications of PSMA to a joint venture formed by Cytogen and Progenics recognized in 1999. Previously, we had recognized up-front license fees when we had no obligations to return the fees under any circumstances. Under SAB 101 these payments are recorded as deferred revenue to be recognized over the remaining term of the related agreements. In 2002, 2001 and 2000, we recognized $410,000, $860,000 and $859,000, respectively, of license revenue that was included in the cumulative effect adjustment as of January 1, 2000.

Revenues from contract research services were $53,000, $43,000 and $165,000 in 2002, 2001 and 2000, respectively. In 2002, we performed limited research and development services for the PSMA Development Company LLC, our joint venture with Progenics Pharmaceuticals, Inc. The level of future revenues from the joint venture will be dependent upon the extent of research and development services requested by the joint venture. In 2000, we discontinued our contract manufacturing services business as a result of the sale of our laboratory and manufacturing facilities. Contract revenues have fluctuated in the past and may fluctuate in the future.

Operating Expenses

Total operating expenses were $28.2 million, $25.8 million and $35.8 million in 2002, 2001 and 2000, respectively. The increase in 2002 from 2001 is due primarily to a non-cash charge of $1.7 million for the intangible asset impairment related to the write-off of license fees of BrachySeed products, $869,000 for the restructuring of AxCell in September 2002, a non-cash milestone payment of $2.0 million related to the progress of the dendritic cell prostate cancer clinical trials at Northwest Biotherapeutics, Inc. and increased expenses relating to the development of the PSMA technologies through our joint venture with Progenics Pharmaceuticals, Inc., the PSMA Development Company LLC, partially offset by a reduction in funding for research activities at our AxCell subsidiary and the development of a new manufacturing and purification process

for ProstaScint. The decrease in 2001 from 2000 was due to a charge in 2000 for the acquisition of Combidex and Code 7228 from Advanced Magnetics, partially offset by increased development efforts at AxCell in 2001 for AxCell's proteomics programs, the development of a new manufacturing process for ProstScint and the 2001 launch of BrachySeed I-125. The 2000 operating expenses included a $13.2 million charge related to the acquisition of the marketing and technology rights to Combidex (for all applications) and Code 7228 (for oncology applications only), of which $13.1 million was non-cash as we issued our common stock as consideration. At this time, Advanced Magnetics does not intend to develop Code 7228 for oncology imaging.

Costs of product sales were $4.7 million, $4.2 million and $4.5 million in 2002, 2001 and 2000, respectively. The increase in 2002 from 2001 was due primarily to an increase in sales of BrachySeed and a $169,000 charge to reserve for excess inventory for OncoScint and ProstaScint, partially offset by lower facility related costs associated with the manufacturing of ProstaScint. The decrease in 2001 compared to 2000 was due primarily to lower manufacturing costs that result from better manufacturing yields for ProstaScint, partially offset by costs associated with the purchase of BrachySeeds, which became commercially available in 2001. Effective January 24, 2003, we no long accept or fill orders for the BrachySeed products.

During 2002, we recorded a non-cash charge of $1.7 million to impairment of intangible assets which represents the write-off of the carrying value of the upfront licensing fees associated with BrachySeed I-125 and BrachySeed Pd-103, as the carrying value will not be recoverable. In January 2003 we served notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with Draximage with respect to the BrachySeed products. As of January 24, 2003, we no longer accept or fill new orders for BrachySeed.

Research and development expenses were $7.6 million in 2002, $10.1 million in 2001 and $7.0 million in 2000. The decrease in 2002 from 2001 was due to decreased funding during 2002 for signal transduction research programs at AxCell and reduction in expenses related to the development of a new manufacturing and purification process by DSM Biologics Company B.V. with respect to ProstaScint, partially offset by a stock-based milestone payment of $2.0 million in 2002 related to the progress of the dendritic cell prostate cancer clinical trials at Northwest Biotherapeutics, Inc. The increase in 2001 from 2000 was due, in part, to the development of a new manufacturing and purification process for ProstaScint. In 2002, 2001 and 2000 we invested $3.6 million, $4.9 million and $3.4 million, respectively, in AxCell's research programs and $551,000, $3.2 million and $559,000 respectively, in our manufacturing process development. Our relationship with DSM providing for the development of a new manufacturing process for ProstaScint ceased in 2002. In connection with the AxCell restructuring plan in September 2002, cost-saving measures implemented at AxCell are expected to lower our annual operating expenses by $2.2 million, which have begun in the fourth quarter of 2002.

Acquisition of marketing and technology rights of $13.2 million in 2000 represents a non-cash charge of $13.1 million related to the acquisition of certain rights to product candidates Combidex (for all applications) and Code 7228 (for oncology applications only) from Advanced Magnetics. At this time, Advanced Magnetics does not intend to develop Code 7228 for oncology imaging.

Our share in the equity loss in the PSMA Development Company LLC, our joint venture with Progenics, was $2.9 million for 2002, and represented 50% of the joint venture's operating results. The joint venture is equally owned by us and Progenics. We account for the joint venture using the equity method of

accounting. Progenics was obligated to fund the initial $3.0 million of development costs of the joint venture, in addition to $2.0 million in supplemental capital contributions funded at certain defined dates. Beginning in December 2001, we began to equally share the costs of the joint venture with Progenics. Our share in the equity loss in the joint venture was $332,000 for 2001. We expect our share of losses and funding in the joint venture to continue at even higher levels in subsequent periods. The joint venture is funded by equal capital contributions from each of Progenics and Cytogen in accordance with an annual budget approved by the joint venture representatives from each such party. As of March 28, 2003, the parties are in the process of negotiating the 2003 annual budget for the joint venture and have agreed that the operating budget for 2003 will be no less than the 2002 operating expenses for the joint venture. Contract research and development services provided by Progenics to the joint venture during 2002 were in accordance with a services agreement between the parties. As of March 28, 2003, the parties are negotiating the terms of a new services agreement and believe that if mutual agreement is not achieved, the parties can successfully negotiate with outside third parties for necessary services.

Selling and marketing expenses were $5.8 million, $6.3 million and $6.1 million in 2002, 2001 and 2000, respectively. The decrease in 2002 from 2001 was due to costs incurred in 2001 for the launch of BrachySeed I-125. The increase in 2001 from 2000 reflected the launch costs in 2001 for BrachySeed I-125, partially offset by costs associated with the expansion of our in-house sales force in 2000. We assumed sole responsibility for the selling and marketing of ProstaScint in July 2000.

General and administrative expenses were $5.4 million, $4.9 million and $4.9 million in 2002, 2001 and 2000, respectively. The increase in 2002 from 2001 and 2000 was due primarily to a charge of $869,000 related the restructuring of AxCell in September 2002, and a stock-based compensation charge for a key employee, partially offset by decreased spending in legal and professional fees in 2002.

Insurance Reimbursement

During 2001, we received a one-time payment of $402,000 from an insurance claim filed by us in 2000 to recover the loss of product resulting from the rupture of a tube during the manufacture of a batch of ProstaScint.

Loss On Investment

We recorded a non-cash charge of $516,000 during 2002 for an impairment in the carrying value of an investment in shares of Northwest Biotherapeutics, Inc. common stock, which the Company had received as part of the acquisition of Prostagen in 1999. The fair value of such investment, based on the quoted market prices, had significantly decreased from its original carrying value of $516,000. Based on an evaluation of the financial condition of Northwest and the significant decline in stock price, we concluded that the decline was other than temporary and that the carrying amount of this investment would not be recoverable.

Interest Income/Expense

Interest income was $274,000, $635,000 and $774,000 for 2002, 2001 and 2000, respectively. The declines in 2002 and 2001 from 2000 were due to lower average yields on investments for each of the respective periods, partially offset by higher average cash and cash equivalent balances during the periods.

Interest expense was $173,000, $180,000 and $163,000 in 2002, 2001 and 2000, respectively. Interest expense includes interest on outstanding debt and finance charges related to various equipment leases.

Income tax benefit

During 2001 and 2000, we sold New Jersey State net operating loss carryforwards and research and development credits, which resulted in the recognition of $1.1 million and $1.6 million income tax benefit, respectively. In January 2003, we sold additional New Jersey State net operating loss carryforwards which resulted in $584,000 of income tax benefit, which will be recorded in the first quarter of 2003. Assuming the State of New Jersey continues to fund this program, which is uncertain, the actual amount of net operating losses and tax credits we may sell will also depend upon the allocation among qualifying companies of an annual pool established by the State of New Jersey.

Net Loss

Net loss was $15.7 million, $12.1 million and $27.3 million in 2002, 2001 and 2000, respectively. Net loss per share in 2002 was $1.85, compared to $1.56 in 2001 and $3.72 in 2000. Net loss was based on weighted average common shares outstanding of 8.5 million, 7.8 million and 7.3 million, in each of 2002, 2001 and 2000, respectively. The 2000 net loss included $4.3 million, or $0.59 per share, for the cumulative effect of accounting change as a result of the adoption of SAB 101.

LIQUIDITY AND CAPITAL RESOURCES

Our cash and cash equivalents were $14.7 million as of December 31, 2002, compared to $11.3 million as of December 31, 2001. The increase in 2002 from 2001 was primarily due to the proceeds of approximately $13 million from the sale of Cytogen common stock offset by cash used for operating activities. In 2002, 2001 and 2000, the cash used for operating activities was $8.3 million, $13.4 million, and $9.0 million, respectively. The 2002 decrease from 2001 and 2000 was primarily due to improved working capital management, which included a build-up of ProstaScint inventory in 2001 and 2000 compared to a reduction in 2002.

In January 2003, we secured a new supply arrangement for the manufacturing of ProstaScint with Laureate Pharma L.P. and as a result, expect to use significant resources to build ProstaScint inventory levels to a two-year requirement. Pursuant to the terms of such Contract Manufacturing Agreement with Laureate, during 2003, we are required to pay a facility access and utilization fee of $1,000,000. We are also required to pay Laureate an additional $157,500 relating to Laureate's production of ProstaScint. The contract would have further required a payment of $136,800 to Laureate in the event that we required an optional production run for the antibody used in our ProstaScint product.

Historically, our primary sources of cash have been proceeds from the issuance and sale of our stock through public offerings and private placements, product related revenues, revenues from contract research services, fees paid under license agreements and interest earned on cash and short-term investments. In October 2000, we entered into an equity financing facility with Acqua Wellington North American Equities Fund, L.P. which provided for the sale of up to $70 million of our common stock to Acqua Wellington at a small discount to market price. Pursuant to this equity financing facility, in February 2001, we sold to Acqua Wellington 127,656 shares of our common stock for an aggregate purchase price of $6.5 million. The equity financing facility was terminated in June 2001.

In June 2001, we entered into a Share Purchase Agreement with the State of Wisconsin Investment Board, or SWIB, pursuant to which we sold 182,000 shares of

our common stock to SWIB for an aggregate purchase price of $8.2 million, before transaction costs. In connection with the Share Purchase Agreement, we were required to discontinue the use of the equity financing facility with Acqua Wellington and such agreement was terminated.

In October 2001, we filed a shelf registration statement on Form S-3 to register 1,000,000 shares of our common stock. Such registration statement was declared effective by the Securities and Exchange Commission in November 2001.

In January 2002, we sold 297,067 shares of our common stock to SWIB for an aggregate purchase price of $8.0 million. Additionally, in June 2002, we sold 416,670 shares of our common stock to SWIB for an aggregate purchase price of $5.0 million. Such issuances and sales of our common stock to SWIB in January 2002 and June 2002 were registered on our shelf registration statement on Form S-3.

In connection with our stock issuances to SWIB, we agreed not to enter into equity line arrangements in the future, issue certain securities at less than fair market value or undertake certain other securities issuances without requisite stockholder approval. Our stockholders have approved, and we have implemented, amendments to our By-Laws and certain of our stock option plans to effect these restrictions.

In January 2003, we received cash of $584,000 relating to a sale of New Jersey State net operating losses and research and development credits. Assuming the State of New Jersey continues to fund this program, which is uncertain, the actual amount of net operating losses and tax credits we may sell will also depend upon the allocation among qualifying companies of an annual pool established by the State of New Jersey.

Because the market value of our common stock held by non-affiliates of the Company is less than $75 million, we are ineligible to utilize a registration statement on Form S-3 for primary offerings in which our common stock is offered for cash on our behalf. We cannot guarantee you that the market value of our common stock held by non-affiliates will ever increase above $75 million, and as a result, that we will thereby regain eligibility to utilize a Form S-3 registration statement for such primary offerings.

We have relied upon revenues from sales of the BrachySeed products to partially fund ongoing operations. For the years ended December 31, 2002 and December 31, 2001, revenue from the sale of BrachySeed products was $2.5 million and $779,000, respectively. In December 2002, we served notice of termination for each of our License and Distribution Agreement and Product Manufacturing and Supply Agreement with Draximage with respect to both the BrachySeed I-125 and BrachySeed Pd-103 products. As a result, effective January 24, 2003, we no longer accept or fill new orders for the BrachySeed products.

Beginning in December 2001, we began to equally share the costs of the PSMA Development Company LLC, our joint venture with Progenics Pharmaceuticals, Inc. Since December 31, 2001, we have recognized 50% of the joint venture's operating results, of which our share was $2.9 million for 2002 and $332,000 for 2001. We expect our share of losses and funding in the joint venture to continue at a even higher level in the subsequent periods. The joint venture is funded by equal capital contributions from each of Progenics and Cytogen in accordance with an annual budget approved by the joint venture representatives from each such party. As of March 28, 2003, the parties are in the process of negotiating the 2003 annual budget for the joint venture and have agreed that the operating budget for 2003 will be no less than the 2002 operating expenses for the joint venture. Contract research and development services provided by Progenics to the

joint venture during 2002 were in accordance with a services agreement between the parties. As of March 28, 2003, the parties are negotiating the terms of a new services agreement and believe that if mutual agreement is not achieved, the parties can successfully negotiate with outside third parties for necessary services.

Our capital and operating requirements may change depending upon various factors, including: (i) whether we and our strategic partners achieve success in manufacturing, marketing and commercialization of our products; (ii) the amount of resources which we devote to clinical evaluations and the expansion of marketing and sales capabilities; (iii) results of clinical trials and research and development activities; and (iv) competitive and technological developments, in particular, we expect to incur significant costs for the development of our PSMA technologies.

Our financial objectives are to meet our capital and operating requirements through revenues from existing products and licensing arrangements. To achieve our strategic objectives, we may enter into research and development partnerships and acquire, in-license and develop other technologies, products or services. Certain of these strategies may require payments by us in either cash or stock in addition to the costs associated with developing and marketing a product or technology. However, we believe that, if successful, such strategies may increase long-term revenues. There can be no assurance as to the success of such strategies or that resulting funds will be sufficient to meet cash requirements until product revenues are sufficient to cover operating expenses, if ever. To fund these strategic and operating activities, we may sell equity or debt securities as market conditions permit or enter into credit facilities.

We have incurred negative cash flows from operations since our inception, and have expended, and expect to continue to expend in the future, substantial funds to implement our planned product development efforts, including acquisition of products and complementary technologies, research and development, clinical studies and regulatory activities, and to further our marketing and sales programs. We expect that our existing capital resources should be adequate to fund our operations and commitments into the first quarter of 2004. We cannot assure you that our business or operations will not change in a manner that would consume available resources more rapidly than anticipated. We expect that we will have additional requirements for debt or equity capital, irrespective of whether and when we reach profitability, for further product development costs, product and technology acquisition costs, and working capital.

Our future capital requirements and the adequacy of available funds will depend on numerous factors, including: (i) the successful commercialization of our products; (ii) the costs associated with the acquisition of complementary products and technologies; (iii) progress in our product development efforts and the magnitude and scope of such efforts; (iv) progress with clinical trials; (v) progress with regulatory affairs activities; (vi) the cost of filing, prosecuting, defending and enforcing patent claims and other intellectual property rights; (vii) competing technological and market developments; and (viii) the expansion of strategic alliances for the sales, marketing, manufacturing and distribution of our products. To the extent that the currently available funds and revenues are insufficient to meet current or planned operating requirements, we will be required to obtain additional funds through equity or debt financing, strategic alliances with corporate partners and others, or through other sources. There can be no assurance that the financial sources described above will be available when needed or at terms commercially acceptable to us. If adequate funds are not available, we may be required to delay, further scale back or eliminate certain aspects of our operations or attempt to obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to certain of our technologies,

product candidates, products or potential markets. If adequate funds are not available, our business, financial condition and results of operations will be materially and adversely affected.

CRITICAL ACCOUNTING POLICIES

Financial Reporting Release No. 60 requires all companies to include a discussion of critical accounting policies or methods used in the preparation of financial statements. Note 1 to our Consolidated Financial Statements in this Annual Report on Form 10-K includes a summary of our significant accounting policies and methods used in the preparation of our Consolidated Financial Statements. The following is a brief discussion of the more significant accounting policies and methods used by us. The preparation of our Consolidated Financial Statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Our actual results could differ materially from those estimates.

Revenue Recognition

We recognize revenue from the sale of our products upon shipment. We do not grant price protection to customers. Quadramet royalties are recognized when earned. The Securities and Exchange Commission has issued Staff Accounting Bulletin (SAB) No. 101, "Revenue Recognition", which provides guidance on the recognition of up-front, non-refundable license fees. Accordingly, we defer up-front license fees and recognize them over the estimated performance period of the related agreement, when we have continuing involvement. Since the term of the performance periods is subject to management's estimates, future revenues to be recognized could be affected by changes in such estimates.

Accounts Receivable

Our accounts receivable balances are net of an estimated allowance for uncollectible accounts. We continuously monitor collections and payments from our customers and maintain an allowance for uncollectible accounts based upon our historical experience and any specific customer collection issues that we have identified. While we believe our reserve estimate to be appropriate, we may find it necessary to adjust our allowance for uncollectible accounts if the future bad debt expense exceeds our estimated reserve. We are subject to concentration risks as a limited number of our customers provide a high percent of total revenues, and corresponding receivables.

Inventories

Inventories are stated at the lower of cost or market, as determined using the first-in, first-out method, which most closely reflects the physical flow of our inventories. Our products and raw materials are subject to expiration dating. We regularly review quantities on hand to determine the need for reserves for excess and obsolete inventories based primarily on our estimated forecast of product sales. Our estimate of future product demand may prove to be inaccurate, in which case we may have understated or overstated our reserve for excess and obsolete inventories.

Carrying Value of Fixed and Intangible Assets

Our fixed assets and certain of our acquired rights to market our products have been recorded at cost and are being amortized on a straight-line basis over the estimated useful life of those assets. If indicators of impairment exist, we assess the recoverability of the affected long-lived assets by determining

whether the carrying value of such assets can be recovered through undiscounted future operating cash flows. If impairment is indicated, we measure the amount of such impairment by comparing the carrying value of the assets to the present value of the expected future cash flows associated with the use of the asset. Adverse changes regarding future cash flows to be received from long-lived assets could indicate that an impairment exists, and would require the write down of the carrying value of the impaired asset at that time.

During 2002, we recorded a non-cash charge of $1.7 million to impairment of intangible assets, which represents the write-off of the carrying value of the licensing fees associated with BrachySeed I-125 and BrachySeed Pd-103, as the carrying value will not be recoverable.

In October 2002, we entered into a five-year agreement with Matritech Inc. to be the sole distributor for Matritech's NMP22 BladderChek point-of-care test to urologists and oncologists in the United States. Retention of exclusivity rights depends upon meeting certain minimum annual purchases. We paid Matritech $150,000 upon the execution of the agreement, which was recorded as other assets in the accompanying consolidated balance sheet for the respective period and is being amortized over the five year estimated performance period of the agreement. We determined that we did not have any impairment regarding Matritech's license fee at December 31, 2002.

COMMITMENTS

As outlined in Notes 7, 10 and 16 of the Notes to our Consolidated Financial Statements, we have entered into various contractual obligations and commercial commitments. The following table summarizes our contractual obligations as of December 31, 2002:

Contractual Obligation	Less than 1 year	1 to 3 years	4 to 5 years	After 5 years	
Long-term debt	$ -	$ 2,280,000	$ -	$ -	$
Capital lease obligations	80,000	82,000	-	-	
Facility leases	609,000	899,000	103,000	-	
Other operating leases	228,000	8,000	-	-	
Manufacturing and research and development contracts	1,317,000	327,000	260,000	1,140,000	
Minimum royalty payments	1,000,000	2,000,000	2,000,000	7,000,000	1
Total	$ 3,234,000	$ 5,596,000	$ 2,363,000	$ 8,140,000	$1

In addition to the above, we are obligated to make certain royalty payments based on sales of the related product and certain milestone payments if our collaborative partners achieved specific development milestones or commercial milestones as outlined in Notes 5 and 7 of the Notes to our Consolidated Financial Statements.

In subsequent periods, we expect to provide funding for the development of the PSMA technologies through our joint venture with Progenics at even higher levels than the current year. Such funding amount may vary dependent upon, among other things, the results of the clinical trials and research and development activities, competitive and technological developments, and market opportunities.

Recently Enacted Accounting Pronouncements

In June 2002, the Financial Accounting Standards Board isssued Statement of Financial Accounting Standard No. 146, "Accounting for Exit or Disposal Activities." SFAS 146 addresses significant issues regarding the recognition, measurement and reporting of costs associated with exit and disposal activities, including restructuring activities. SFAS 146 also addresses recognition of certain costs related to terminating a contract that is not a capital lease, costs to consolidate facilities or relocate employees and termination of benefits provided to employees that are involuntarily terminated under the terms of a one-time benefit arrangement that is not an ongoing benefit arrangement or an individual deferred compensation contract. SFAS 146 is effective for exit or disposal activities that are initiated after December 31, 2002.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We do not have operations subject to risks of foreign currency fluctuations, nor do we use derivative financial instruments in our operations or investment portfolio. As of December 31, 2002, the Company had $2.3 million of debt outstanding with a fixed interest rate of 7%. We do not have exposure to market risks associated with changes in interest rates, as we have no variable interest rate debt outstanding. Changes in interest rates could expose us to market risk associated with a fixed interest rate debt. We do not believe that this note will have material exposure to market risks associated with interest rates.

Item 8. Financial Statements and Supplementary Data

The financial statements required by this Item 8 are submitted as a separate section of this Form 10-K.

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

The information required to be disclosed under this Item regarding former accountants was previously reported by the Company on: (i) a Current Report on Form 8-K filed with the Securities & Exchange Commission on May 20, 2002, and an amendment thereto filed with the Securities & Exchange Commission on May 22, 2002; and (ii) a Current Report on Form 8-K filed with the Securities & Exchange Commission on May 24 2002.

PART III

Item 10. Directors and Executive Officers of the Company

The information relating to our directors, nominees for election as directors and executive officers under the headings "Election of Directors", "Executive Officers" and "Compliance with Section 16(a) of the Exchange Act" in our definitive proxy statement for the 2003 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 11. Executive Compensation

The discussion under the heading "Executive Compensation" in our definitive proxy statement for the 2003 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The discussion under the heading "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" in our definitive proxy statement for the 2003 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 13. Certain Relationships and Related Transactions

The discussion under the heading "Certain Relationships and Related Transactions" in our definitive proxy statement for the 2003 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 14. Controls and Procedures

(1) Evaluation of disclosure controls and procedures. Based on their evaluation of the Company's disclosure controls and procedures (as defined in Rules 13a-14(c) and 15d-14(c) under the Securities Exchange Act of 1934) as of a date within 90 days of the filing date of this Annual Report on Form 10-K, the Company's chief executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities & Exchange Commission's rules and forms and are operating in an effective manner.

(2) Changes in internal controls. There were no significant changes in the Company's internal controls or in other factors that could significantly affect these controls subsequent to the date of their most recent evaluation.

PART IV

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

(a) Documents filed as a part of the Report:

(1) and (2) The response to this portion of Item 15 is submitted as a separate section of this Form 10-K.

(3) Exhibits -

Exhibit No.	
3.1	Restated Certificate of Incorporation of Cytogen Corporation, as amended. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended June 30, 1996, and incorporated herein by reference.
3.2	Certificate of Amendment to the Restated Certificate of Incorporation of Cytogen Corporation, as amended. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended June 30, 2000, and incorporated herein by reference.
3.3	Certificate of Amendment to the Restated Certificate of Incorporation, as amended, as filed with the Secretary of State of the State of Delaware on October 25, 2002. Filed as an exhibit to the Company's Current Report on Form 8-K, filed with the Commission on October 25, 2002, and incorporated herein by reference.
3.4	Certificate of Designations of Series C Junior Participating Preferred Stock of Cytogen Corporation. Filed as an exhibit to the Company's Registration Statement on Form S-8 (File No. 333-59718), filed with the Commission on April 27, 2001, and incorporated herein by reference.
3.5	By-Laws of Cytogen Corporation, as amended. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference.
4.1	Amended and Restated Rights Agreement, dated as of October 19, 1998 between Cytogen Corporation and Chase Mellon Shareholder Services, L.L.C., as Rights Agent. The Amended and Restated Rights Agreement includes the Form of Certificate of Designations of Series C Junior Participating Preferred Stock as Exhibit A, the form of Right Certificate as Exhibit B and the Summary of Rights as Exhibit C. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended September 30, 1998, and incorporated herein by reference.
10.1	Lease Agreement, dated as of March 16, 1987, by and between Peregrine Investment Partners I, as lessor, and Cytogen Corporation, as lessee. Filed as an exhibit to Form 10-K Annual Report for Year Ended January 2, 1988, and incorporated herein by reference.
10.2	Amendment, dated as of October 16, 1987, to Lease Agreement between Peregrine Investment Partners I and Cytogen Corporation. Filed as an exhibit to Form S-8 Registration Statement (No. 33-30595), and incorporated herein by reference.
10.3	1989 Employee Stock Option Plan. Filed as an exhibit to Form S-8 Registration Statement (No. 33-30595), and incorporated herein by reference. +
10.4.1	1988 Stock Option Plan for Non-Employee Directors. Filed as an exhibit to Form S-8 Registration Statement (No. 33-30595), and incorporated herein by reference. +
10.4.2	Amendment to the Cytogen Corporation 1988 Stock Option Plan for Non-Employee Directors dated May 22, 1996. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended June 30, 1996, and

incorporated herein by reference. +

10.5 Standard Form of Indemnification Agreement entered into between Cytogen Corporation and its officers, directors, and consultants. Filed as an exhibit to Amendment No. 1 to Form S-1 Registration Statement (No. 33-31280), and incorporated herein by reference. +

10.6 1989 Stock Option Policy for Outside Consultants. Filed as an exhibit to Amendment No. 1 to Form S-1 Registration Statement (No. 33-31280), and incorporated herein by reference. +

10.7.1 License Agreement dated as of March 31, 1993 between Cytogen Corporation and The Dow Chemical Company. Filed as an exhibit to Form 10-Q/A-1 Amendment to Quarterly Report for the quarter ended July 3, 1993, and incorporated herein by reference.*

10.7.2 Amendment of the License Agreement between Cytogen Corporation and The Dow Chemical Company dated September 5, 1995. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended March 31, 1996, and incorporated herein by reference.*

10.7.3 Second Amendment to the License Agreement between Cytogen Corporation and The Dow Chemical Company dated May 20, 1996. Filed as an exhibit to Form 10-Q/A-1 Amendment to Quarterly Report for the quarter ended June 30, 1996, and incorporated herein by reference.*

10.8 1992 Cytogen Corporation Employee Stock Option Plan II, as amended. Filed as an exhibit to Form S-4 Registration Statement (No. 33-88612), and incorporated herein by reference. +

10.9 License Agreement, dated March 10, 1993, between Cytogen Corporation and The University of North Carolina at Chapel Hill, as amended. Filed as an exhibit to Form 10-K Annual Report for the year ended December 31, 1994, and incorporated herein by reference.*

10.10 Option and License Agreement, dated July 1, 1993, between Cytogen Corporation and Sloan-Kettering Institute for Cancer Research. Filed as an exhibit to Form 10-K Annual Report for the year ended December 31, 1994, and incorporated herein by reference.*

10.11 Cytogen Corporation Amended and Restated 1995 Stock Option Plan. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference. +

10.12 Horosziewicz - Cytogen Agreement, dated April 20, 1989, between Cytogen Corporation and Julius S. Horosziewicz, M.D., DMSe. Filed as an exhibit to Form 10-K Annual Report for the year ended December 31, 1995, and incorporated herein by reference.*

10.13 Marketing and Co-Promotion Agreement between Cytogen Corporation and C.R. Bard, Inc. effective August 1, 1996. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended September 30, 1996, and incorporated herein by reference.*

10.14 Severance Agreement effective as of March 26, 1996 between Cytogen Corporation and John D. Rodwell, Ph.D. Filed as an exhibit to Form 10-K Annual Report for the year ended December 31, 1996, and incorporated herein by reference. +

10.15 Cytogen Corporation Employee Stock Purchase Plan, as amended. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference. +

10.16 License Agreement between Targon Corporation and Elan Corporation, plc dated July 21, 1997. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended June 30, 1997, and incorporated herein by reference.*

10.17 Convertible Promissory Note dated as of August 12, 1998 between Cytogen Corporation and Elan International Services, Ltd. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended June 30, 1998, and incorporated herein by reference.

47

10.18 Employment agreement effective as of August 20, 1998 between Cytogen Corporation and H. Joseph Reiser. Filed as an exhibit to Form 10-Q Quarterly Report for the quarter ended September 30, 1998, and incorporated herein by reference. +

10.19 License Agreement by and between Berlex Laboratories, Inc. and Cytogen Corporation dated as of October 28, 1998. Filed as an exhibit to Form 10-Q/A-1 Amendment to Quarterly Report for the quarter ended September 30, 1998, and incorporated herein by reference.

10.20 Manufacturing Space Agreement between Bard BioPharma L.P. and Cytogen Corporation dated as of January 7, 1999. Filed as an exhibit to Form S-1/A-1 Amendment to Registration Statement, filed with the Commission on January 27, 1999, and incorporated herein by reference.

10.21 Employment Agreement effective as of June 10, 1997 between Cytogen Corporation and Donald F. Crane, Jr. Filed as an exhibit to Form 10-K Annual Report for the year ended December 31, 1999, and incorporated herein by reference. +

10.22 Amended and Restated 1999 Stock Option Plan for Non-Employee Directors. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference.

10.23 Strategic Alliance Agreement between AxCell Biosciences Corporation and InforMax, Inc. dated as of September 15, 1999. Filed as an exhibit to Form 10-K Annual Report for the year ended December 31, 1999, and incorporated herein by reference.*

10.24 AxCell Biosciences Corporation Employee Stock Option Plan. Filed as an exhibit to Form 10-K Annual Report for the year ended December 31, 1999, and incorporated herein by reference. +

10.25 Master Loan and Security Agreement No. S7600 among Cytogen Corporation, AxCell Biosciences Corporation and Finova Capital Corporation dated December 30, 1999. Filed as an exhibit to Form 10-K Annual Report for the year ended December 31, 1999, and incorporated herein by reference.

10.26 Amendment No. 1 to Marketing and Co-Promotion Agreement effective as of January 1, 2000 by and between Cytogen Corporation and C.R. Bard, Inc. Filed as an exhibit to the Company's Quarterly Report on Form

10-Q for the quarter ended June 30, 2000, and incorporated herein by reference.

10.27 License and Marketing Agreement by and between Cytogen Corporation and Advanced Magnetics, Inc. dated August 25, 2000. Filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2000, and incorporated herein by reference.*

10.28 Development and Manufacturing Agreement by and between Cytogen Corporation and DSM Biologics Company B.V. dated July 12, 2000. Filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2000, and incorporated herein by reference.*

10.29 Common Stock Purchase Agreement, dated September 29, 2000, by and between Cytogen Corporation and Acqua Wellington North American Equities Fund, Ltd. Filed as an exhibit to the Company's Current Report on Form 8-K, filed with the Commission on October 5, 2000, and incorporated herein by reference.

10.30 Common Stock Purchase Agreement, dated October 4, 2000, by and between Cytogen Corporation and Acqua Wellington North American Equities Fund, Ltd. Filed as an exhibit to the Company's Current Report on Form 8-K, filed with the Commission on October 12, 2000, and incorporated herein by reference.

10.31 Written Compensatory Agreement by and between Cytogen Corporation and H. Joseph Reiser dated August 24, 1998, as revised on July 11, 2000. Filed as an exhibit to the Company's Registration Statement on Form S-8 (File No. 333-48454), filed with the Commission on October 23, 2000, and incorporated herein by reference. +

10.32 Written Compensatory Agreement by and between Cytogen Corporation and Lawrence Hoffman dated July 10, 2000. Filed as an exhibit to the Company's Registration Statement on Form S-8 (File No. 333-48454), filed with the Commission on October 23, 2000, and incorporated herein by reference. +

10.33 Product Manufacturing and Supply Agreement by and between Cytogen Corporation and Draximage Inc. dated December 5, 2000. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2000, and incorporated herein by reference. *

10.34 License and Distribution Agreement by and between Cytogen Corporation and Draximage Inc. dated December 5, 2000. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2000, and incorporated herein by reference. *

10.35 Form of Executive Change of Control Severance Agreement by and between the Company and each of its Executive Officers. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2001, and incorporated herein by reference. +

10.36.1 Lease Agreement by and between Newtown Associates, L.P. and AxCell Biosciences Corporation dated as of July 23, 1999. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2001, and incorporated herein by reference.

10.36.2 First Amendment to the Lease Agreement by and between 826 Newtown Associates, L.P. and AxCell Biosciences Corporation dated as of March 16, 2001. Filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2001, and incorporated herein by reference.

10.37 Cytogen Corporation Stock Payment Bonus Plan Program. Filed as an exhibit to the Company's Registration Statement on Form S-8 (File No. 333-58384), filed with the Commission on April 6, 2001, and incorporated herein by reference. +

10.38 MFS Fund Distributors, Inc. 401(K) Profit Sharing Plan and Trust. Filed as an exhibit to the Company's Registration Statement on Form S-8 (File No. 333-59718), filed with the Commission on April 27, 2001, and incorporated herein by reference. +

10.39 Adoption Agreement for MFS Fund Distributors, Inc. Non-Standardized 401(K) Profit Sharing Plan and Trust, with amendments. Filed as an exhibit to the Company's Registration Statement on Form S-8 (File No. 333-59718), filed with the Commission on April 27, 2001, and incorporated herein by reference.

10.40 Cytogen Corporation Performance Bonus Plan with Stock Payment Program. Filed as an exhibit to Company's Registration Statement on Form S-8 (File No. 333-75304), filed with the Commission on December 17, 2001, and incorporated herein by reference. +

10.41 Share Purchase Agreement by and between Cytogen Corporation and the State of Wisconsin Investment Board dated as of June 18, 2001. Filed as an exhibit to the Company's Current Report on Form 8-K, filed with the Commission on June 19, 2001, and incorporated herein by reference.

10.42 Share Purchase Agreement by and between Cytogen Corporation and the State of Wisconsin Investment Board dated as of January 18, 2002. Filed as an exhibit to the Company's Current Report on Form 8-K, filed with the Commission on January 24, 2002, and incorporated herein by reference.

10.43 Limited Liability Company Agreement of PSMA Development Company LLC by and between Cytogen Corporation, Progenics Pharmaceuticals, Inc. and the PSMA Development Company LLC dated June 15, 1999. Filed as an exhibit to the Company's Registration Statement on Form S-3, filed with the Commission on July 20, 1999, and incorporated herein by reference.

10.44 Amendment No. 1 to Limited Liability Company Agreement of PSMA Development Company LLC by and between Cytogen Corporation, Progenics Pharmaceuticals, Inc. and PSMA Development Company LLC dated as of March 22, 2002. Filed as an exhibit to the Company's Quarterly Report on Form 10-Q, filed with the Commission on May 14, 2002, and incorporated herein by reference.

10.45 Sublease Agreement by and between Cytogen Corporation and Hale and Dorr LLP dated as of May 23, 2002. Filed as an exhibit to the Company's Quarterly Report on Form 10-Q, filed with the Commission on August 14, 2002, and incorporated herein by reference.

10.46 Addendum to Stock Exchange Agreement among Cytogen Corporation and the Shareholders and Debtholders of Prostagen, Inc. dated as of May

14, 2002, and amended as of August 13, 2002. Filed as an exhibit to the Company's Quarterly Report on Form 10-Q, filed with the Commission on August 14, 2002, and incorporated herein by reference.

10.47 Distribution Agreement by and between Cytogen Corporation and Matritech Inc. dated October 18, 2002. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference. **

10.48 Written Compensatory Agreement by and between Cytogen Corporation and Michael D. Becker dated December 17, 2002. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference. +

10.49 Contract Manufacturing Agreement by and between Cytogen Corporation and Laureate Pharma L.P. dated January 15, 2003. Filed herewith. **

10.50 Quality Agreement by and between Cytogen Corporation and Laureate Pharma L.P. dated January 15, 2003. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference. **

16.1 Letter from Arthur Andersen LLP to the Securities and Exchange Commission dated May 20, 2002. Filed as an exhibit to the Company's Current Report on Form 8-K, filed with the Commission on May 20, 2002, and incorporated herein by reference.

16.2 Letter from Arthur Andersen LLP to the Securities and Exchange Commission dated May 22, 2002. Filed as an exhibit to the Company's Current Report on Form 8-K/A, filed with the Commission on May 22, 2002, and incorporated herein by reference.

16.3 Letter from Arthur Andersen LLP to the Securities and Exchange Commission dated May 24, 2002. Filed as an exhibit to the Company's Current Report on Form 8-K, filed with the Commission on May 24, 2002, and incorporated herein by reference.

21 Subsidiaries of Cytogen Corporation. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference.

23.1 Consent of KPMG LLP. Filed herewith.

23.2 Consent of PricewaterhouseCoopers. Filed herewith.

31.1 Certification of President and Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. Filed herewith.

31.2 Certification of Vice President and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. Filed herewith.

32.1 Certification of President and Chief Executive Officer pursuant to U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. Filed herewith.

32.2 Certification of Vice President and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. Filed herewith.

99.1 Code of Ethics of Cytogen Corporation adopted by the Company as of March 2003. Filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Commission on March 31, 2003, and incorporated herein by reference.

+ Management contract or compensatory plan or arrangement.

* We have received confidential treatment of certain provisions contained in this exhibit pursuant to an order issued by the Securities and Exchange Commission. The copy filed as an exhibit omits the information subject to the confidentiality grant.

** We have submitted an application for confidential treatment with the Securities and Exchange Commission with respect to certain provisions contained in this exhibit. The copy filed as an exhibit omits the information subject to the confidentiality application.

(b) Reports on Form 8-K:

We filed two current reports on Form 8-K during the quarter ended December 31, 2002.

On October 25, 2002, we filed a current report on Form 8-K with the Securities and Exchange Commission reporting the results of our special meeting of stockholders held on October 25, 2002, and that we filed a Certificate of Amendment to our Restated Certificate of Incorporation, as amended, with the Secretary of State of the State of Delaware to affect a one-for-ten reverse stock split of all outstanding, issued and authorized shares of our common Stock, $0.01 par value per share.

On December 17, 2002, we filed a current report on Form 8-K with the Securities and Exchange Commission reporting certain changes to our senior management team.

(c) Exhibits:

The Exhibits filed with this Form 10-K are listed above in response to Item 15(a)(3).

(d) Financial Statement Schedules:

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on the 19th day of September 2003.

Cytogen Corporation

By: /s/ Michael D. Becker

Michael D. Becker,
President and Chief Executive Officer

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

Signature		Title
By:	/s/ Michael D. Becker Michael D. Becker	Chief Executive Officer and President (Principal Executive Officer and Director)
By:	/s/ Christopher P. Schnittker Christopher P. Schnittker	Vice President, Chief Financial Officer (Principal Financial and Accounting Officer)
By:	/s/ John E. Bagalay, Jr. John E. Bagalay, Jr.	Director
By:	/s/ Allen Bloom Allen Bloom	Director
By:	/s/ Stephen K. Carter Stephen K. Carter	Director
By:	/s/ James A. Grigsby James A. Grigsby	Director and Chairman of the Board
By:	/s/ Robert F. Hendrickson Robert F. Hendrickson	Director
By:	/s/ Kevin G. Lokay Kevin G. Lokay	Director
By:	/s/ H. Joseph Reiser H. Joseph Reiser	Director

Form 10-K Item 15(a)(1) and (2)

CYTOGEN CORPORATION AND SUBSIDIARIES

(1) Index to Financial Statements

INDEPENDENT AUDITOR'S REPORT

The Board of Directors and Stockholders
Cytogen Corporation:

We have audited the accompanying consolidated balance sheet of Cytogen Corporation and subsidiaries as of December 31, 2002 and the related consolidated statements of operations, stockholders' equity and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit. We did not audit the financial statements of PSMA Development Company LLC (a development stage enterprise), a 50% owned unconsolidated investee company. The Company's equity interest in the loss of PSMA Development Company LLC was $2.9 million for the year ended December 31, 2002. The financial statements of PSMA Development Company LLC were audited by other auditors whose report has been furnished to us, and our opinion, insofar as it relates to the amounts included for PSMA Development Company LLC, is based solely on the report of the other auditors. The consolidated financial statements of Cytogen Corporation and subsidiaries as of December 31, 2001 and for each of the years in the two-year period ended December 31, 2001, were audited by other auditors who have ceased operations. Those auditors' report dated February 5, 2002, on those consolidated financial statements was unqualified before the restatement described in Note 1 to the consolidated financial statements, and included an explanatory paragraph that

described the change in Cytogen Corporation's method of accounting for revenue recognition discussed in Note 1 to the consolidated financial statements.

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

In our opinion, based on our audit and the report of other auditors, the 2002 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Cytogen Corporation and subsidiaries as of December 31, 2002, and the results of their operations and their cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

As discussed above, the consolidated financial statements of Cytogen Corporation and subsidiaries as of December 31, 2001 and for each of the years in the two-year period ended December 31, 2001, were audited by other auditors who have ceased operations. As described in Note 1, the Company implemented a reverse stock split in 2002, and the number of shares and per share amounts in the accompanying 2001 and 2000 consolidated financial statements have been restated to reflect such reverse stock split. We audited the adjustments that were applied to restate the number of shares and per share amounts reflected in the 2001 and 2000 consolidated financial statements for the reverse stock split. In our opinion, such adjustments are appropriate and have been properly applied. However, we were not engaged to audit, review or apply any procedures to the 2001 and 2000 consolidated financial statements of Cytogen Corporation and subsidiaries, other than with respect to such adjustments and, accordingly, we do not express an opinion or any form of assurance on the 2001 and 2000 consolidated financial statements taken a whole.

/s/ KPMG LLP

Princeton, New Jersey
January 31, 2003

Report of Independent Accountants

To the Board of Directors and Stockholders of PSMA Development Company LLC:

In our opinion, the accompanying balance sheets and the related statements of operations, of stockholders' (deficit) equity and of cash flows present fairly, in all material respects, the financial position of PSMA Development Company LLC (the "Company") (a development stage enterprise) at December 31, 2001 and 2002,

and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2002 and the cumulative period from June 15, 1999 (inception) to December 31, 2002, in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audit of these financial 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 audit provides a reasonable basis for our opinion.

PricewaterhouseCoopers LLP

New York, New York
February 14, 2003, except for Notes 1 and 3,
as to which the date is March 28, 2003

THE FOLLOWING IS A COPY OF A REPORT ISSUED BY ARTHUR ANDERSEN LLP, AND INCLUDED IN CYTOGEN CORPORATION'S ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2001. THIS REPORT HAS NOT BEEN REISSUED BY ARTHUR ANDERSEN, AND ARTHUR ANDERSEN HAS NOT CONSENTED TO ITS USE IN THIS ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2002. ALL NUMBERS SET FORTH IN THIS FORM 10-K REFLECT THE EFFECT OF A ONE-FOR-TEN REVERSE STOCK SPLIT EFFECTIVE OCTOBER 25, 2002.

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To Cytogen Corporation:

We have audited the accompanying consolidated balance sheets of Cytogen Corporation (a Delaware Corporation) and Subsidiaries as of December 31, 2001 and 2000, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2001. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence

supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Cytogen Corporation and Subsidiaries as of December 31, 2001 and 2000 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001, in conformity with accounting principles generally accepted in the United States.

As explained in Note 1 to the consolidated financial statements, effective January 1, 2000, the Company changed its method of accounting for revenue recognition.

ARTHUR ANDERSEN LLP

Philadelphia, Pennsylvania
February 5, 2002

CYTOGEN CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(All amounts in thousands, except share and per share data)

	December 31,	
	2002	20
ASSETS:		
Current Assets:		
Cash and cash equivalents	$ 14,725	$ 11
Marketable securities	-	1
Receivable on income tax benefit sold	-	1
Accounts receivable, net	1,778	1
Inventories	1,262	1
Other current assets	643	
Total current assets	18,408	17
Property and Equipment, net	1,072	1
Other Assets	414	1
	$ 19,894	$ 21
LIABILITIES AND STOCKHOLDERS' EQUITY:		

Current Liabilities:		
Current portion of long-term liabilities	$ 80	$
Accounts payable and accrued liabilities	4,427	5
Deferred revenue		