CYTOGEN CORP Form S-3/A August 12, 2003

As filed with the Securities and Exchange Commission on August 12, 2003 Registration Statement No. 333-106797

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

AMENDMENT NO. 1 TO
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

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 Number)

650 College Road East, 3rd Floor Princeton, New Jersey 08540 (609) 750-8200

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Donald L. Novajosky, Esq.

Director, Legal Cytogen Corporation 650 College Road East, 3rd Floor Princeton, New Jersey 08540 (609) 750-8222

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

COPY TO:

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Hale and Dorr LLP
650 College Road East, 4th Floor
Princeton, New Jersey 08540
(609) 750-7600

Approximate date of commencement of proposed sale to public: As soon as practicable after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. $[\]$

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. [X]

| If this | Form | is file | ed to re | gister | additio | onal : | securit | cies | for a | n offerin | g |
|--------------|--------|---------|----------|----------|---------|--------|---------|---------|-------|-----------|---|
| pursuant to | Rule | 462(b) | under t | he Secur | ities | Act, | please | e checi | k the | followin | g |
| box and list | the | Securit | ties Act | regist | ration | state | ement r | number | of th | ne earlie | r |
| effective re | egistr | ation s | statemen | t for th | e same | offer | ing | | | | |

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ______.

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. $[\]$

CALCULATION OF REGISTRATION FEE

| Title Of Shares To Be Registered | Amount To Be Registered | Proposed Maximum Aggregate Price Per Unit(1) | Proposed Maximum Aggregate Offering Price(1) | Amount Of Registration Fee(2) |
|---|-------------------------------|--|--|-------------------------------------|
| Common stock, \$.01 par value per share | 1,368,422 | \$7.43 | \$10,167,375 | \$822.54 |

- (1) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended, and based upon the average of the high and low prices on the Nasdaq National Market on June 26, 2003.
- (2) The Company has previously paid such filing fee to the Commission on July 3, 2003.

THE COMPANY HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE COMPANY SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8 (A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8 (A), SHALL DETERMINE.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THE SELLING STOCKHOLDERS NAMED IN THIS PROSPECTUS MAY NOT SELL THESE SECURITIES

UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND THE SELLING STOCKHOLDERS ARE NOT SOLICITING OFFERS TO BUY THESE SECURITIES IN ANY JURISDICTION WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED AUGUST 12, 2003

PROSPECTUS

CYTOGEN CORPORATION

1,368,422 SHARES OF COMMON STOCK

This prospectus relates to resales of shares of up to 1,368,422 shares of our common stock, \$0.01 par value per share, all of which are being sold by certain institutional investors set forth in this prospectus under the section titled "Selling Stockholders" on page 19. We are not selling any shares under this prospectus. Accordingly, we will not receive any proceeds from the sale of shares hereunder.

Our common stock is traded on the Nasdaq National Market under the symbol "CYTO." On June 25, 2003, the closing sale price of our common stock on Nasdaq was \$7.09 per share. You are urged to obtain current market quotations for our common stock.

INVESTING IN OUR COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. SEE "RISK FACTORS" COMMENCING ON PAGE 4.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is August [], 2003.

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Reverse Stock Split....

Risk Factors....

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| We have a history of operating losses and an accumulated deficit and expect to incur losses in the future |
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| We depend on sales of ProstaScint and Quadramet for the majority of our near- term revenues |
| We depend on acceptance of our products by the medical community for the continuation of our revenue |
| The reduced workforce at AxCell may not be able to implement AxCell's business plan |
| We may need to raise additional capital, which may not be available |
| Our capital raising efforts may dilute stockholder interests |
| We may need to raise funds other than through the issuance of equity securities |
| 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 |
| Our PSMA product development program is novel and, consequently, inherently risky |
| 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 |
| Competition in our field is intense and likely to increase |
| We rely heavily on our collaborative partners |
| Our business could be harmed if certain agreements expire or are terminated early |
| We have limited sales, marketing and distribution capabilities for our products |
| There are risks associated with the manufacture and supply of our products |
| Failure of consumers to obtain adequate reimbursement from third-party payors could limit market acceptance and affect pricing of our products |
| If we are unable to comply with applicable governmental regulation we may not be able to continue our operations |
| 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 depend on attracting and retaining key personnel |
| 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 involves environmental risks that may result in liability |
| Our intellectual property is difficult to protect |
| |

| Our security measures may not protect our unpatented proprietary technology |
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| We are currently subject to patent litigation |
| Our stock price has been and may continue to be volatile, and your investment in our stock could decline in value or fluctuate significantly |
| We have adopted various anti-takeover provisions which may affect the market price of our common stock and prevent or frustrate attempts by our stockholders to replace or remove our management team |
| The liquidity of our common stock could be adversely affected if we are delisted from The Nasdaq National Market |
| A large number of our shares are eligible for future sale which may adversely impact the market price of our common stock |
| Because we do not intend to pay, and have not paid, any cash dividends on our shares of common stock, our stockholders will not be able to receive a return on their shares unless the value of our shares appreciates and they sell them |
| Special Note Regarding Forward-Looking Statements |
| Use of Proceeds |
| Selling Stockholders |
| Plan of Distribution |
| Legal Matters |
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PROSPECTUS SUMMARY

THIS SUMMARY HIGHLIGHTS IMPORTANT FEATURES OF THIS OFFERING AND THE INFORMATION INCLUDED OR INCORPORATED BY REFERENCE IN THIS PROSPECTUS. THIS SUMMARY DOES NOT CONTAIN ALL OF THE INFORMATION THAT YOU SHOULD CONSIDER BEFORE INVESTING IN OUR COMMON STOCK. YOU SHOULD READ THE ENTIRE PROSPECTUS CAREFULLY, ESPECIALLY THE RISKS OF INVESTING IN OUR COMMON STOCK DISCUSSED UNDER "RISK FACTORS."

CYTOGEN CORPORATION

Cytogen Corporation is a product-driven, oncology-focused biopharmaceutical company with an established and growing product line in prostate cancer and other areas of oncology. Our FDA-approved products include ProstaScint(R) (a monoclonal antibody-based imaging agent used to image the extent and spread of prostate cancer); Quadramet(R) (a therapeutic agent marketed for the relief of bone pain in prostate and other types of cancer) and NMP22 BladderChek(TM) (a point-of-care, in vitro diagnostic test for bladder cancer). Our pipeline is comprised of product candidates at various stages of clinical development, including fully human monoclonal antibodies and cancer vaccines based on PSMA prostate specific membrane antigen technology, or PSMA technologies, which we exclusively licensed from Memorial Sloan-Kettering Cancer Center. We also conduct research in cellular signaling through our subsidiary, AxCell Biosciences.

In addition to the products listed above, 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 in June, 2000, in an effort to bring Combidex to market.

We have had a history of operating losses since our inception. We had a net loss of \$2.0 million for the three months ended March 31, 2003 and had a net loss of \$15.7 million for the year ended December 31, 2002. Although we continually look to expand our product pipeline, we currently rely on two products, ProstaScint and Quadramet, for substantially all of our revenues. In addition, we have, from time to time, ceased sales of certain products, such as BrachySeed and OncoScint CR/OV, that we previously believed would generate significant revenues for our business. Our products are subject to significant regulatory review by the FDA and other federal and state agencies, which requires significant time and expenditures in seeking product approvals. In addition, we rely on collaborative partners to a significant degree to manufacture our products, to secure raw materials, and to provide licensing rights to their proprietary products for us to sell and market to others.

We are a Delaware corporation. We were incorporated and began operations in 1980 under the name Hybridex, Inc. and changed our name to Cytogen Corporation in April 1980. Our executive offices are located at 650 College Road East, Suite 3100, Princeton, New Jersey 08540, our telephone number is (609) 750-8200 and our Internet address is http://www.cytogen.com The information on our Internet website is not incorporated by reference in this prospectus. Unless the context otherwise requires references in this prospectus to "Cytogen", the "Company," "we," "us," and "our" refer to Cytogen Corporation and our subsidiaries.

ProstaScint(R) and OncoScint(R) are registered United States trademarks of Cytogen Corporation. All other trade names, trademarks or service marks appearing in this Registration Statement on Form S-3 are the property of their respective owners, and not the property of Cytogen Corporation or any of our

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subsidiaries. Quadramet (R) is a trademark of The Dow Chemical Company used under license by Cytogen.

THE OFFERING

Use of proceeds...... Cytogen will not receive any proceeds from

the sale of shares in this offering

Nasdaq National Market symbol..... CYTO

REVERSE STOCK SPLIT

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 Registration Statement on Form S-3 reflect the effect of such one-for-ten reverse stock split.

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RISK FACTORS

INVESTING IN OUR COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. YOU SHOULD CAREFULLY CONSIDER THE RISKS AND UNCERTAINTIES DESCRIBED BELOW BEFORE PURCHASING OUR COMMON STOCK. IF ANY OF THE FOLLOWING RISKS ACTUALLY OCCUR, OUR BUSINESS, FINANCIAL CONDITION OR RESULTS OF OPERATIONS WOULD LIKELY SUFFER. IN THAT CASE, THE TRADING PRICE OF OUR COMMON STOCK COULD FALL, AND YOU MAY LOSE ALL OR PART OF THE MONEY YOU PAID TO BUY OUR COMMON STOCK.

WE HAVE A HISTORY OF OPERATING LOSSES AND AN ACCUMULATED DEFICIT AND EXPECT TO INCUR LOSSES IN THE FUTURE.

Given the high level of research and development and related expenditures associated with our business and our inability to generate revenues sufficient to cover such expenditures, we have had a history of operating losses since our inception. We had a net loss of \$2.0 million for the three months ended March 31, 2003 and had a net loss of \$15.7 million for the year ended December 31, 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 \$12.1 million for the year ended December 31, 2001. We had a net loss of \$27.3 million for the year ended December 31, 2000 which included 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 \$358.3 million as of March 31, 2003.

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.

To date, we have taken affirmative steps to reduce our trend of operating losses. Such steps include, among other things: (i) the effective monitoring and management of expenses relating to research and development, selling and marketing, and other general and administrative matters; (ii) undergoing steps to realign and implement our focus as a product-driven, oncology-focused biopharmaceutical company; (iii) the establishment and maintenance of our in-house specialty sales force; (iv) enhancing our marketed product portfolio through marketing alliances and strategic arrangements such as we have done with the Combidex product, which we intend to market if this product is approved by the FDA; (v) the reacquisition of North American and Latin American marketing rights to Quadramet from Berlex Laboratories in August 2003; and (vi) the addition of NMP22 BladderChek to our marketed product portfolio.

Although we have taken these affirmative steps, we may never be able to successfully implement them, and our ability to generate and sustain significant additional revenues or achieve profitability will depend upon the factors discussed elsewhere in this "Risk Factors" 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.

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WE DEPEND ON SALES OF PROSTASCINT AND QUADRAMET FOR THE MAJORITY OF OUR 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 royalties from Quadramet accounted for approximately 64% and 15%, respectively, of our product related revenues; and in the three-months ended March 31, 2003, revenues from ProstaScint and royalties from Quadramet accounted for approximately 69% and 19%, respectively, of our product related revenues. If ProstaScint or Quadramet do not achieve broader market acceptance, either because we fail to effectively market such products or our competitors introduce competing products, we may not be able to generate sufficient revenue to become profitable. 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. In April 2003, we entered into an agreement with Draximage formally terminating each of these agreements.

Generating market acceptance and sales of our products is difficult, time consuming and uncertain. We launched ProstaScint in October 1996, Quadramet in March 1997, OncoScint CR/OV in December 1992, BrachySeed I-125 in February 2001, BrachySeed Pd-103 in May 2002 and NMP22 BladderChek in November 2002. Revenues

for ProstaScint grew from \$55,000 in 1996 to \$7.9 million in 2002. Royalties from sales of Quadramet went from \$3.3 million in 1997 to \$1.8 million in 2002. Royalties from sales of Quadramet in the initial years of sales were supported by a guaranteed minimum revenue arrangement with the third party licensor of Quadramet. OncoScint CR/OV was discontinued in December 2002 and the BrachySeed products were discontinued in January 2003. NMP22 BladderChek is a relatively new product for us. Currently, all of our revenues are derived from sales of ProstaScint, Quadramet and NMP22 BladderChek products, as well as certain license and contract revenues.

WE DEPEND ON ACCEPTANCE OF OUR PRODUCTS BY THE MEDICAL COMMUNITY FOR THE CONTINUATION OF OUR REVENUES.

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 by technologists and physicians and their acceptance of this product as part of their treatment practices. 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

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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 may be fewer than 100 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, such reduced workforce may not 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 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 CAPITAL RAISING EFFORTS MAY DILUTE STOCKHOLDER INTERESTS.

If we raise additional capital by issuing equity securities, the issuance will result in ownership dilution to our existing stockholders. The extent of such dilution will vary based upon the amount of capital raised.

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WE MAY NEED TO RAISE FUNDS OTHER THAN THROUGH THE ISSUANCE OF EQUITY SECURITIES.

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.

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 December 1992, we introduced OncoScint CR/OV, and subsequently ceased selling and marketing this product in December 2002. 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 January 2003, we discontinued our marketing and sale of the BrachySeed products. In November 2002, we began promoting NMP22 BladderChek to urologists in the

United States.

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;

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- 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. If we fail to develop such products, 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. The product candidates we develop, pursue or offer may not prove to be safe and effective, may not receive the necessary regulatory approvals, may be precluded by proprietary rights of third parties or may not ultimately achieve market acceptance. These product candidates will require substantial additional investment, laboratory development, clinical testing and regulatory approvals prior to their commercialization. We may experience difficulties, such as inability to receive timely regulatory approvals, 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. Our clinical trials may not demonstrate safety and efficacy of a proposed product, and therefore, may not 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. In addition, the FDA may, among other things, subsequently disapprove or may recall our product candidates that were previously approved. 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.

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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 products and product candidate 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.

The markets for therapeutic and diagnostic products that address prostate and bladder cancers are large. Our most significant competitors include various pharmaceutical and medical device companies, radiopharmaceutical distributors and biotechnology companies.

Metastron (Strontium-89), manufactured by Amerhsam Health and marketed by Galliel Medical, competes with Quadramet (Samarium-153 Lexidronam). The FDA recently approved a generic version of Sr-89 for bone pain palliation, which is marketed by Bio-Nucleonics Pharma as Strontium Chloride Sr-89 Injection, USP.

A single agent, Positron Emission Tomography (PET), competes with ProstaScint (Capromab pendetide). PET imaging agent, 18-F fluorodeoxyglucose-PET (FDG), is produced and distributed by various radiopharmaceutical suppliers (such as PETnet and Cardinal Health Nuclear Pharmacy Services). PET (FDG) may also be used to image lymph node metastasis in cancer patients, which may prove competitive to Combidex, following FDA approval, if received, and subsequent market introduction of Combidex.

Polymedco manufactures BTAstat, a point of care urine-based test approved for monitoring bladder cancer patients. BTAstat, marketed by Mentor, competes with NMP22 BladderChek (which we have licensed from Matritech). NMP22 BladderChek is, however, the only point of care urine-based test approved for both monitoring and diagnosis of bladder cancer. Matritech has retained rights to market NMP22 BladderChek 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.

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.

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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;
- 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 ProstaScint;
- 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 manufacturing and distribution activities, among others, these activities are outside our direct control and we rely on our partners to perform their obligations. 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 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. As a result, 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 CERTAIN AGREEMENTS EXPIRE OR ARE TERMINATED EARLY.

If our collaborative agreements expire or are terminated and we cannot renew or replace them on commercially reasonable terms, our business and financial results may suffer. For example, 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 which represented 20% of our product related revenues for the year ended December 31, 2002. In April 2003, we entered into an agreement with Draximage formally terminating each of these agreements. We no longer market and sell the BrachySeed products.

We are also 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

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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 these technologies 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, Quadramet 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. Effective August 1, 2003, we reacquired marketing rights to Quadramet from Berlex Laboratories, Inc. in North and Latin America, for an upfront payment of \$8.0 million and the obligation to pay royalties to Berlex on future sales of Quadramet. If our internal sales force is unable to successfully market Quadramet, our business and financial condition may be adversely affected. If we are unable to establish and maintain significant sales, marketing and distribution efforts within the United States, either internally or through arrangements with third parties, our business may be significantly and adversely affected. In locations outside of the United States, we have not established a selling presence.

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. If we are unable to successfully arrange for the manufacture of our products and product candidates, either because potential manufacturers are not cGMP compliant, are not available or charge excessive amounts, 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 Laureate's facility for continued manufacturing of the product until January 2002. We entered into a Development and Manufacturing Agreement with DSM Biologics Company B.V. in July 2000, which we intended would replace our arrangement with Laureate with respect to ProstaScint. Our relationship with DSM has subsequently terminated. 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 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

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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. If third-party payors determine that our products are not cost-effective, they may discontinue reimbursement to consumers. Alternatively, such reimbursement may not 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 may incur significant costs to comply with laws and regulations in the future or compliance with laws or regulations may create an unsustainable burden on our business.

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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, which may be a lengthy process. 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;
- 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.

Regulatory agency approval for a product or agent may not be received and may entail limitations on the indicated uses that could limit the potential market for any such product. For example, as disclosed in our press releases and periodic filings, we have exclusive United States marketing rights to Combidex, an ultrasmall superparamagnetic iron oxide contrast agent for magnetic resonance imaging of lymph nodes, that is pending clearance by the United States Food and Drug Administration. In June 2000, Advanced Magnetics received an approvable letter from the FDA with respect to Combidex. We are awaiting further information from the FDA regarding Combidex.

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,

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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, such as us, 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. If we are unsuccessful in defending against any such action, such action may 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 therefore we may not 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, resigned from his position for personal reasons. Michael D. Becker, our former 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 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

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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, Operations; (ii) Deborah Kaminsky, our Vice President of Sales and Marketing, shifted her work focus, and serves as our Vice President, Business Development; (iii) Rita Auld, our Director of Human Resources, was promoted to Vice President, Human Resources and Administration and Corporate Secretary; (iv) Corey Jacklin assumed the responsibilities of Senior Director of Sales; and (v) June Gobern was promoted to Senior Director of Marketing.

On December 17, 2002, we entered into a letter agreement with Michael D. Becker in connection with Mr. Becker's promotion to President and Chief Executive Officer of the Company. Under the terms of such letter agreement, Mr. Becker receives an annual base salary of \$250,000. Mr. Becker is also eligible to participate in our Cytogen Corporation Performance Bonus Plan, as and if approved by our Board of Directors, with a target bonus rate of 30% of base salary based upon performance objectives. Mr. Becker is also entitled to all existing Company benefits, at the sole discretion of the Board of Directors. In addition, Mr. Becker was granted options to purchase 200,000 shares of our common stock under our 1995 Stock Option Plan. Pursuant to the terms of the letter agreement, in the event we terminate Mr. Becker's employment for reasons other than for cause, as defined therein, Mr. Becker shall be entitled to receive twelve month's base pay and continuation of benefits under COBRA, and a pro rata portion of any incentive benefits earned through the date of termination.

Each of our executive officers is currently party to an Executive Change of Control Severance Agreement with Cytogen. Such agreements provide, generally, for the payment of twelve months' base salary, a pro-rata portion of such officer's bonus compensation, the continuation of all benefits, reasonable Company-paid outplacement assistance and certain other accrued rights, in the event such officer's employment with us is terminated in connection with certain changes in control.

We do not carry key person life insurance policies and we do not typically enter into long-term arrangements with our 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 and product liability claims may be asserted against us, our collaborators or our licensees. While we currently maintain product liability insurance in the amount of \$10.0 million, such coverage may not be adequate to protect us against future product liability claims. In addition, product liability insurance may not be available to us in the future on commercially reasonable terms, if at all. Although we have not had a history of claims payments that have exceeded our insurance coverage or available financial resources, if liability claims against us exceed our financial resources or coverage amounts, we may have to curtail or terminate our operations. In addition, while we currently maintain directors and officers liability insurance in the amount of \$20.0 million, such coverage may not be available on commercially reasonable terms or be adequate to cover any claims that we may be required to satisfy in the future. Our insurance coverage is

subject to industry standard and certain other limitations.

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

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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. We currently do not carry insurance for contamination or injury resulting from the use of such materials.

Two of our marketed products, ProstaScint and Quadramet utilize radioactive materials. ProstaScint is not manufactured or shipped as a radioactive material because the radioactive component is not added until the product has arrived at its final destination (a radiopharmacy). Laureate Pharma, the contract manufacturer of ProstaScint, holds a radioactive materials license because such license is required for certain release and stability tests of the product.

Quadramet, however, is manufactured and shipped as radioactive, and therefore, the manufacturing and distribution of this product must comply with regulations promulgated by the U.S. Nuclear Regulatory Commission. Bristol Myers Squibb manufacturers and distributes Quadramet, and is, therefore, subject to these regulations.

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 their 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, the degree of protection that may be afforded any patents we are issued or license from others may not be sufficient to protect our commercial interests. Furthermore, others may independently develop similar or alternative technologies, duplicate our technologies, or, if patents are issued to us, design around the patented technologies developed by us. 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. In addition, if challenged by others in litigation, the patents we have been issued, or which we have been assigned or we have licensed from others may be found invalid. It is

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also possible that our activities may 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.

Any licenses required under any such third-party patents or proprietary rights may not be 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 our or our competitors' pending patent applications will result in the issuance of valid patents which may significantly and adversely affect our business.

OUR SECURITY MEASURES MAY NOT 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. Although we are unaware of any unauthorized use or disclosure of our unpatented proprietary technology to date, these agreements may not provide adequate protection for our trade secrets, know-how or other proprietary information or prevent such 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 District 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 may incur material expenditures. 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. The parties subsequently presented expert testimony and submitted additional briefing. On April 29, 2003, our motion for summary judgment of non-infringement of all asserted claims was granted, plaintiffs' motion for summary judgment of infringement was denied and the case was ordered closed. On May 12, 2003, Plaintiffs filed a Notice of Appeal regarding this decision to the U.S. Court of Appeals for the Federal Circuit and subsequently filed such appeal on August 4, 2003.

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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 July 1, 2000 through June 30, 2003 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 |
|---------------|------|-----|
| | | |

| September 30, 2000 December 31, 2000 | \$113.75 \$71.88 | \$55.00 \$20.00 |
|---|---------------------|--------------------|
| March 31, 2001 June 30, 2001 | \$65.63 \$61.00 | \$23.13 \$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 |
| March 31, 2003 | \$3.90 | \$2.51 |
| June 30, 2003 | \$8.60 | \$2.80 |

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WE HAVE ADOPTED VARIOUS ANTI-TAKEOVER PROVISIONS WHICH MAY AFFECT THE MARKET PRICE OF OUR COMMON STOCK AND PREVENT OR FRUSTRATE ATTEMPTS BY OUR STOCKHOLDERS TO REPLACE OR REMOVE OUR MANAGEMENT TEAM.

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. In addition, these provisions make it more difficult to replace or remove our current management team in the event our stockholders believe this would be in the best interest of the Company and our stockholders.

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

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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.

If we do not continue to maintain compliance with this Marketplace Rule, or any other Listing Standards which may apply to us, we may once again face delisting from the Nasdaq National Market in the future.

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 June 18, 2003 we had 9,818,755 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 28,589 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 392,715 shares of common stock are issuable upon the exercise of outstanding stock options and an additional 422,153 shares of common stock are issuable upon the exercise of outstanding warrants, including the warrants issued to the selling stockholders in this prospectus. 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

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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 167,951 additional shares of common stock reserved for future issuance under our current stock options plans, 3,630 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 95,153 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 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 for future sale and issuance could depress the price of our common stock.

BECAUSE WE DO NOT INTEND TO PAY, AND HAVE NOT PAID, ANY CASH DIVIDENDS ON OUR SHARES OF COMMON STOCK, OUR STOCKHOLDERS WILL NOT BE ABLE TO RECEIVE A RETURN ON THEIR SHARES UNLESS THE VALUE OF OUR SHARES APPRECIATES AND 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. Therefore, our stockholders will not

be able to $\,$ receive a return on their $\,$ shares $\,$ unless $\,$ the value of our $\,$ shares appreciates and they sell them.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes or incorporates forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of historical facts, included or incorporated in this prospectus 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. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue $\hbox{reliance}\quad\hbox{on our forward-looking statements.}\quad\hbox{Actual results or events could}$ differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included or incorporated in this prospectus, particularly under the heading "Risk Factors", that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make. We do not assume any obligation to update any forward-looking statements. You should not unduly rely on forward-looking statements contained or incorporated by reference in this prospectus. Actual results or outcomes may differ materially from those predicted in our forward-looking statements due to the risks and uncertainties inherent in our business.

You should read and interpret any forward-looking statements together with the following documents:

- our most recent Annual Report on Form 10-K, as amended;
- our most recent quarterly report of Form 10-Q;
- the risk factors contained in this prospectus under the caption "Risk Factors"; and
- our other filings with the Securities and Exchange Commission.

Any forward-looking statement speaks only as of the date on which that statement is made. We will not update any forward-looking statement to reflect events or circumstances that occur after the date on which such statement is made.

USE OF PROCEEDS

We will not receive any proceeds from the sale of shares by the selling stockholders.

The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this

prospectus, including, without limitation, all registration and filing fees, Nasdaq listing fees and fees and expenses of our counsel and our accountants.

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SELLING STOCKHOLDERS

On June 6, 2003, we entered into a securities purchase agreement with certain institutional investors pursuant to which we issued and sold 1,052,632 shares of our common stock at \$4.75 per share and issued warrants to purchase 315,790 shares of our common stock at an exercise price of \$6.91 per share to the investors. Pursuant to the above private placement, we entered into a registration rights agreement with the institutional investors which requires us to register on a Form S-3, the shares issued to the investors and the shares issuable upon exercise of the warrants.

The following table sets forth, to our knowledge, certain information about the selling stockholders as of June 18, 2003.

Beneficial ownership is determined in accordance with the rules of the SEC, and includes voting or investment power with respect to shares. Shares of common stock issuable under stock options and warrants that are exercisable within 60 days after June 18, 2003 are deemed outstanding for computing the percentage ownership of the person holding the options and warrants but are not deemed outstanding for computing the percentage ownership of any other person. Unless otherwise indicated below, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock, except to the extent authority is shared by spouses under applicable law. The inclusion of any shares in this table does not constitute an admission of beneficial ownership for the person named below.

| Name of Selling Stockholder | Beneficially | f Common Stock / Owned Prior to ring (1) | Number of Shares of Common Stock Being Offered(1) | Shares of C Beneficia Of | |
|-----------------------------|--------------|--|---|--------------------------------|--|
| | Number | Percentage (2) | | Number | |
| Bonanza Master Fund Ltd.(3) | 684,211(5) | 6.86% | 684,211 | 0 | |
| BayStar Capital II LP(4) | 684,211(5) | 6.86% | 684,211 | 0 | |

^{*} Less than one percent.

(1) We do not know when or in what amounts a selling stockholder may offer shares for sale. The selling stockholders might not sell any or all of the shares offered by this prospectus. Because the selling stockholders may offer all or some of the shares pursuant to this offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares, we cannot estimate the number of the shares that will be held by the selling stockholders after completion of the offering. However, for purposes of this table, we have assumed that, after completion of the offering, none of the shares covered by this prospectus will be held by the selling stockholders.

- (2) Applicable percentage ownership is based on 9,818,755 shares of common stock outstanding as of June 18, 2003, plus any common stock equivalent or convertible securities held or shares beneficially owned by each such holder.
- Mr. Bernay Box, the General Partner of Bonanza Master Fund, Ltd., has voting, dispositive and investment powers over such securities. We have not previously had any material relationship with this selling stockholder.

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- (4) Mr. Steven Lamar, the Managing Partner of BayStar Capital II LP, has voting, dispositive and investment powers over such securities. We have not previously had any material relationship with this selling stockholder.
- (5) Includes 526,316 shares of common stock held by each such selling stockholder and 157,895 shares of common stock issuable to the selling stockholders upon exercise of a warrant held by each such selling stockholder. The exercise price to purchase each share of common stock pursuant to each such warrant is \$6.91 per share. Although the shares of common stock issuable upon exercise of the warrants are included herein, the terms of the warrants prohibit the exercise thereof in the event such exercise would cause the holder's beneficial ownership percentage to exceed 4.99%.

PLAN OF DISTRIBUTION

The selling stockholders and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the

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pledgees or secured parties may offer and sell the shares of common stock from time to time under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933, as amended, amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholders have informed us that it does not have any agreement or understanding, directly or indirectly, with any person to distribute the common stock.

We are required to pay all fees and expenses incident to the registration of the shares. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

LEGAL MATTERS

The validity of the shares of common stock offered hereby has been passed upon by Hale and Dorr LLP, Princeton, New Jersey.

EXPERTS

The consolidated financial statements of Cytogen Corporation and subsidiaries as of December 31, 2002 and for the year then ended, have been incorporated by reference herein and in the registration statement in reliance upon the reports of KPMG LLP, independent accountants, and PricewaterhouseCoopers LLP, independent accountants, incorporated by reference herein, and upon the authority of said firms as experts in accounting and auditing. The audit report covering the December 31, 2002 consolidated financial statements refers to KPMG LLP's audit of the adjustments that were applied to restate the 2001 and 2000 consolidated financial statements, as more fully described in Note 1 to the consolidated financial statements. However, KPMG LLP was not engaged to and did not audit, review, or apply any procedures to the 2001 and 2000 consolidated financial statements other than with respect to such adjustments.

The consolidated balance sheet of Cytogen Corporation as of December 31, 2001 and the consolidated statements of operations, stockholders' equity and cash flows for each of the years in the two-year period ended December 31, 2001,

have been incorporated by reference in this prospectus, and in the registration statement of which this prospectus is a part, from the $\mbox{\it Annual}$ $\mbox{\it Report}$ on $\mbox{\it Form}$ 10-K of Cytogen Corporation. The financial statements for the years ended December 31, 2001 and December 31, 2000 have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their report with respect thereto, and are incorporated by reference herein. The Company has not received an updated or reissued copy of such report dated February 5, 2002, and is relying solely upon the manually-signed report of Arthur Andersen LLP previously provided to the Company in connection with the Company's Annual Report on Form 10-K for the year ended December 31, 2001. Arthur Andersen LLP has not consented to the inclusion of their report in this prospectus, and we have dispensed with the requirement to file their consent in reliance on Rule 437a promulgated under the Securities Act of 1933, as amended. Because Arthur Andersen has not consented to the inclusion of their report in this prospectus, you will not be able to recover against Arthur Andersen under Section 11 of the Securities Act of 1933, as amended, for any untrue statements of a material fact contained in the financial statements audited by Arthur Andersen or any omissions to state a material fact required to be stated therein.

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WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other documents with the SEC. You may read and copy any document we file at the SEC's public reference room at Judiciary Plaza Building, 450 Fifth Street, N.W., Room 1024, Washington, D.C. 20549. You should call 1-800-SEC-0330 for more information on the public reference room. Our SEC filings are also available to you on the SEC's Internet site at http://www.sec.gov.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and our common stock, including certain exhibits and schedules. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's Internet site.

INFORMATION INCORPORATED BY REFERENCE

The SEC requires us to "incorporate" into this prospectus information that we file with the SEC in other documents. This means that we can disclose important information to you by referring to other documents that contain that information. The information incorporated by reference is considered to be part of this prospectus. Information contained in this prospectus and information that we file with the SEC in the future and incorporate by reference in this prospectus automatically updates and supersedes previously filed information. We incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, prior to the sale of all the shares covered by this prospectus.

- (1) Our Annual Report on Form 10-K for the year ended December 31, 2002, as filed with the Securities and Exchange Commission on March 31, 2003 (File No. 000-14879);
- (2) Amendment Number 1 to our Annual Report on Form 10-K/A for the year ended December 31, 2002, as filed with the Securities and Exchange Commission on March 31, 2003 (File No. 000-14879);
- (3) Our Current Report on Form 8-K, dated April 8, 2003, as filed with the Securities and Exchange Commission on April 9, 2003 (File No. 000-14879);

- (4) Our Current Report on Form 8-K, dated May 14, 2003, as filed with the Securities and Exchange Commission on May 14, 2003 (File No. 000-14879);
- (5) Our Quarterly Report on Form 10-Q for the period ended March 31, 2003, as filed with the Securities and Exchange Commission on May 14, 2003 (File No. 000-14879);
- (6) Our Current Report on Form 8-K, dated June 6, 2003, as filed with the Securities and Exchange Commission on June 9, 2003 (File No. 000-14879);
- (7) Our Current Report on Form 8-K, dated June 18, 2003, as filed with the Securities and Exchange Commission on July 3, 2003 (File No. 000-14879);
- (8) Our Current Report on Form 8-K, dated July 10, 2003, as filed with the Securities and Exchange Commission on July 11, 2003 (File No. 000-14879);
- (9) Our Current Report on Form 8-K dated July 14, 2003, as filed with the Securities and Exchange Commission on July 14, 2003 (File No. 000-14879);

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- (10) Our Current Report on Form 8-K, dated July 15, 2003, as filed with the Securities and Exchange Commission on July 15, 2003 (File No. 000-14879);
- (11) Our Current Report on Form 8-K dated August 1, 2003, as filed with the Securities and Exchange Commission on August 1, 2003 (File No. 000-14879);
- (12) The description of our common stock contained in our Registration Statement on Form 8-A, as supplemented by the disclosure set forth in Exhibit 3.1 to our Form 10-Q Quarterly Report for the quarter ended June 30, 2000 and Exhibit 3 to our Form 10-Q Quarterly Report for the quarter ended June 30, 1996 (File No. 000-14879);
- (13) The description of our Series C Junior Participating Preferred Stock contained in Exhibit 1 to our Current Report on Form 8-K filed with the Securities and Exchange Commission on June 24, 1998 (File No. 333-020015); and
- (14) All of our filings pursuant to the Exchange Act after the date of filing the initial registration statement and prior to effectiveness of the registration statement.

You may request a copy of these documents, which will be provided to you at no cost, by writing or telephoning us using the following contact information:

Cytogen Corporation 650 College Road East, 3rd Floor Princeton, New Jersey 08540 Attention: Director, Legal Telephone: 609-750-8222

YOU SHOULD RELY ONLY ON THE INFORMATION INCORPORATED BY REFERENCE OR PROVIDED IN THIS PROSPECTUS OR ANY PROSPECTUS SUPPLEMENT. WE HAVE NOT AUTHORIZED

ANYONE TO PROVIDE YOU WITH INFORMATION DIFFERENT FROM THAT CONTAINED OR INCORPORATED BY REFERENCE IN THIS PROSPECTUS. THE SELLING STOCKHOLDERS ARE OFFERING TO SELL, AND SEEKING OFFERS TO BUY, SHARES OF OUR COMMON STOCK ONLY IN JURISDICTIONS WHERE OFFERS AND SALES ARE PERMITTED. THE INFORMATION CONTAINED IN THIS PROSPECTUS IS ACCURATE ONLY AS OF THE DATE OF THIS PROSPECTUS, REGARDLESS OF THE TIME OF DELIVERY OF THIS PROSPECTUS OR OF ANY SALE OF COMMON STOCK.

INDEMNIFICATION OF DIRECTORS AND OFFICERS

Subsection (a) of Section 145 of the Delaware General Corporation Law empowers a corporation to indemnify any person who was or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action, suit or proceeding if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

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Subsection (b) of Section 145 empowers a corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 145 further provides that to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsection (a) and (b) or in the defense of any claim, issue or matter therein, he or she shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection therewith; that the indemnification provided by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and that the scope of indemnification extends to directors, officers, employees, or agents of a constituent corporation absorbed in a consolidation or merger and persons serving in that capacity at the request of the constituent corporation for another. Section 145 also empowers a corporation to purchase and maintain insurance on behalf of a director or officer of the corporation against any liability asserted against him or her or incurred by him or her in any such capacity or arising out of his or her status as such whether or not the

corporation would have the power to indemnify him or her against such liabilities under Section 145.

Section 102(b)(7) of the Delaware General Corporation Law enables a corporation in its certificate of incorporation to limit the personal liability of members of its board of directors for violation of a director's fiduciary duty of care. This section does not, however, limit the liability of a director for breaching his or her duty of loyalty, failing to act in good faith, engaging in intentional misconduct or knowingly violating a law, authorizing a payment of a dividend or approving a stock repurchase in violation of Delaware Corporate Law or from any transaction in which the director derived an improper personal benefit. This section also will have no effect on claims arising under the federal securities laws.

The Company's Certificate of Incorporation and By-Laws provide that the Company shall indemnify officers and directors and, to the extent permitted by the Board of Directors, employees and agents of the Company, to the full extent permitted by and in the manner permissible under the laws of the State of Delaware. In addition, the By-Laws permit the Board of Directors to authorize the Company to purchase and maintain insurance against any director, officer, employee or agent of the Company arising out of his capacity as such.

Cytogen has obtained liability insurance for the benefit of its directors and officers which provides coverage for losses of directors and officers for liabilities arising out of claims against such persons acting as directors or officers of Cytogen (or any subsidiary thereof) due to any breach of duty, neglect, error, misstatement, misleading statement, omission or act done by such directors and officers, except as prohibited by law.

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of the securities being registered hereby, all of which will be borne by Cytogen Corporation (except any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares). All amounts shown are estimates except the Securities and Exchange Commission registration fee.

| Filing Fee - Securities and Exchange Commission | \$ 822.54 |
|---|-------------|
| Legal fees and expenses | \$30,000.00 |
| Accounting fees and expenses | \$12,000.00 |
| Total Expenses | \$42,822.54 |

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Subsection (a) of Section 145 of the Delaware General Corporation Law empowers a corporation to indemnify any person who was or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding,

whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action, suit or proceeding if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Subsection (b) of Section 145 empowers a corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection with the defense or settlement of such $% \left(1\right) =\left(1\right) \left(1\right)$ action or suit if he or she $% \left(1\right) \left(1\right)$ action or suit if he or she acted in good $% \left(1\right) \left(1\right)$ faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

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Section 145 further provides that to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsection (a) and (b) or in the defense of any claim, issue or matter therein, he or she shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection therewith; that the indemnification provided by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and that the scope of indemnification extends to directors, officers, employees, or agents of a constituent corporation absorbed in a consolidation or merger and persons serving in that capacity at the request of the constituent corporation for another. Section 145 also empowers a corporation to purchase and maintain insurance on behalf of a director or officer of the corporation against any liability asserted against him or her or incurred by him or her in any such capacity or arising out of his or her status as such whether or not the corporation would have the power to indemnify him or her against such liabilities under Section 145.

Section 102(b)(7) of the Delaware General Corporation Law enables a corporation in its certificate of incorporation to limit the personal liability of members of its board of directors for violation of a director's fiduciary duty of care. This section does not, however, limit the liability of a director for breaching his or her duty of loyalty, failing to act in good faith, engaging in intentional misconduct or knowingly violating a law, authorizing a payment of a dividend or approving a stock repurchase in violation of Delaware Corporate Law or from any transaction in which the director derived an improper personal benefit. This section also will have no effect on claims arising under the federal securities laws.

The Company's Certificate of Incorporation and By-Laws provide that the Company shall indemnify officers and directors and, to the extent permitted by the Board of Directors, employees and agents of the Company, to the full extent permitted by and in the manner permissible under the laws of the State of Delaware. In addition, the By-Laws permit the Board of Directors to authorize the Company to purchase and maintain insurance against any director, officer, employee or agent of the Company arising out of his capacity as such.

Cytogen has obtained liability insurance for the benefit of its directors and officers which provides coverage for losses of directors and officers for liabilities arising out of claims against such persons acting as directors or officers of Cytogen (or any subsidiary thereof) due to any breach of duty, neglect, error, misstatement, misleading statement, omission or act done by such directors and officers, except as prohibited by law.

ITEM 16. EXHIBITS AND FINANCIAL SCHEDULES.

- (a) Exhibits
 - 5.1* Opinion of Hale and Dorr LLP.
 - 10.1 Securities Purchase Agreement by and among the Company and the Purchasers dated July 10, 2003 (incorporated by reference to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 11, 2003) (Commission File No. 000-14879).
 - 10.2 Form of Common Stock Purchase Warrant issued by the Company in favor of each Purchaser dated July 10, 2003 (incorporated by reference to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 11, 2003) (Commission File No. 000-14879).

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- 10.3 Registration Rights Agreement by and among the Company and the Purchasers dated July 10, 2003 (incorporated by reference to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 11, 2003) (Commission File No. 000-14879).
- 23.1* Consent of KPMG LLP.
- 23.2* Consent of PricewaterhouseCoopers LLP.
- 23.3* Consent of Hale and Dorr LLP (Included in Exhibit 5.1).
- 24.1* Power of Attorney (Included on signature page).

ITEM 17. UNDERTAKINGS.

The undersigned Registrant hereby undertakes:

^{*} Filed herewith.

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act");
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that paragraphs (1)(i) and (1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in this Registration Statement.

(2) That, for the purposes of determining any liability under the Securities Act, each post-effective amendment shall be deemed to be a new

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registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the indemnification provisions described herein, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the

payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Amendment to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Princeton, State of New Jersey, on August 12, 2003.

CYTOGEN CORPORATION

By: /s/ Michael D. Becker

-----Michael D. Becker
President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Allen Bloom

| SIGNATURE | TITLE | DATE |
|------------------------------------|--|---------------|
| /s/ Michael D. Becker | President, Chief Executive Officer and Director (Principal Executive Officer) | August 12, 20 |
| Michael D. Becker /s/ Thu A. Dang | Vice President, Finance (Principal Financial and Accounting Officer) | August 12, 20 |
| Thu A. Dang * | Director | August 12, 20 |
| John E. Bagalay, Jr. * | Director | August 12, 20 |

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| * | Director | August 12, 20 |
|-----------------------|----------|---------------|
| Stephen K. Carter | | |
| * | Director | August 12, 20 |
| James A. Grigsby | | |
| * | Director | August 12, 20 |
| Robert F. Hendrickson | | |
| * | Director | August 12, 20 |
| Kevin G. Lokay | | |
| * | Director | August 12, 20 |
| | | |

H. Joseph Reiser

 * By the signature set forth below, the undersigned, pursuant to the duly authorized powers of attorney filed with the Securities and Exchange Commission has signed this Amendment to the Registration Statement on behalf of the person indicated.

/s/Michael D. Becker
----Michael D. Becker
(Attorney-in-Fact)

EXHIBIT INDEX

| EXHIBIT NUMBER | DESCRIPTION |
|----------------|---|
| 5.1* | Opinion of Hale and Dorr LLP. |
| 10.1 | Securities Purchase Agreement by and among the Company and the Purchasers dated July 10, 2003 (incorporated by reference to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 11, 2003) (Commission File No. 000-14879). |
| 10.2 | Form of Common Stock Purchase Warrant issued by the Company in favor of each Purchaser dated July 10, 2003 (incorporated by reference to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 11, 2003) (Commission File No. 000-14879). |
| 10.3 | Registration Rights Agreement by and among the Company and the Purchasers dated July 10, 2003 (incorporated by reference to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 11, 2003) (Commission File No. 000-14879). |

| 23 | 3.1* | Consent of | KPMG LLP. |
|----|------|------------|--|
| 23 | 3.2* | Consent of | PricewaterhouseCoopers LLP. |
| 23 | 3.3* | Consent of | Hale and Dorr LLP (Included in Exhibit 5.1). |
| 24 | 1.1* | Power of A | ttorney (Included on signature page). |

^{*} Filed herewith.