

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

FORM 10-K

(MARK ONE)

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 1998

TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE
ACT OF 1934

FOR THE TRANSITION PERIOD FROM TO

COMMISSION FILE NO. 0-26078

CYTOCLONAL PHARMACEUTICS INC.
(Name of small business issuer in its charter)

<TABLE>

<S>	<C>
DELAWARE	75-2402409
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
9000 HARRY HINES BOULEVARD, SUITE 330, DALLAS, TEXAS	75235
(Address of principal executive offices)	(Zip Code)

</TABLE>

Issuer's Telephone Number, including Area Code (214) 353-2922

Securities registration under Section 12(b) of the Act:

<TABLE>

<S>	<C>
TITLE OF EACH CLASS	NAME OF EACH EXCHANGE
N/A	ON WHICH REGISTERED
	N/A

</TABLE>

Securities registered under Section 12(g) of the Act:

COMMON STOCK \$.01 PAR VALUE
(Title of Class)

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

Indicate by check mark if disclosure of delinquent filers in response to Item 405 of Regulation S-K is not contained in this form, and no disclosure will be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K []

State Registrant's revenues for its most recent fiscal year. \$1,183,000

State the aggregate market value of the voting stock held by non-affiliates computed by reference to the price at which the stock was sold, or the average bid and asked price of such stock, as of March 30, 1999. \$70,008,043

State the number of shares outstanding of each of the issuer's classes of common stock, as of March 30, 1999: 10,256,322 shares of Common Stock, \$.01 par value.

Transitional Small Business Disclosure Format: [] Yes No [X]

DOCUMENTS INCORPORATED BY REFERENCE

N/A

PART I

ITEM 1. DESCRIPTION OF BUSINESS.

GENERAL

Cytoclonal Pharmaceuticals Inc., a Delaware corporation ("CPI" or the "Company"), is a biopharmaceutical company focusing on the development of diagnostic and therapeutic products for the identification, treatment and prevention of cancer and infectious diseases. To date, the Company has been involved solely in research and development activities relating to several products that are at various stages of development. The Company's research and development activities relate principally to its proprietary Paclitaxel Fermentation Production System, its diagnostic and imaging lung cancer products, Human Gene Discovery Program, Quantum Core Technology(TM) -- the Company's rational drug discovery program and its Vaccine program. Taxol(TM) (the brand name for Paclitaxel) has been designated by the National Cancer Institute as the most important cancer drug introduced in the past decade.

The Company's strategy is to focus on its (i) collaboration with Bristol-Myers Squibb Company, Inc. ("Bristol-Myers Squibb") on the development of Paclitaxel production from Fermentation and Paclitaxel-specific genes; (ii) Paclitaxel Fermentation Production System program since Paclitaxel has been approved by the FDA as a treatment for refractory (treatment resistant) breast cancer, ovarian cancer, Kaposi's Sarcoma and lung cancer; (iii) Treatment for Polycystic Kidney Disease using Paclitaxel; (iv) Quantum Core Technology(TM) for mechanism-based drug design; (v) Human Gene Discovery Program, including a proprietary cancer related gene ("LCG gene") and related monoclonal antibody ("MAb"), addressing the need for diagnosis and treatment of lung cancer, the second most common form of cancer; (vi) Vaccine program and (vii) antiestrogen peptide for breast cancer. Other programs which involve anti-sense therapeutics, tumor necrosis factor -- polyethylene glycol ("TNF-PEG"), fusion protein ("IL-T") and potential anti-leukemia drug ("IL-P") are being pursued at modest levels. These other programs may serve as platforms for future products or alternatives to the primary programs if unforeseen problems develop. In addition, several of the technologies under development are complementary and could possibly potentiate each other.

The Company was created in 1991 to acquire rights to certain proprietary cancer and viral therapeutic technology ("Wadley Technology") developed at the Wadley Institutes in Dallas, Texas ("Wadley"). Through its own research and development efforts and agreements with other research institutions and biotechnology companies, the Company has acquired and developed additional proprietary technology and rights. However, to date, the Company has not developed any commercial products and will require significant additional financing to complete development and obtain regulatory approvals for its proposed products which, if ever received, can take several years. See"-- Collaborative Agreements -- WadTech."

In June 1993, the Company received an exclusive worldwide license (the "RDI Agreement") to use patented fungal technology to synthesize Paclitaxel, the active ingredient in Taxol(TM) (the "Microbial Paclitaxel Technology"), from the Research & Development Institute, Inc. at Montana State University ("RDI"). Paclitaxel has proven to be effective in treating refractory ovarian and breast cancers and, in preliminary clinical trials, has shown potential in treating refractory non-small cell lung cancer ("NSCLC") and certain other cancer indications. Presently, Paclitaxel is made from the inner bark and needles of the slow-growing Pacific yew tree. Scientists at the Company, in cooperation with the inventors of the microbial paclitaxel technology, are using this technology and fermentation technology to develop a system for manufacturing Paclitaxel in commercial quantities and at lower costs than currently available

production methods. In 1994, a patent covering the original fungal strain that produces Paclitaxel issued. In March 1999, a broad patent issued for the production of Paclitaxel by utilizing the technology licensed to the Company pursuant to the RDI Agreement to isolate microorganisms from the slow growing Pacific yew tree. See "-- Research and Development Programs -- Paclitaxel Fermentation Production System Program."

In February 1996, the Company obtained exclusive rights to a technology and pending patent developed at the University of California at Los Angeles ("UCLA") for the Paclitaxel treatment of polycystic kidney disease. The patent issued in 1998. See "-- Research and Development Programs -- Polycystic Kidney Disease" and "-- Collaborative Agreement -- UCLA Agreements."

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In June 1996, the Company entered into a Patent License Agreement (the "Regents Agreement") with the Board of Regents of the University of Texas System ("Regents") whereby the Company received an exclusive royalty-bearing license to manufacture, have manufactured, use, sell and sublicense products related to a U.S. Patent Application entitled "A Method for Ranking Sequences to Select Target Sequence Zones of Nucleus Acids." The technology has identified optimum regions within genes to bind anti-sense products. Anti-sense products are under development to control genes involved in human diseases such as cancer, diabetes, or AIDS. A patent application had been filed on this technology and patent was issued in 1999. This discovery potentially has broad applications to many human and viral genes involved in human disease. See "-- Collaborative Agreement -- University of Texas."

In July 1996, the Company entered into an agreement (the "WSURF Agreement") with the Washington State University Research Foundation ("WSURF") whereby the Company received an exclusive, world-wide license to use and/or sublicense patented technology or prospective patented technology (the "WSURF Technology") related to genes and the associated gene products, including the enzymes, in the biosynthetic pathway for Paclitaxel from the yew tree. The genes will be used to further optimize the Paclitaxel Production System. See "-- Collaborative Agreement -- WSURF."

In June 1998, the Company entered into a Master License Agreement (the "BMS License Agreement") and a Sponsored Research Agreement (the "R&D Agreement") with Bristol-Myers Squibb. Pursuant to the BMS License Agreement, the Company granted to Bristol-Myers Squibb an exclusive sublicense under each of the (i) the RDI Agreement (the "BMS-RDI Sublicense Agreement") and (ii) the WSURF Agreement. The R&D Agreement contemplates a program directed toward developing microbial fermentation and genetic engineering technologies for the production of Paclitaxel and other taxanes. See "-- Collaborative Agreement -- Bristol-Myers Squibb."

In August 1998, the Company obtained exclusive world-wide rights to a technology and pending patent developed at UCLA for a peptide antiestrogen breast cancer therapy for a term of the life of the patent, subject to termination in certain circumstances.

In December 1998, the Company obtained an exclusive license to technology for the fungal production of Telomerase, the so-called "immortality enzyme," from RDI.

Effective January 4, 1999, the Company acquired proprietary technology for rational based drug design developed by Dorit Arad, Ph.D. and employed Dr. Arad as Vice President of Drug Design.

The Company was originally incorporated in the state of Texas in September 1991 as Bio Pharmaceuticals, Inc. In November 1991, the Company changed its name to Cytoclonal Pharmaceuticals Inc. The Company was reincorporated in Delaware by merger into a wholly-owned Delaware subsidiary in January 1992.

RESEARCH AND DEVELOPMENT PROGRAMS

Microbial Paclitaxel Production System Program

Scientists at the Company in collaboration with the inventors of the microbial Paclitaxel technology (the "Microbial Paclitaxel Technology"), have developed a system for the production of Paclitaxel (the "Paclitaxel Fermentation Production System") utilizing microbial fermentation. Microbial

fermentation is considered one of the most cost effective systems for drug production. The Company has established agreements with Bristol-Myers Squibb to develop microbial fermentation for the commercial production of Paclitaxel.

Presently, Paclitaxel is made from the inner bark and needles of the slow-growing Pacific yew tree. Supplies of Paclitaxel are limited and expensive. The Microbial Paclitaxel Technology licensed by RDI to the Company pursuant to the RDI Agreement utilizes Paclitaxel producing micro-organisms, such as the fungus *Taxomyces andreanae*. This fungus was initially isolated from a Pacific yew tree and has been adapted to grow independently from the yew tree utilizing fermentation processes. Detailed chemical analysis of the Paclitaxel produced by the fungus indicates chemical equivalency to Taxol(TM) produced from the Pacific yew tree; Science, 260, 214-216 (1993). Additional micro-organisms have been isolated and are under development.

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The Paclitaxel producing fungus was discovered by Dr. Gary Strobel from Montana State University ("MSU"), Dr. Andrea Stierle from MSU and Montana College of Mineral Science and Technology ("MCMST") and Dr. Donald Stierle of MCMST. Dr. Stierle and Dr. Strobel assigned their rights to the Microbial Paclitaxel Technology to RDI, a non-profit corporation which manages intellectual property for MSU and MCMST. RDI was issued a U.S. patent on the Microbial Paclitaxel Technology on June 21, 1994 covering the method of isolating the fungus which produces Paclitaxel, the use of the fungus to make Paclitaxel, and the method of producing Paclitaxel from the fungus. In June 1993, RDI and the Company entered into the RDI Agreement whereby RDI granted the Company worldwide exclusive rights to the Microbial Paclitaxel Technology and technologies related thereto. It has been reported that over ten companies, including several major pharmaceutical companies, were competing to license this technology. In March 1999, a broad patent issued for the production of Paclitaxel by microorganisms isolated from the slow growing Pacific yew tree utilizing the technology licensed to the Company pursuant to the RDI Agreement. The Company believes that the experience of Dr. Arthur P. Bollon, the Company's Chairman, President and Chief Executive Officer, in the area of fungi, which originated from his Post-Doctoral Fellowship at Yale University, combined with the research and development activities of the Company in anti-cancer products, contributed to the Company obtaining the Microbial Paclitaxel Technology. See"-- Collaborative Agreements -- RDI" and "Management."

The Paclitaxel Fermentation Production System also produces certain compounds called Taxanes which can be precursors to Paclitaxel or related compounds like Taxotere. These compounds are under investigation by several entities, including Rhone-Poulenc Rorer Pharmaceuticals, Inc., which is using Taxotere as a therapeutic for use in the treatment of lung cancer.

Development efforts are continuing with respect to the Paclitaxel Fermentation Production System with the goal of generating commercial quantities of Paclitaxel at reduced costs. Scientists at the Company, in conjunction with the inventors of the Microbial Paclitaxel Technology, have increased the level of Paclitaxel production over 3,000 fold from the initial levels of production under the Paclitaxel Fermentation Production System. Media, growth conditions and strain improvements continue to be used to improve the Paclitaxel Fermentation Production System. The Company's participation in this development program is under the direction of Dr. Rajinder Sidhu, Director of the Company's Fungal Paclitaxel Program, and Dr. Bollon.

Furthermore, in July 1996, the Company and WSURF entered into the WSURF Agreement therein WSURF granted the Company the exclusive rights to a gene isolated from the Yew tree by Dr. Rodney Croteau. The gene codes for the enzyme Taxadiene Synthase which is involved in a critical step for Paclitaxel production and the gene and other paclitaxel genes isolated by Dr. Croteau are expected to be utilized to further increase the efficiency of Paclitaxel synthesis by fermentation. Manipulation of genes by genetic engineering have greatly improved production of pharmaceutical products such as antibiotics and human interferon and insulin.

The NCI has recognized Taxol(TM) as one of the most important cancer drugs discovered in the past decade. Paclitaxel, although not a cure for cancer, promotes the assembly of cellular microtubules to render fast growing cells, such as cancer cells, unable to divide and proliferate. This mode of action is in contrast to most cancer drugs which target the cell nucleus or DNA. Paclitaxel has proven to be effective in treating refractory

(treatment-resistant) ovarian and breast cancers, and forms of lung cancer and certain other cancers. Due to its different mode of action, Paclitaxel is being tested in combination therapy with other cancer therapeutic drugs.

Evidence to date has shown that Paclitaxel is generally well tolerated by patients with reduced side effects compared to other chemotherapy treatments. Considering that no currently available anti-cancer agents are free from toxicity, Paclitaxel's comparatively safety profile suggests substantial improvements in quality of life for patients who must undergo chemotherapy. Nevertheless, hypersensitivity reactions and other side effects have been noted during Paclitaxel administration. Reactions are characterized by transient hypotension and an allergic type response, which appear to cease upon stopping drug administration. Premedication effectively minimizes or eliminates this problem, although side effects may nevertheless limit some patients' use of Paclitaxel. In addition, Paclitaxel has been shown to produce peripheral neuropathy (loss of sensation or pain

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and tingling in the extremities) and neutropenia (low white blood cell counts), which also may, in certain cases, limit some patients' use of Paclitaxel.

In June 1991, the NCI formalized a Collaborative Research and Development Agreement ("CRADA") for development of Taxol(TM) with Bristol-Myers Squibb as its pharmaceutical manufacturing and marketing partner. This CRADA had granted Bristol-Myers Squibb the exclusive use, until December 1997, of NCI's clinical data relating to Paclitaxel in seeking approval from the FDA, which significantly shortened the approval process and prevented any other party from obtaining FDA approval using the NCI data. Although Bristol-Myers Squibb has since lost its right of exclusivity under the CRADA, effective Paclitaxel exclusivity is still being maintained by Bristol-Myers Squibb due to a patent on its Taxol(TM) infusion method, that exclusivity currently being contested by other competitors in the courts. Bristol-Myers Squibb received FDA approval for the commercial sale of its Taxol(TM) as a treatment for refractory ovarian cancer in December 1992, refractory breast cancer in April 1994 and Kaposi's Sarcoma in August 1997. In 1998, Bristol-Myers Squibb received approval for Taxol(TM) treatment of lung cancer. Since December 1992, Bristol-Myers Squibb has been the sole source of Taxol(TM) for commercial purposes. It is the Company's understanding that Bristol-Myers Squibb is currently conducting clinical trials required for FDA approval of Taxol(TM) for treating other cancers. See "-- Competition."

Alternative production systems for Paclitaxel, such as plant cell culture, complete synthesis and improved processing of yew tree material, are under investigation by others and there can be no assurance that such alternative methods will not be developed prior to the Company's proposed method or that they will not prove more efficient and cost effective than the method being developed by the Company.

Polycystic Kidney Disease

In February 1996, the Company entered into two license agreements with the Regents of UCLA therein granting the Company exclusive rights to: (i) a pending patent, entitled "Inhibition of Cyst Formation By Cytoskeletal Specific Drugs" that makes use of various drugs, one of which is Paclitaxel and (ii) technology in the field of Pharmacological Treatment for Polycystic Kidney Disease. See "-- Collaborative Agreements -- UCLA."

Approximately 500,000 individuals in the U.S. and 5 million individuals world-wide are afflicted with Polycystic Kidney Disease ("PKD"). There is no treatment except management by dialysis or transplantations. Dr. David Woo of UCLA has shown in an animal model system that Taxol(TM) inhibits cyst enlargement, resulting in increased survival of treated animals. The Company, in collaboration with Dr. Woo, is attempting to develop, although there can be no assurance of successful completion, if any, this potential new use of Taxol(TM). There can be no assurance that the Company will be able to perform human clinical studies for Taxol(TM) treatment or, if performed, such studies will be successful. Also, a patent for treatment of PKD by Taxanes, such as Paclitaxel, issued in 1998. The Company is currently in negotiations with potential strategic partners for Paclitaxel treatment of PKD. However, there can be no assurances that such negotiations will be successful. See "-- Collaborative Agreements -- UCLA."

In connection with the Company's employment of Dorit Arad, Ph.D. as Vice President of Drug Design in January 1999, the Company acquired rights to certain proprietary molecular scaffolds and technology for the mechanism-based design of novel protease inhibitors as well as certain anti-cancer and anti-viral agents developed by Dr. Arad at Tel Aviv University in Tel Aviv, Israel. The design of mechanism-based protease regulators is built upon an understanding of the target structure and chemical mechanism. Unlike structure-based rational drug design and combinatorial chemistry where large numbers of molecules based upon known substrate structure, with non-selective chemistry, may be screened for high affinity binding and/or activity, the Company begins with an "active" core or scaffold of low molecular weight known to be mechanism specific. Affinity maturation to optimize enzyme binding (selectivity) is then achieved by standard combinatorial chemistry approaches. Through its own proposed research and development efforts as well as through potential future collaborative agreements with research institutions and other pharmaceutical companies, the Company

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anticipates, although there can be no assurance, developing additional proprietary technology to serve as the basis for the eventual introduction of commercial products. Commercial development of these products will require significant additional financing for completion of development, clinical studies and obtainment of regulatory approvals. See "Management."

Human Gene Discovery Program/Lung Cancer Program

The Company's Human Gene Discovery Program focuses on identifying and isolating human genes by utilizing biological markers employing MABs and analyzing cellular activities associated with the cause or treatment of various diseases. Genes play an important role in the development of a variety of therapeutics, diagnostics and other products and services. Proteins expressed by genes are the targets of many drugs. As a result, the identification of proteins can play an important role in the development of drugs and drug screens. The identification of genes that code for proteins that may be missing or defective can enable the development of therapeutics for genetic diseases. In addition, identification of genes that may predispose a person to a particular disease may enable the development of diagnostic tests for the disease.

One of the central features of the Company's Human Gene Discovery Program is its proprietary human gene expression libraries and its Retroselection(TM) approach to isolating human genes with a defined function. Currently, these libraries consist of over 50,000 human gene clones isolated by the Company through extracting expressed messenger RNA from human tissue and cells in different development stages and in normal and diseased states. By comparing the genes expressed from tissue in different physiological states (e.g., diseased and normal), the Company hopes to identify genes that are expressed during different stages of a disease and that could serve as components of diagnostic tests or as targets for therapeutic drugs. Thus, the Company's Human Gene Discovery Program concentrates on gene products with associated biological or medical use as opposed to only DNA sequences. At present, the Company is focusing on creating MAB and DNA probes products for diagnostic and imaging applications.

The Company is developing a proprietary MAB (the "LCG MAB") which recognizes a specific protein (the "LCG protein") on the surface of some lung cancer cells, such as NSCLC, which is believed to represent approximately 65% of lung cancers. In addition, the cancer related human gene ("LCG gene") that makes this surface protein, has been isolated by the Company's scientists by a process the Company calls "Retroselection." The specificity of the LCG protein to some lung cancers is based on studies on biopsy material, biodistribution studies on animal model systems and Phase I clinical trials. A U.S. patent for the LCG gene, filed by the Company in July 1994, was issued on December 31, 1996. A patent for the lung cancer gene marker issued in June 1998.

The LCG gene and LCG MAB are being developed by the Company as a potential diagnostic product to test in vitro serum, tissue or respiratory aspirant material for presence of cells which may indicate a predisposition or early sign of lung cancer. The LCG MAB is also being developed as an in vivo imaging agent for lung cancer. An imaging agent may assist physicians in establishing the location of a cancer and determine whether the cancer has spread to other sites in the body. In Phase I human clinical trials performed at Wadley, the LCG MAB

made from mouse cells and labeled with a radioactive marker showed strong specificity in 5 of 6 patients. In these trials, the LCG MAb bound to the lung cancer but was not detectable for normal lung cells. These clinical studies will be expanded with a human-related form of the LCG MAb which is presently under development by the Company. Working with cells in culture, the Company is studying whether the LCG gene itself may be potentially useful as a genetic probe to test for the presence of the LCG gene expression where the LCG protein has not been made or has been made at low levels.

Additional potential products under development using the LCG gene and LCG MAb are products for the delivery of therapeutic drugs, such as Paclitaxel and TNF-PEG, to the cancer. The involvement of the LCG gene in the formation and metabolism of the lung cancer is also under investigation. In addition, the LCG protein could possibly be used as an antigen for a vaccine against NSCLC. The Company has deferred plans to initiate testing in animal model systems and conducting clinical trials since successful development of vaccine applications will take significant additional research and development efforts and expenditures.

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The Human Gene Discovery Program is also being used to isolate additional novel cancer related genes utilizing specific MAbs for breast and ovarian cancer and melanoma which are proprietary to the Company. A U.S. patent for the melanoma MAb was issued to WadTech and assigned to the Company. A U.S. patent for a melanoma antigen issued to the Company in August, 1997. See "-- Collaborative Agreements -- WadTech."

The Human Gene Discovery Program is conducted under the direction of Dr. Richard Torczynski, along with Dr. Bollon. Dr. Torczynski and Dr. Bollon have extensive experience isolating human genes including IFN-WA, a novel interferon, and the LCG gene. The human-related form of the LCG MAb is under the direction of Dr. Susan Berent.

Other Programs

In addition to its Paclitaxel Fermentation Production System Program, Paclitaxel treatment of Polycystic Kidney Disease and Human Gene Discovery Program/Lung Cancer Program, the Company is pursuing other programs at modest levels which may serve as platforms for the development of future products or alternatives to such primary programs. These include the (i) Vaccine Program, (ii) Anti-sense Therapeutics Program, (iii) TNF-PEG: Broad Range Anti-cancer Drug Program, (iv) IL-T: Prevention of Radiation and Chemotherapy Damage Program and (v) IL-P Anti-leukemic Product Program.

Vaccine Program. The main objective of the Company's vaccine program is to develop genetically engineered live vaccines for diseases that are life threatening. The Company's current strategy consists of (i) identifying bacterial host strains that are best suited for delivering recombinant immunogens and cancer markers; (ii) developing proprietary cloning and expression vectors that can transfer, maintain and express recombinant immunogens and cancer markers in the delivery system; and (iii) cloning genes for specific immunogens or cancer markers into the vectors and testing the vaccine system in appropriate animal models and, if successful, commencing clinical trials.

The Company has identified three host strains of mycobacteria that appear well suited for expressing and delivering protein and lipid antigens. Furthermore, the Company has constructed plasmid and phage-based cloning vectors and developed reproducible transformation techniques for the host strains. These vectors have large cloning capacities and are highly efficient in transformation. Potential antigens for cancer markers are the proprietary LCG gene and other cancer genes for breast cancer and melanoma which are under development by the Company. The Company's goal is to license, as licensor and licensee, new cancer specific marker genes and to enter into strategic partnerships to develop vaccines for infectious diseases, such as tuberculosis.

These vaccine studies are under the direction of Dr. Labidi, who is director of the Company's vaccine program. Dr. Labidi, who received his Ph.D. in Microbiology from the Pasteur Institute, in Paris, France, was one of the early investigators to establish the plasmid profile of several mycobacterium species and was the first to isolate, characterize and sequence the mycobacterium plasmid pAL5000 which has contributed to mycobacterium cloning and expression

vectors. Working with the Company and Dr. Labidi is Dr. Hugo David, a consultant to the Company and a member of its Scientific Advisory Board. Dr. David was formerly the head of the tuberculosis program at the Center for Disease Control (CDC) in the U.S. and at the Pasteur Institute.

Anti-sense Therapeutics Program. Anti-sense has the potential of regulating genes involved in various disease states. The Company is sponsoring anti-sense research and development under the direction of Dr. Gray, Professor of Molecular and Cell Biology at University of Texas at Dallas. The Company had a right of first refusal for an exclusive worldwide license for the technology developed in connection with these research activities, which rights the Company exercised in June 1996 and has obtained an exclusive world-wide license for certain anti-sense technology developed by Dr. Gray. Pursuant to this program, Dr. Gray has developed, and a patent application had been submitted and a patent issued in 1999 therein covering proprietary technology which may improve the efficiency of anti-sense reagents potentially applicable to a broad spectrum of diseases. The capability has recently been computerized, which will be contained in a related patent continuation-in-part. See "-- Collaborative Agreements -- University of Texas."

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TNF-PEG: Broad Range Anti-cancer Drug Program. TNF is a natural immune protein (cytokine) made by human cells. It has been found to kill in vitro a high percentage of different cancer cells compared to normal cells and is one of the most potent anti-cancer agents tested in animals. The Company has TNF technology, including TNF analogs, which the Company believes are proprietary and which were developed at Wadley utilizing a genetically engineered bacteria and developed further by Lymphokine Partners Limited, a partnership set up by an affiliate of Wadley and Phillips Petroleum Company (the "Wadley/Phillips Partnership"). The Company acquired this technology from Wadley Technologies, Inc. ("WadTech"). Phase I and II human clinical trials were performed at Wadley using 23 patients with different kinds of cancer. These studies, as well as studies on TNF technology developed by others, showed no therapeutic benefit from TNF in humans because of the high toxicity of TNF at therapeutic doses and its relatively short half life (approximately 30 minutes) at lower doses. See "-- Collaborative Agreements -- WadTech."

Pursuant to a research collaboration (the "Enzon Agreement") with Enzon, Inc. ("Enzon"), the Company and Enzon are developing an anti-cancer agent combining the Company's TNF technology with Enzon's patented polyethylene glycol ("PEG") technology. The PEG process involves chemically attaching PEG, a relatively non-reactive and non-toxic polymer, to proteins and certain other biopharmaceuticals for the purpose of enhancing their therapeutic value. Attachment of PEG helps to disguise the proteins and to reduce their recognition by the immune system, thereby generally lowering potential immunogenicity. Both the increased molecular size and lower immunogenicity result in extended circulating blood life, in some cases from minutes to days. The PEG technology is a proven technology covered by patents held by Enzon. To the Company's knowledge, Enzon has two products on the market using PEG, PEG-adenosine deaminase, for treatment of the immune deficiency disease known as the "bubble boy" syndrome, and PEG-Asparaginase, a cancer chemotherapeutic drug. In preliminary animal studies at Sloan-Kettering Institute for Cancer Research ("Sloan-Kettering"), a TNF-PEG construct has been tested in an animal cancer model system and was shown to kill tumors with possibly reduced toxicity. The results of these studies will be confirmed and expanded and, if the TNF-PEG does result in longer half life and reduced toxicity, an investigational new drug ("IND") application for clinical trials is expected to be submitted by the Company or Enzon. There can, however, be no assurance that similar results will be found in humans. The Enzon Agreement also involves directing TNF-PEG to human cancers using Enzon's proprietary single chain antibodies. See "-- Collaborative Agreements -- Enzon" and "Collaborative Agreements -- Sloan-Kettering."

The Enzon Agreement involves equal sharing of revenue from sales of TNF-PEG if both parties contribute equally to its development, which is the Company's intention. There can, however, be no assurance that the Company will have the financial resources to meet such obligations. The Enzon Agreement also specifies that Enzon will work with only the Company on the construction of TNF-PEG, unless the Company consents to Enzon working with a third party. See "-- Collaborative Agreements -- Enzon."

IL-T: Prevention of Radiation and Chemotherapy Damage Program. This program involves a novel protein called IL-T. The Company and the Wadley/Phillips

Partnership constructed IL-T through genetic engineering by fusing together parts of two human immune proteins ("cytokines"), Interleukin and TNF. The Company is testing various combinations of cytokines for improved protection against radiation and chemotherapy damage. The IL-T protein has been tested in animal studies for protection against radiation damage at Sloan-Kettering and these studies are expected to continue. Following animal studies confirmation of protection against radiation damage could potentially lead to filing an IND application with the FDA followed by Phase I clinical trials. Products proprietary to others have shown protection against radiation damage and to potentiate weakened immune cells. The Company has filed a patent application for IL-T. See "-- Collaborative Agreements -- WadTech" and "-- Collaborative Agreements -- Sloan-Kettering."

IL-P Anti-Leukemic Product Program. Through its joint Venture with Pestka Biomedical Laboratories, Inc. ("Pestka"), the Company is participating in the development of a novel anti-leukemic drug known as ("IL-P"). This research and development involves the application of certain phosphorylation technology developed at Pestka and licensed to the joint Venture to Interleukin-2. Various constructs of IL-P have been tested at Pestka and the Company expects to provide additional funding to the joint Venture for the continuation of such tests. See "-- Collaborative Agreements -- Cytomune."

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For the fiscal years ended December 31, 1998 and 1997, the Company incurred \$1,692,000 and \$1,469,000 of research and development expenses, respectively. See "Management's Discussion and Analysis of Financial Condition" and "Financial Statements."

COLLABORATIVE AGREEMENTS

Bristol-Myers Squibb

In June 1998, the Company entered into the BMS License Agreement and R&D Agreement with Bristol-Myers Squibb. Pursuant to the BMS License Agreement, the Company granted to Bristol-Myers Squibb an exclusive sublicense under each of the (i) RDI Agreement and (ii) WSURF Agreement. The term of the BMS License Agreement runs, subject to earlier termination in certain circumstances, as to each CPI-Covered Product (as defined) in each country of the Territory (as defined) until the later of (i) ten (10) years from the First Commercial Sale (as defined) of such CPI-Covered Product in such country, or (ii) such time as the making, use or sale at the time by Bristol-Myers Squibb, its affiliates or sublicensees in such country of such CPI-Covered Product would not infringe (a) any U.S. or foreign patents or patent applications, including reissues, renewals, extensions, continuations or continuations-in-part, copyrights or trademarks owned and licensed by RDI to the Company under the RDI Agreement, (b) certain U.S. and foreign patents or patent applications owned by WSURF and licensed by WSURF to the Company under the WSURF Agreement and (c) other licensed property, including Licensed Cell Lines, the Licensed Gene Materials, the Novel Taxanes from Fermentation, the Novel Taxanes from Covered Cell Line, the Licensed CPI-Technology and the Improvements (as those terms are defined in the BMS License Agreement), together with all patent rights pertaining thereto, to the extent that such patent rights are not already part of the RDI Agreement and WSURF Agreement. Bristol-Myers Squibb has the right to terminate the BMS License Agreement, effective upon ninety (90) days notice, in which event the Bristol-Myers Squibb sublicense under the RDI Agreement and WSURF Agreement would terminate. See "-- General; -- Collaborative Agreements -- RDI and -- WSURF."

In addition, pursuant to the BMS License Agreement, Bristol-Myers Squibb has the right of first negotiation during the term of the BMS License Agreement to obtain from the Company an exclusive, world-wide right to license or sublease to all or a part of any CPI Technology (as defined) involving Taxol (TM) or natural products for anti-cancer treatment from microorganisms. The BMS License Agreement contemplates sales based royalty payments and payments by Bristol-Myers Squibb to the Company against the advent of certain milestones and royalties. See "-- General; -- Collaborative Agreements -- RDI and -- WSURF."

The R&D Agreement, renewable by Bristol-Myers Squibb for successive one-year periods thereafter, provided that the BMS License Agreement remains in effect at the time, contemplates a program directed toward developing microbial fermentation and genetic engineering technologies for the production of Paclitaxel and other Taxanes and potentially new anti-cancer products from

microorganisms. See "-- General; -- Collaborative Agreements -- RDI and -- WSURF."

WadTech

In October 1991, the Company entered into a purchase agreement with WadTech (the "WadTech Agreement"), whereby the Company acquired certain of WadTech's right, title and interest in and to the Wadley Technology, including technology developed by Wadley, and acquired by WadTech upon dissolution of the Wadley/Phillips Partnership and licensed to WadTech by Phillips Petroleum Company ("Phillips"). The Wadley Technology includes, but is not limited to, technology related to TNF, IL-T, a novel interferon designated IFN-WA, and select melanoma, ovarian, breast, colon and lung cancer MAbs. See "-- Research and Development Programs -- Human Gene Discovery Program/Lung Cancer Program" and "-- Other Programs -- TNF/PEG: Broad Anti-cancer Drug Program."

Pursuant to the WadTech Agreement, the Company has agreed to (i) pay WadTech the sum of \$1,250,000 (the "Fixed Sum"), (ii) pay WadTech royalties on sales of products incorporating the Wadley Technology and a percentage of all royalties and other consideration paid to the Company by any licensees of the Wadley Technology, all of which are to be applied toward the Fixed Sum, (iii) assume WadTech's

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obligations under a license agreement entered into in March 1989 between the Wadley/Phillips Partnership and Phillips (the "Phillips Agreement"), namely the obligation to pay royalties of up to 3.75% on sales products produced using Phillips recombinant yeast expression system, and (iv) pay to WadTech minimum annual royalties of \$31,250 for the year beginning October 1, 1996, \$62,500 for the year beginning October 1, 1997 and \$125,000 for each year thereafter. The WadTech Agreement provides that the royalties and other sums payable by the Company to WadTech are at a higher rate until the Fixed Sum has been paid in full. The term of the WadTech Agreement is for 99 years but may be terminated earlier by WadTech if the Company fails to cure a default in its payment obligations or breaches any material term or condition of the agreement. See "-- Research and Development Programs -- Human Gene Discovery Program/Lung Cancer Program" and "-- Other Programs -- TNF/PEG: Broad Anti-cancer Drug Program."

In order to secure the Company's obligation to pay the Fixed Sum to WadTech, the Company and WadTech entered into a Security Agreement (the "Security Agreement"), pursuant to which WadTech retains a security interest in all of the Wadley Technology until the Fixed Sum is paid in full to WadTech. The Security Agreement also provides that in the event of a default (which includes failure of the Company to perform any material obligation under the WadTech Agreement), WadTech would have the right to license the Wadley Technology to a third party or sell the Wadley Technology through a foreclosure sale.

RDI

In June 1993, the Company entered the RDI Agreement with RDI, a non-profit entity which manages the intellectual property of MSU and MCMST, therein granting to the Company worldwide exclusive rights to the Microbial Paclitaxel Technology. Pursuant to the RDI Agreement, the Company made an initial payment of \$150,000 to RDI and has agreed to pay RDI royalties on sales of products using the Microbial Paclitaxel Technology and a percentage of royalties paid to the Company by sublicensees of the Microbial Paclitaxel Technology, and has paid RDI \$25,000 in June 1994, \$50,000 in June 1995, \$75,000 in June 1996, \$100,000 in June 1997 and \$100,000 in June 1998, and has agreed to pay RDI \$100,000 each year thereafter that the license is retained. The Company in 1994 also granted to RDI stock options to purchase up to 20,000 shares of the Company's Common Stock at \$2.50 per share exercisable over four years, all of which are currently exercisable. The Company and RDI also entered into a Research and Development Agreement (the "Paclitaxel R&D Agreement") effective the date of the RDI Agreement. The Paclitaxel R&D Agreement provides for RDI to perform research and development at MSU relating to the Paclitaxel Fermentation Production System. Pursuant to the Paclitaxel R&D Agreement, the Company has agreed to make payments of \$250,000 per year for four years. In 1998, the Company and RDI agreed to a one year renewable extension of the Paclitaxel R&D Agreement. The Company has, to date, paid a total of \$1,637,000 under both RDI agreements. In February 1995, the Company and RDI amended the RDI Agreement and Paclitaxel R&D Agreement to include technology applicable to commercial products, in addition

to Paclitaxel and Paclitaxel related technology, identified and developed from organisms/products supplied to RDI by Dr. Gary Strobel, Dr. Andrea Stierle and/or Dr. Donald Stierle pursuant to the RDI Agreement and Paclitaxel R&D Agreement. These additional technologies could include, but are not limited to, anti-cancer, anti-viral, anti-fungal or any other activities which could result in any commercial products. In May 1998, the Company and RDI amended the RDI Agreement therein requiring the Company to pay to RDI (i) a percentage of royalties received with respect to the manufacture, use or sale of the inventions by sublicensees, which royalty rate shall be reduced in the event the Company is required to pay royalties to others and (ii) all up-front, milestone and royalty payments it may receive pursuant to certain provisions of the BMS-RDI Sublicense Agreement. See "General" and "-- Collaborative Agreements -- Bristol Myers Squibb."

In February 1995, the Company entered into a license agreement (the "FTS-2 License Agreement") with RDI, therein granting the Company worldwide exclusive rights to exercise all intellectual property rights relating to a fungal strain identified as "FTS-2" (the "FTS-2 Rights") which contains a cytotoxic activity for a breast cancer line and related activities. In October 1995, the Company entered into a license agreement (the "Tbp-5 License Agreement") with RDI, granting to the Company worldwide exclusive rights to exercise all intellectual property rights relating to a fungal strain identified as "Tbp-5" (the "Tbp-5 Rights" and together with the FTS-2 Rights, the "Intellectual Property Rights") which contains a cytotoxic activity for a

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breast cancer cell line. Pursuant to the FTS-2 License Agreement and the Tbp-5 License Agreement, the Company has agreed to pay RDI royalties on sales of products or services using the Intellectual Property Rights and a percentage of royalties paid to the Company by sublicensees using the Intellectual Property Rights. See "-- Collaborative Agreements -- Bristol Myers Squibb."

In December 1998, the Company obtained an exclusive license to technology for the fungal production of Telomerase, the so-called "immortality enzyme," from RDI.

In March 1999, a broad patent issued for the production of Paclitaxel by microorganisms isolated from the slow growing Pacific yew tree utilizing the technology licensed to the Company pursuant to the RDI Agreement.

UCLA License Agreements

In February 1996, the Company entered into two license agreements with the Regents of UCLA, therein granting the Company exclusive rights to: (1) a pending patent, entitled, "Inhibition of Cyst Formation By Cytoskeletal Specific Drugs" ("UCLA License Agreement I") that makes use of various drugs, one of which is Paclitaxel and (2) technology in the field of Pharmacological Treatment for PKD ("UCLA License Agreement II"). Pursuant to UCLA License Agreement I, the Company paid a license issue fee of \$5,000 and has agreed to pay UCLA \$10,000 upon issuance of a patent. Pursuant to the UCLA License Agreement II, the Company paid a license issue fee of \$5,000 and has agreed to pay UCLA \$5,000 upon issuance of a patent. The Company must pay a yearly license maintenance fee on both licenses until the Company is commercially selling a product based on the technology derived from UCLA License Agreement I and UCLA License Agreement II, at which time a royalty based on net sales will be due.

In August 1998, the Company entered into an exclusive world-wide license agreement with UCLA ("UCLA Agreement III") for any domestic and foreign patents and patents pending based upon and including any subject matter claimed in or covered by a U.S. patent pending entitled, "Peptide Antiestrogen Compositions and Methods for Treating Breast Cancer," (collectively, the "Patent Rights"). The UCLA Agreement III grants the Company the right to make, use, sell, offer for sale and import certain products involving the Patent Rights (collectively, the "Patent Products") and to conduct any process or method covered by the Patent Rights (the "Patent Methods"). Also, the Company may grant sublicenses to third parties to make, use, sell, offer for sale and import Patent Products and to practice Patent Methods where Patent Rights exist, provided the Company retains exclusive rights thereto under the UCLA Agreement III. The UCLA Agreement III requires the Company to pay up-front fees, fees upon the issuance of a patent application under the Patent Rights, maintenance fees, annual and quarterly royalty payments, and milestone payments. The term of the UCLA Agreement III commenced August 1998 and ends upon the termination or

cancellation of the last patent covered by the Patent Rights, subject to earlier termination by the Regents if the Company's fails to perform certain studies and clinical trials by certain dates or cure any breaches within 60 days notice from the Regents.

Enzon

In July 1992, the Company and Enzon entered into the Enzon Agreement providing for the conduct of a collaborative research and development program to develop an anti-cancer agent by combining the Company's TNF technology with Enzon's PEG technology. Pursuant to this agreement, each party agreed to fund its own development costs associated with the initial stage, roughly the first year, of the program. The agreement provides that if both parties agree to continue the TNF-PEG program jointly, each party shall share equally in the cost of such research and development and the profits therefrom. If one party decides not to proceed or is unable to share jointly, the continuing party will receive exclusive (even as to the other party) worldwide licenses in the applicable technology of the other party and will pay the other party royalties. The term of the Enzon Agreement is 15 years for each product developed under the program from the date of FDA approval to market such product. The Company and Enzon also entered into a similar agreement in March 1992 relating to combining various target proteins to be developed by the Company with Enzon's PEG-technology pursuant to which Enzon funded certain of the Company's initial research and development activities thereunder. To

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the extent this earlier agreement applied to TNF, it was superseded by the Enzon Agreement. Currently, the primary focus of the parties is on the Enzon Agreement and the TNF-PEG technology.

Sloan-Kettering

Pursuant to a Research Agreement, effective April 8, 1994, between the Company and the Sloan-Kettering, Sloan-Kettering has agreed to continue evaluating the IL-T fusion protein to determine whether such protein protects mice against radiation and chemotherapy. In connection with such activities, Sloan-Kettering has agreed to provide all necessary personnel, equipment supplies and facilities in completion of the protocol set forth in the agreement for a budget not to exceed \$35,000. Inventions resulting from Sloan-Kettering's research which were not contemplated by the parties, if any, will be the property of Sloan-Kettering. However, Sloan-Kettering must grant the Company the right of first refusal to acquire a world-wide exclusive license to develop and commercialize any such invention upon mutually agreeable terms. The term of the agreement is through completion of the protocol.

Cytomune

Cytomune, Inc. ("Cytomune") is a joint Venture (50:50) between the Company and Pestka. A novel anti-leukemic drug, IL-P, is in development utilizing proprietary technology developed by Dr. Sidney Pestka. Dr. Pestka developed interferon for commercial use for Hoffmann-La Roche, Inc. The objective of the joint Venture is to develop IL-P for the diagnosis and treatment of leukemia. For their respective interests in the joint Venture the Company contributed \$233,000 and certain technology and Pestka contributed exclusive rights to phosphorylation technology as applied to Interleukin-2. Pestka has performed research and development for Cytomune relating to IL-P using this technology. Additional funding is not required but, if provided, will permit such research and development to continue. See "Management -- Scientific Advisors/Consultants."

University of Texas

In June 1992, the Company and the University of Texas at Dallas ("UTD") entered into an agreement, which has been amended, pursuant to which UTD performs certain research and development activities relating to anti-sense compounds and related technology for use in humans as therapeutic and diagnostic products. Pursuant to the agreement, UTD provides all necessary personnel, equipment supplies and facilities in consideration for an amended budget not to exceed \$240,240. Inventions under the agreement, if any, will be the property of UTD. However, UTD must grant the Company the right of first refusal to acquire a license to develop and commercialize any intellectual property resulting from the agreement for a royalty to be negotiated, not to exceed 8% of the net sales

(as defined in the agreement) of commercialized products. The Company is not required to pay any up-front fee or any minimum royalty. The agreement has been extended through August 1999 in consideration for the Company's agreement to increase the original funding commitment from \$150,240 to \$285,240 of which amount the Company has paid \$273,213 as of December 31, 1998.

In June 1996, the Company entered into a Patent License Agreement (the "Regents Agreement") with the Board of Regents of the University of Texas System ("Regents") whereby the Company received an exclusive royalty-bearing license to manufacture, have manufactured, use, sell and sublicense products related to a U.S. Patent Application entitled, "A Method for Ranking Sequences to Select Target Sequence Zones of Nucleus Acids." The technology has identified optimum regions within genes to bind anti-sense products. Anti-sense products are under development to control genes involved in human diseases such as cancer, diabetes, or AIDS. This discovery potentially has broad applications to many human and viral genes involved in human disease. The Company is required to pay Regents certain royalties and sublicensing fees. The Regents Agreement shall be in full force and effect until the later of 20 years or the expiration of patent rights. However, the Regents Agreement will terminate (i) automatically if the Company's obligations to pay royalties and sublicensing fees are not satisfied within 30 days after the Company receives written notice of its failure to make such payment; (ii) upon 90 days' written notice if the Company or Regents shall breach or default on any obligation under the Regents Agreement; and (iii) upon 60 days' written notice by the

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Company. In addition, Regents may terminate the exclusivity of the Regents Agreement at any time after June 1999 and may terminate the license completely at any time after June 2001 if the Company fails to provide Regents with written evidence that it has commercialized or is actively attempting to commercialize the licensed product. There can be no assurance that any revenues will be derived by the Company as a result of the agreement or that the Regents will not be in a position to exercise its termination rights.

Helm AG

The Company entered into a marketing agreement, effective in November 1994, with Helm AG, a world-wide distributor of pharmaceutical and related products, granting Helm AG the right, in certain parts of Europe, to market the technology and/or products of, and arrange business introductions for, the Company on a commission basis. The agreement is terminable by either party on six months' notice. To date, the Company has no products available for distribution and thus no revenues have been derived from such agreement. There can be no assurance that any revenues will be derived by the Company from this agreement in the future.

WSURF

In July 1996, the Company entered into the WSURF Agreement with WSURF whereby the Company received an exclusive, world-wide license to use and/or sublicense WSURF Technology. The Company is required to pay WSURF license fees of \$7,500 per year, commencing July 1, 1997, as well as certain royalties and sublicensing fees. The WSURF Agreement shall be in full force and effect until the last to expire of the patents licensed under the WSURF Technology. However, the Company may terminate the WSURF Agreement on 90 days' notice provided that all amounts due to WSURF are paid. WSURF may terminate the WSURF Agreement immediately if the Company ceases to carry on its business or on 90 days' notice if the Company is in default in payment of fees or royalties, is in breach of any provisions of the WSURF Agreement, provides materially false reports or institutes bankruptcy, insolvency, liquidation or receivership proceedings. In connection with this agreement, the Company granted WSURF warrants to purchase 36,000 shares of Common Stock at \$4.25 per share. Such Warrants vest annually in 12,000 increments commencing July 1999 and expire July 2002. In June 1998, the Company and WSURF amended the WSURF Agreement therein (i) covering additional patents, patent applications and genes for enzymes which are expected to be the subject of future patent filings and (ii) granting to the Company an option, expiring July 2006, to license any prospective WSURF Technology as it is developed. There can be no assurance that any revenues will be derived by the Company as a result of the agreement. See "-- Collaborative Agreements -- Bristol-Myers Squibb."

The Company owns and has rights to a number of patents and patent applications. In 1991, the Company entered into the WadTech Agreement, whereby it was assigned (i) two issued United States patents (expiring, under current law, in 2006 and 2007, respectively), (ii) three pending United States patent applications and (iii) six pending foreign patent applications held by WadTech. A U.S. patent for the LCG gene, filed by the Company in July 1994, was issued on December 31, 1996. A patent for the lung cancer gene market issued in June 1998. Pursuant to the RDI Agreement, the Company has been granted an exclusive license to the technology contained in the Paclitaxel Fermentation Production System, including one issued United States patent, one United States patent application with allowed claims and foreign patent applications. In addition, UTD had filed a patent application, on which a patent was issued in 1999, relating to certain anti-sense technology with respect to which, pursuant to the agreement between the Company and UTD, the Company has a right of first refusal to acquire a license to develop and commercialize products using such technology. Pursuant to the UCLA License Agreement I, the Company has been granted an exclusive license to technology involving the "Inhibition of Cyst Formation By Cytoskeletal Specific Drugs" and related patent of which the claims have been allowed by the U.S. Patent and Trademark Office in August 1997. Pursuant to the UCLA License Agreement III, the Company has been granted an exclusive world-wide license to technology involving a U.S. patent pending entitled, "Peptide Antiestrogen Compositions and Methods for Treating Breast Cancer." In connection with the employment of Dr. Dorit Arad in January 1999, the

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Company was assigned patent applications for technology including "Pharmaceutical Preparation Which Compromises Inhibitors of Cysteine Protease," "Modulators of Cysteine Protease," "Novel Antiviral Compounds," and "Cysteine Protease Inhibitors." In March 1999, a broad patent issued for the production of Paclitaxel by microorganisms isolated from the slow growing Pacific yew tree utilizing the technology licensed to the Company pursuant to the RDI Agreement. See "-- Collaborative Agreement; Bristol-Myers Squibb, -- WadTech; -- RDI; - -- UCLA License Agreements and University of Texas."

The Company's policy is to protect its technology by, among other things, filing patent applications for technology it considers important in the development of its business. In addition to filing patent applications in the United States, the Company has filed, and intends to file, patent applications in foreign countries on a selective basis. The Company has filed patent applications relating to its IL-T and Lung Cancer Gene technologies and is preparing to file additional patent applications, relating primarily to technologies for vaccines and Paclitaxel production. Although a patent has a statutory presumption of validity in the United States, the issuance of a patent is not conclusive as to such validity or as to the enforceable scope of the claims of the patent. There can be no assurance that the Company's issued patents or any patents subsequently issued to or licensed by the Company will not be successfully challenged in the future. The validity or enforceability of a patent after its issuance by the patent office can be challenged in litigation. If the outcome of the litigation is adverse to the owner of the patent, third parties may then be able to use the invention covered by the patent, in some cases without payment. There can be no assurance that patents in which the Company has rights will not be infringed or successfully avoided through design innovation.

There can be no assurance that patent applications owned by or licensed to the Company will result in patents being issued or that the patents will afford protection against competitors with similar technology. It is also possible that third parties may obtain patent or other proprietary rights that may be necessary or useful to the Company. In cases where third parties are first to invent a particular product or technology, it is possible that those parties will obtain patents that will be sufficiently broad so as to prevent the Company from using certain technology or from further developing or commercializing certain products. If licenses from third parties are necessary but cannot be obtained, commercialization of the related products would be delayed or prevented. The Company is aware of patent applications and issued patents belonging to competitors and it is uncertain whether any of these, or patent applications filed of which the Company may not have any knowledge, will require the Company to alter its potential products or processes, pay licensing fees or cease certain activities.

The Company also relies on unpatented technology, trade secrets and information and no assurance can be given that others will not independently

develop substantially equivalent information and techniques or otherwise gain access to the Company's technology or disclose such technology, or that the Company can meaningfully protect its rights in such unpatented technology, trade secrets and information. The Company requires each of its employees to execute a confidentiality agreement at the commencement of an employment relationship with the Company. The agreements generally provide that all inventions conceived by the individual in the course of employment or in the providing of services to the Company and all confidential information developed by, or made known to, the individual during the term of the relationship shall be the exclusive property of the Company and shall be kept confidential and not disclosed to third parties except in limited specified circumstances. There can be no assurance, however, that these agreements will provide meaningful protection for the Company in the event of unauthorized use or disclosure of such confidential information.

COMPETITION

All of the Company's proposed products will face competition from existing therapies. The development by others of novel treatment methods for those indications for which the Company is developing compounds could render the Company's compounds non-competitive or obsolete. This competition potentially includes all of the pharmaceutical concerns in the world that are developing pharmaceuticals for the diagnosis and treatment of cancer. Competition in pharmaceuticals is generally based on performance characteristics, price and timing of market introduction of competitive products. Acceptance by hospitals, physicians and patients is crucial to the success of a product. Price competition may become increasingly important as a result of an

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increased focus by insurers and regulators on the containment of health care costs. In addition, the various federal and state agencies have enacted regulations requiring rebates of a portion of the purchase price of many pharmaceutical products.

Most of the Company's existing or potential competitors have substantially greater financial, technical and human resources than the Company and may be better equipped to develop, manufacture and market products. In addition, many of these companies have extensive experience in pre-clinical testing, human clinical trials and the regulatory approval process. These companies may develop and introduce products and processes competitive with or superior to those of the Company.

The Company's competition also will be determined in part by the potential indications for which the Company's compounds are developed. For certain of the Company's potential products, an important factor in competition may be the timing of market introduction of its own or competitive products. Accordingly, the relative speed with which the Company can develop products, complete the clinical trials and regulatory approval processes and supply commercial quantities of the products to the market are expected to be important competitive factors. The Company expects that competition among products approved for sale will be based on, among other things, product efficacy, safety, reliability, availability, price and patent position.

The Company's competitive position also depends upon its ability to attract and retain qualified personnel, obtain patent protection or otherwise develop proprietary products or processes and secure sufficient capital resources for the often lengthy period between technological conception and commercial sales. See "Management."

GOVERNMENT REGULATION

The production and marketing of the Company's products and its research and development activities are subject to regulation for safety and efficacy by numerous governmental authorities in the United States and other countries. In the United States, drugs and pharmaceutical products are subject to rigorous FDA review. The Federal Food, Drug, and Cosmetic Act, the Public Health Service Act and other federal statutes and regulations govern or influence the testing, manufacture, safety, labeling, storage, record keeping, approval, advertising and promotion of such products. Non-compliance with applicable requirements can result in fines, recall or seizure of products, total or partial suspension of production, refusal of the government to approve product license applications or allow the Company to enter into supply contracts and criminal prosecution. The FDA also has the authority to revoke product licenses and establishment licenses previously granted.

In order to obtain FDA approval of a new product, the Company must submit proof of safety, purity, potency and efficacy. In most cases, such proof entails extensive pre-clinical, clinical and laboratory tests. The testing, preparation of necessary applications and processing of those applications by the FDA is expensive and may take several years to complete. There is no assurance that the FDA will act favorably or quickly in making such reviews, and significant difficulties or costs may be encountered by the Company in its efforts to obtain FDA approvals that could delay or preclude the Company from marketing any products it may develop. The FDA may also require post-marketing testing and surveillance to monitor the effects of approved products or place conditions on any approvals that could restrict the commercial applications of such products. Product approvals may be withdrawn if compliance with regulatory standards is not maintained or if problems occur following initial marketing. With respect to patented products or technologies, delays imposed by the governmental approval process may materially reduce the period during which the Company will have the exclusive right to exploit them.

The time period between when a promising new compound is identified and when human testing is initiated is generally referred to as the pre-clinical development period. During this time, a manufacturing process is identified and developed to be capable of producing the compound in an adequately pure and well characterized form for human use. Production of compounds for use in humans is governed by a series of FDA regulations known as Good Manufacturing Practices, which govern all aspects of the manufacturing process. The FDA has published a "Points to Consider" guidance document with respect to the manufacture of MAbs for human use.

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The FDA approval process for a new and unfamiliar term or drug involves completion of pre-clinical studies and the submission of the results of these studies to the FDA in an IND application. Pre-clinical studies involve laboratory evaluation of product characteristics and animal studies to assess the efficacy and safety of the product. Pre-clinical studies are regulated by the FDA under a series of regulations called the Good Laboratory Practices ("GLP") regulations. Violations of these regulations can, in some cases, lead to invalidation of the studies, requiring those studies to be replicated.

Once the IND is approved, human clinical trials may be conducted. Human clinical trials are typically conducted in three sequential phases, but the phases may overlap. Phase I trials consist of testing the product in a small number of volunteers, primarily for safety at one or more doses. In Phase II, in addition to safety, the efficacy of the product is evaluated in a patient population somewhat larger than Phase I trials. Phase III trials typically involve additional testing for safety and clinical efficacy in an expanded population at geographically dispersed test sites. A clinical plan, or "protocol," accompanied by the approval of the institution participating in the trials, must be submitted to the FDA prior to commencement of each clinical trial. The FDA may order the temporary or permanent discontinuation of a clinical trial at any time.

To date an IND was submitted for the LCG-MAb clinical trials at Wadley. The Company intends to file an IND for a humanized form of the LCG-MAb followed by clinical trials. The results of the pre-clinical and clinical testing are submitted to the FDA in the form of a New Drug Application ("NDA") or, in the case of a biologic, such as LCG-MAb and other MAbs, as part of a product license application ("PLA"). In a process which generally takes several years, the FDA reviews this application and once, and if, it decides that adequate data is available to show that the new compound is both safe and effective, approves the drug or biologic product for marketing. The amount of time taken for this approval process is a function of a number of variables including the quality of the submission and studies presented, the potential contribution that the compound will make in improving the treatment of the disease in question and the workload at the FDA. There can be no assurance that any new drug will successfully proceed through this approval process or that it will be approved in any specific period of time.

The FDA may, during its review of an NDA or PLA, ask for the production of additional test data. If the FDA does ultimately approve the product, it may require post-marketing testing, including potentially expensive Phase IV studies, and surveillance to monitor the safety and effectiveness of the drug. In addition, the FDA may in some circumstances impose restrictions on the use of

the drug that may be difficult and expensive to administer and may seek to require prior approval of promotional materials.

Manufacture of a biologic product must be in a facility covered by an FDA-approved Establishment License Application. Manufacture, holding, and distribution of both biologic and non-biologic drugs must be in compliance with GMPs. Manufacturers must continue to expend time, money, and effort in the area of production and quality control and record keeping and reporting to ensure full compliance with those requirements. The labeling, advertising, and promotion of a drug or biologic product must be in compliance with FDA regulatory requirements. Failures to comply with applicable requirements relating to manufacture, distribution, or promotion can lead to FDA demands that production and shipment cease, and, in some cases, that products be recalled, or to enforcement actions that can include seizures, injunctions, and criminal prosecution. Such failures can also lead to FDA withdrawal of approval to market the product.

The FDA may designate a biologic or drug as an Orphan Drug for a particular use, in which event the developer of the biologic or drug may request grants from the government to defray the costs of certain expenses related to the clinical testing of such drug and be entitled to a seven year marketing exclusivity period.

The Company's ability to commercialize its products successfully may also depend in part on the extent to which reimbursement for the cost of such products and related treatment will be available from government health administration authorities, private health insurers and other organizations. Such third-party payers are increasingly challenging the price of medical products and services. Several proposals have been made that may lead to a government-directed national health care system. Adoption of such a system could further limit reimbursement for medical products and services. Significant uncertainty exists as to the reimbursement status of newly approved health care products, and there can be no assurance that adequate third-party

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coverage will be available to enable the Company to maintain price levels sufficient to realize an appropriate return on this investment in product development.

The Company is also subject to regulation by the Occupational Safety and Health Administration ("OSHA") and the Environmental Protection Agency ("EPA") and to regulation under the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other regulatory statutes, and may in the future be subject to other federal, state or local regulations. Either or both of OSHA or the EPA may promulgate regulations that may affect the Company's research and development programs. The Company is unable to predict whether any agency will adopt any regulation which could have a material adverse effect on the Company's operations.

Sales of pharmaceutical products outside the United States are subject to foreign regulatory requirements that vary widely from country to country. Whether or not FDA approval has been obtained, approval of a product by comparable regulatory authorities of foreign countries must be obtained prior to the commencement of marketing the product in those countries. The time required to obtain such approval may be longer or shorter than that required for FDA approval.

MANUFACTURING AND MARKETING

Neither the Company nor any of its officers or employees has pharmaceutical marketing experience. Furthermore, the Company has never manufactured or marketed any products and the Company does not have the resources to manufacture or market on a commercial scale any products that it may develop. The Company's long-term objective is to manufacture and market certain of its products and to rely on independent third parties for the manufacture of certain of its other products. For the foreseeable future, the Company will be required to rely on corporate partners or others to manufacture or market products it develops, although no specific arrangements have been made. No assurance can be given that the Company will enter into any such arrangements on acceptable terms. See "Collaborative Agreement -- Helm AG."

Manufacturing. While the Company intends to select manufacturers that comply with GMP and other regulatory standards, there can be no assurance that

these manufacturers will comply with such standards, that they will give the Company's orders the highest priority or that the Company would be able to find substitute manufacturers, if necessary. In order for the Company to establish a manufacturing facility, the Company will require substantial additional funds and will be required to hire and retain significant additional personnel and comply with the extensive GMP regulations of the FDA applicable to such a facility. No assurance can be given that the Company will be able to make the transition successfully to commercial production, should it choose to do so.

Marketing. Despite the Company's strategy to develop products for sale to concentrated markets, significant additional expenditures and management resources will be required to develop an internal sales force, and there can be no assurance that the Company will be successful in penetrating the markets for any products developed. For certain products under development, the Company may seek to enter into development and marketing agreements which grant exclusive marketing rights to its corporate partners in return for royalties to be received on sales, if any. Under certain of these agreements, the Company's marketing partner may have the responsibility for all or a significant portion of the development and regulatory approval. In the event that the marketing and development partner fails to develop a marketable product or fails to market a product successfully, the Company's business may be adversely affected. The sale of certain products outside the United States will also be dependent on the successful completion of arrangements with future partners, licensees or distributors in each territory. There can be no assurance that the Company will be successful in establishing any additional collaborative arrangements, or that, if established, such future partners will be successful in commercializing products. See "Collaborative Agreement -- Helm AG."

PRODUCT LIABILITY INSURANCE

The testing, marketing and sale of human health care products entail an inherent risk of allegations of product liability, and there can be no assurance that product liability claims will not be asserted against the Company. The Company intends to obtain product liability insurance for its ongoing clinical trials. Such

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coverage may not be adequate as and when the Company further develops products. There can be no assurance that the Company will be able to obtain, maintain or increase its insurance coverage in the future on acceptable terms or that any claims against the Company will not exceed the amount of such coverage.

HUMAN RESOURCES

As of March 19, 1999, the Company had 19 full-time employees, 15 of whom were engaged directly in research and development activities, including 8 Ph.D.s, and 4 of whom were in executive and administrative positions. The Company's employees are not governed by any collective bargaining agreement and the Company believes that its relationship with its employees is good. See "Management."

ITEM 2. PROPERTY.

The Company occupies an aggregate of approximately 21,400 square feet of both office and laboratory space in Dallas, Texas at two separate facilities. The Company leases approximately 4,800 square feet of office and laboratory space pursuant to a lease agreement expiring in August 1999. In addition, the Company occupies an additional approximate 16,600 square feet of office and laboratory space, including approximately 11,000 square feet added in 1999, pursuant to a lease assigned to the Company by the Wadley/Phillips Partnership and which lease term has been extended until December 2000. The Company's lease payments for the fiscal year ended December 31, 1998 were approximately \$142,000. The Company believes that its current facilities are suitable for its present needs.

ITEM 3. LEGAL PROCEEDINGS.

As of the date hereof, the Company is not a party to any material legal proceedings.

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

The Company held its annual meeting of stockholders on September 19, 1998

for holders of record of the Company's common stock, par value \$.01 per share (the "Common Stock"), and Series A Convertible Preferred Stock, par value \$.01 per share (the "Preferred Stock"), as of the close of business on August 3, 1998. Such meeting was adjourned to October 2, 1998 (the "Annual Meeting").

The following matters were voted upon at the Annual Meeting and the results were as follows:

1. To elect each Arthur P. Bollon, Ph.D., Ira J. Gelb, M.D., Mr. Irwin C. Gerson and Walter M. Lovenberg, Ph.D. to the Company's Board of Directors; each for a term of one year or until their respective successors are elected and qualify. The stockholders voted 9,269,316 shares of Common Stock and 422,133 shares of Preferred Stock in favor of the election of each of the nominees and 27,772 shares of Common Stock and no shares of Preferred Stock against. There were no abstentions or broker non-votes. See "Item 10. Directors and Executive Officers of the Registrant."

2. To approve an amendment to the Company's 1996 Stock Option Plan, to increase the number of options available for grant by 750,000, from 750,000 to 1,500,000, and the number of shares of Common Stock of the Company reserved for issuance thereunder by 750,000, from 750,000 to 1,500,000 shares of Common Stock (the "Amendment"). The stockholders voted 5,193,343 shares of Common Stock and 354,497 shares of Preferred Stock in favor of the Amendment, and 308,816 shares of Common Stock and 67,636 shares of Preferred Stock against. The stockholders of 78,734 shares of Common Stock abstained, and there were 3,716,195 broker non-votes. See "Item 11. Executive Compensation -- Stock Options."

3. To ratify the selection by the Board of Directors of Richard A. Eisner & Company, LLP as the Company's independent auditors for the fiscal year ended December 31, 1998 (the "Ratification"). The stockholders voted 9,217,781 shares of Common Stock and 422,133 shares of Preferred Stock in favor of the Ratification, and 25,507 shares of Common Stock no Preferred Stock against. The stockholders of 53,800 shares of Common Stock abstained, and there were no broker non-votes.

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PART II

ITEM 5. MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS.

The Company's Common Stock, Class C Warrants and Class D Warrants are quoted in the over-the-counter market on the Nasdaq SmallCap Market System under the symbols "CYPH," "CYPHW" and "CYPHZ," respectively, since November 2, 1995. The following table sets forth the high and low bid prices for the Common Stock as reported by the National Association of Securities Dealers, Inc. for the periods indicated. The prices set forth below represent quotes between dealers and do not include commissions, mark-ups or mark-downs, and may not necessarily represent actual transactions.

<TABLE>
<CAPTION>

	COMMON STOCK		CLASS C WARRANTS		CLASS D WARRANTS		
	HIGH	LOW	HIGH	LOW	HIGH	LOW	
	<C>	<C>	<C>	<C>	<C>	<C>	
FISCAL 1997							
1(st) Quarter.....	\$4 7/16	\$2 1/8	\$1 7/8	\$ 11/16	\$ 11/16	\$ 5/32	
2(nd) Quarter.....	3 1/4	2 1/2	1	3/8	5/8	1/4	
3(rd) Quarter.....	10 1/16	2 7/16	5 7/8	9/16	2 11/16	3/16	
4(th) Quarter.....	11 1/2	5 7/8	9 3/8	2 13/16	5	1 3/8	
FISCAL 1998							
1(st) Quarter.....	12	5 3/4	9 3/4	4 1/2	5	2 1/8	
2(nd) Quarter.....	14 3/4	6 7/6	14 5/16	4 1/4	6 3/8	2 7/8	
3(rd) Quarter.....	9 5/8	3 1/8	7 1/8	2	3 11/16	15/16	
4(th) Quarter.....	7 7/16	4 3/8	4 1/4	1 5/8	2 1/4	15/16	
FISCAL 1999							
1(st) Quarter (through March 10, 1999).....		9 9/16	6 7/8	6 3/4	3 5/8	3 5/16	1 3/38

</TABLE>

The Company believes that as of March 25, 1999, there were in excess of 300 beneficial holders of its Common Stock.

The Company has never paid cash dividends on its Common Stock and does not anticipate paying cash dividends on its Common Stock in the foreseeable future.

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ITEM 6. SELECTED FINANCIAL DATA.

The following selected financial data has been derived from the Company's audited financial statements. The Income Statement Data relating to the years 1998, 1997 and 1996 and the Balance Sheet Data as of December 31, 1998 and 1997 should be read in conjunction with the Company's audited financial statements and notes thereto appearing elsewhere herein.

CYTOCOLONAL PHARMACEUTICS, INC.

SELECTED FINANCIAL DATA

<TABLE>
<CAPTION>

	YEAR ENDED DECEMBER 31,				
	1998	1997	1996	1995	1994
	<C>	<C>	<C>	<C>	<C>
INCOME STATEMENT DATA					
Revenue.....	\$ 1,183,000	\$ --	\$ --	\$ --	\$ --
Research and development....	1,692,000	1,469,000	1,576,000	1,181,000	1,025,000
General and administrative expenses.....	2,500,000	1,888,000	1,530,000	1,138,000	1,128,000
Operating loss.....	(3,009,000)	(3,357,000)	(3,106,000)	(2,319,000)	(2,153,000)
Interest expense.....	(5,000)	(2,000)	--	(419,000)	(117,000)
Interest income.....	286,000	107,000	216,000	47,000	5,000
Loss before income taxes....	(2,728,000)	(3,252,000)	(2,890,000)	(2,691,000)	(2,265,000)
Provision for income taxes.....	--	--	--	--	--
Net loss.....	(2,728,000)	(3,252,000)	(2,890,000)	(2,691,000)	(2,265,000)
Basic and diluted loss per common share.....	\$ (0.30)	\$ (0.42)	\$ (0.42)	\$ (0.53)	\$ (0.48)
BALANCE SHEET DATA					
Total assets.....	\$ 7,746,000	\$ 2,802,000	\$ 3,881,000	\$ 6,515,000	\$ 1,811,000
Working capital.....	6,227,000	1,330,000	2,543,000	5,238,000	(1,878,000)
Royalties payable -- less current portion.....	1,000,000	1,125,000	1,219,000	1,250,000	1,250,000
Shareholder's equity.....	6,062,000	1,123,000	2,312,000	5,030,000	(1,726,000)

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

The Company was organized and commenced operations in September 1991, and until July 1998, was in the development stage. To this day, the Company's efforts have been principally devoted to research and development activities and organizational efforts, including the development of products for the treatment of cancer and infectious diseases, recruiting its scientific and management personnel and advisors and raising capital.

The Company's plan of operation for the next 12 months will consist of research and development and related activities aimed at:

- Continued collaboration with Bristol-Myers Squibb on the development of Paclitaxel production from Fermentation and Paclitaxel-specific genes. See "Business -- Research and Development Programs -- Paclitaxel Fermentation Production System Program."
- Further development of the Paclitaxel treatment of polycystic kidney disease, a potential new Paclitaxel indication, and establishing a strategic partnership. See "Business -- Research and Development

Programs -- Polycystic Kidney Disease."

- Development of its rational drug design program using Quantum Core Technology(TM). See "Business -- Research And Development Programs -- Quantum Core Technology(TM)."

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- Evaluation of potential new proprietary microbial anticancer drugs with Bristol-Meyers Squibb. See "Collaborative Agreements -- Bristol-Myers Squibb."

- Further development of a diagnostic test using the patented LCG gene and related MAb to test in vitro serum, tissue or respiratory aspirant material for the presence of cells which may indicate a predisposition to, or early sign of, lung or other cancers. See "Business -- Human Gene Discovery Program/Lung Cancer Program."

- Further testing of peptide from UCLA for inhibition of breast cancer via steroid receptors. See "Collaborative Agreements -- UCLA License Agreements."

- Further analysis of the TNF-PEG technology as an anti-cancer agent in animal studies. See "Business -- Research and Development Programs -- Other Programs -- TNF-PEG: Broad Range Anticancer Drug Program."

- Testing proprietary vectors which have been constructed for the expression of specific proteins that may be utilizable for vaccines for different diseases using Mycobacteria. See "Business -- Research and Development Programs -- Other Programs Vaccine Program."

- Further development and potential marketing of the anti-sense technology currently being conducted at the University of Texas at Dallas. See "Business -- Research and Development Programs -- Other Programs -- Anti-sense Therapeutics Program."

- Developing a humanized antibody specific or peptide specific for the protein associated with the LCG gene and, if successful, submission of an IND for clinical trials. See "Business -- Research and Development Programs -- Human Gene Discovery Program/Lung Cancer Program."

- Making improvements to the Company's laboratory facilities and corporate facilities.

- Hiring additional research technicians and a financial vice president.

- Seeking to establish strategic partnerships for the development, marketing, sales and manufacturing of the Company's proposed products. See "Business -- Manufacturing and Marketing."

The actual research and development and related activities of the Company may vary significantly from current plans depending on numerous factors, including changes in the costs of such activities from current estimates, the results of the Company's research and development programs, the results of clinical studies, the timing of regulatory submissions, technological advances, determinations as to commercial potential and the status of competitive products. The focus and direction of the Company's operations will also be dependent upon the establishment of collaborative arrangements with other companies, the availability of financing and other factors.

The Company incurred net losses of \$2,890,000, \$3,252,000 and \$2,728,000 for the twelve months ended December 1996, 1997 and 1998, respectively. The increase in net losses from 1996 to 1997 was attributable to decrease in interest income and an increase in general and administrative expenses. The decrease from 1997 to 1998 was attributable to revenue received from the Bristol-Myers Squibb License and R&D Agreements and an increase in interest income, partially offset by an increase in research and development expenses and general and administrative expenses. The Company expects to incur additional losses in the foreseeable future.

The Company incurred general and administrative expenses of \$1,530,000, \$1,888,000 and \$2,500,000 for the twelve months ended December 1996, 1997 and

1998, respectively. The increase from 1996 to 1997 was attributable to increased legal and professional fees, as well as, increased consulting fees and travel expenses. Included in general and administrative expenses for 1997 was a non-cash charge of \$133,000 related to the valuation of stock options issued to consultants of the Company. The increase from 1997 to 1998 was attributable to increased legal and professional fees, including increased patent expenses, as well as, increased insurance costs, increased public relations and financial relations expenses, partially offset by a decrease in consulting fees and a decrease in travel and lodging expenses. Included in general and administrative expenses

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for 1998 was a non-cash charge of \$197,000 related to the valuation of stock options issued to consultants of the Company.

The Company incurred research and development expenses of \$1,576,000, \$1,469,000 and \$1,692,000 for the twelve months ended December 1996, 1997 and 1998, respectively. The decrease from 1996 to 1997 was attributable to the completion of the Company's funding obligation to RDI partially offset by increased expenses for contract research and development at Washington State University and increased rent expenses. The increase from 1997 to 1998 was attributable to increased funding for the research programs at Washington State University and Research & Development Institute, Inc., an increase in contract labor costs and an increase in license fees, partially offset by a decrease in laboratory supply expenses.

In April 1998, the Company received net proceeds of approximately \$4,837,000 from the sale of 56 Units consisting of 671,026 shares of Common Stock and Class E Warrants to purchase 335,540 shares of Common Stock at exercise prices per share from \$9.82 to \$11.35, subject to adjustment upon the occurrence of certain events. During the year ended December 31, 1998, the Company also received proceeds of approximately \$2,630,000 from the exercise of options and warrants.

The Company believes that it has sufficient capital to finance the Company's plan of operation in excess of 12 months. However, there can be no assurance that the Company will generate sufficient revenues, if any, to fund its operations after such period or that any required financings will be available, through bank borrowings, debt or equity offerings, or otherwise, on acceptable terms or at all.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The response to this item is submitted in a separate section of this report.

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

Not applicable.

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PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT.

The executive officers, directors and principal scientists of the Company are as follows:

<TABLE>

<CAPTION>

NAME	AGE	POSITION
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<S>	<C>	<C>
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Arthur P. Bollon, Ph.D.(1).....	56	Chairman, President and Chief Executive Officer
Ira J. Gelb, M.D.(1).....	71	Director
Irwin C. Gerson(1).....	69	Director

Walter M. Lovenberg, Ph.D.....	64	Director
Daniel Shusterman, J.D.....	35	Vice President of Operations, Treasurer and Chief Financial Officer
Dorit Arad, Ph.D.....	39	Vice President of Drug Design
Susan L. Berent, Ph.D.....	46	Director of Gene & Protein Engineering and Information Systems, Co-Director Molecular Immunology and Gene Expression Systems
Hakim Labidi, Ph.D.....	41	Director of Vaccine Program
Rajinder Singh Sidhu, Ph.D.....	50	Director of Fungal Paclitaxel Program, Co-Director of Gene Expression Systems
Richard M. Torczynski, Ph.D.....	43	Director of Human Gene Discover, Mammalian Expression system and Diagnostic Development, Co-Director of Molecular Immunology

</TABLE>

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(1) Members of Audit and Compensation Committees

Arthur P. Bollon, Ph.D., a founder of the Company, has, since the Company's inception in 1991, served as Chairman of the Board of Directors, President, Chief Executive Officer and, until March 1995, Treasurer. Dr. Bollon received his Ph.D. from the Institute of Microbiology at Rutgers University and was a Post Doctoral Fellow at Yale University. He has served as consultant to a number of major companies (including Merck, Sharp & Dohme and Diamond Shamrock) and has previously served on the Board of Directors and Advisory Boards of several biotechnology companies, including Viragen, Inc., Wadley Biosciences Corp. and American Bio-netics, Inc. From 1987 to 1991, Dr. Bollon served as President and Chief Executive Officer of the Wadley/Phillips Partnership. Prior to that time, he was Director of Genetic Engineering and Chairman of the Department of Molecular Genetics at Wadley Institutes of Molecular Medicine. In his capacities at the Wadley/Phillips Partnership and Wadley Institutes, Dr. Bollon has played a leading role in bringing the technology that forms the basis of CPI from conception to reality.

Ira J. Gelb, M.D. has been a director of the Company since April 1994. Dr. Gelb received his M.D. from New York University School of Medicine in 1951. After finishing his training in cardiology at the Mount Sinai Hospital in New York City in 1957, he continued his association with that institution until his retirement in 1992. During this period, he was appointed Attending Cardiologist and Associate Clinical Professor at the Mount Sinai School of Medicine. Other appointments included Adjunct Associate Clinical Professor of Cardiology at Cornell Medical School, Adjunct Clinical Professor of Cardiology at New York Medical College, Cardiology Consultant at Lawrence Hospital, Bronxville, N.Y. and United Hospital, Portchester, N.Y. Dr. Gelb is a past President of the American Heart Association, Westchester-Putnam Chapter and was a Senior Assistant Editor with the American Journal of Cardiology from 1968-1983, when he became a founding editor of the Journal of the American College of Cardiology (the "JACC"). Dr. Gelb continued as a Senior Assistant Editor of JACC until his retirement in 1992. Since that time, he has served on the boards of various pharmaceutical companies. Dr. Gelb has been the Clinical Coordinator of Biomedical Programs and Professor of Chemistry & Biochemistry at Florida Atlantic University since 1998 and an Adjunct Professor and a member of its Foundation Board, since October 1996 and its Steering Committee, since 1997. Since

December 1996 he has also been a member of the Board of Directors of the American Heart Association -- Boca Raton Division. In 1998, Boca Raton Community Hospital added Dr. Gelb as a member to its Foundation Board. Since 1992, Dr. Gelb has been an Honorary Lecturer at The Mount Sinai School of Medicine. In November 1998, Dr. Gelb was appointed Voluntary Professor of Medicine at the University of Miami School of Medicine.

Irwin C. Gerson has been a director since March 1995. Since January 1998, Mr. Gerson has served as Chairman Emeritus of Lowe McAdams Healthcare. Prior thereto, from 1995 until December 1997, he had been Chairman of Lowe McAdams Healthcare and prior thereto he had been, since 1986, Chairman and Chief Executive Officer of William Douglas McAdams, Inc., one of the largest advertising agencies in the U.S. specializing in pharmaceutical communications to healthcare professionals. Mr. Gerson has received a B.S. in Pharmacy from Fordham University and an MBA from the NYU Graduate School of Business Administration. In 1992, Mr. Gerson received an honorary Doctor of Humane

Letters from the Albany College of Pharmacy. Mr. Gerson serves as a Trustee of Long Island University, Chairman of The Council of Overseers -- Arnold and Marie Schwartz College of Pharmacy, member of the Board of Trustees of the Albany College of Pharmacy and, from 1967 through 1974, was a lecturer on sales management pharmaceutical marketing at the Columbia College School of Pharmacy. Mr. Gerson also serves as a Member of the Board of Governors, New York Council, American Association of Advertising Agencies, a Director (and past Chairman) of Business Publications Audit ("BPA"), a Director of the Connecticut Grand Opera, a Director of the Stamford Chamber Orchestra, and is a director of Andrx Corporation, a NASDAQ traded company (Ticker: ANDRX). Mr. Gerson previously served as Director of the foundation of Pharmacists and Corporate Americans for AIDS Education, the Pharmaceutical Advertising Council, Penn Dixie Industries, Continental Steel Corporation, the Nutrition Research Foundation and as a Trustee of the Chemotherapy Foundation.

Walter M. Lovenberg, Ph.D. has been a director since August 1995. Dr. Lovenberg was an Executive Vice President and member of the Board of Directors of Marion Merrell Dow Inc. from 1989 through August 1993. Dr. Lovenberg served as the President of the Marion Merrell Dow Research Institute from 1989 to 1993 and Vice President from 1986 through 1989. Prior to joining Marion Merrell Dow (1958-1985), he was a Senior Scientist and Chief of Biochemical Pharmacology at the National Institutes of Health. Dr. Lovenberg has been President of Lovenberg Associates, Inc. since 1993. Since 1997, Dr. Lovenberg has served as Chief Executive Officer of Helicon Therapeutics Inc., a private company, and since 1992 and 1995, Dr. Lovenberg has served as a director of Xenometrix, Inc. and Inflazyme Pharmaceuticals, Ltd. (each traded on the Vancouver Exchange), respectively. Also, since 1994, Dr. Lovenberg has served as director of OSI Pharmaceuticals, Inc., a public company listed on NASDAQ. Dr. Lovenberg received a Ph.D. in Biochemistry from George Washington University in 1962 and a B.S. in Biochemistry and an M.S. in Agriculture from Rutgers University in 1958 and 1956, respectively. Dr. Lovenberg, who serves as Executive Editor of Analytical Biochemistry and Editor (USA) of Neurochemistry International, is a consulting editor to several other scientific journals. He has been the recipient of many awards, including a Fulbright-Hays Senior Scholar Award and a Public Health Service Superior Service Award. Dr. Lovenberg is a member of the American College of Neuropsychopharmacology, the American Society of Neurochemistry and the American Society of Biochemistry and Molecular Biology.

Daniel Shusterman, J.D. was named Vice President of Operations of the Company in 1994 and Treasurer and Chief Financial Officer in March 1995, after having served as Director of Operations since he joined the Company in 1991. Mr. Shusterman received his M.S. degree with an emphasis on biotechnology from the University of Texas in 1988. He was Director of Operations at Wadley/Phillips Partnership for three years prior to joining CPI. Mr. Shusterman is a registered Patent Agent and received his J.D. from Texas Wesleyan University School of Law in 1993 and has been a member of the Texas bar since 1994. In addition to his role as a V.P. of Operations, he is contributing to the implementation of an intellectual property protection and maintenance system at CPI.

Dorit Arad, Ph.D. joined the Company as Vice President of Drug Design in January 1999. From 1996 until 1998, Dr. Arad served as Scientific Director at Satori Medical Research LTD. From 1991 until 1993, Dr. Arad served as a consultant to Teva-Israel Pharmaceutical Industries. In addition, Dr. Arad has served as

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an instructor and lecturer at Technicon in Haifa, Israel and as a lecturer at the Tel-Aviv University. Dr. Arad is the co-author of a number of scientific articles and papers. Dr. Arad received her B.Sc., M.Sc. and D.Sc. Degrees in Chemistry from Technicon, Haifa, Israel.

Susan L. Berent, Ph.D. has been with the Company since 1991 as Director of Gene and Protein Engineering and Computer Systems. Dr. Berent received her Ph.D. in Biological Chemistry from the University of Michigan and completed a postdoctoral fellowship at the Department of Molecular Genetics, Wadley Institutes of Molecular Medicine. She was appointed to Senior Scientist at Wadley in 1984 and maintained that position in the Wadley/Phillips Partnership until she joined the Company in 1991. Dr. Berent is an expert in protein chemistry, DNA libraries, cytokines such as TNF, and production Systems.

Hakim Labidi, Ph.D. has been with the Company since 1991 as Director of the Vaccine Program. Dr. Labidi received his Ph.D. in Microbiology at the Pasteur

Institute in Paris, France and has been a senior scientist at CPI since 1991. Prior to joining the Company, Dr. Labidi was a Senior Research Investigator and Assistant Professor at the University of Texas from 1987 to 1989 and an Associate Professor at Kuwait University from 1989 until 1991. Dr. Labidi was the first to isolate and sequence a plasmid from mycobacterium.

Rajinder Singh Sidhu, Ph.D. has been with the Company since 1991 as Director of the Fungal Program and Co-Director of Gene Expression Systems. Dr. Sidhu received his Ph.D. degree in Microbiology from Haryana Agricultural University in Hissar, India, and completed a postdoctoral fellowship at Osaka University in Japan. He was appointed to Senior Scientist at Wadley in 1984 and maintained that position in the Wadley/Phillips Partnership until he joined the Company. Dr. Sidhu is an expert on gene fusion and engineering, fungal genes and secretion, cytokines such as TNF, and production Systems.

Richard M. Torczynski, Ph.D. has been with the Company since 1991 as Director of Human Gene Discovery, Mammalian Expression System and Diagnostic Development, and Co-Director of Molecular Immunology. Dr. Torczynski received his Ph.D. degree in Biology from the University of Texas and completed his research fellowship under the direction of Dr. Arthur Bollon. He was appointed to Senior Scientist at Wadley in 1984 and maintained that position in Wadley/Phillips Partnership. Dr. Torczynski is an expert on certain specialized gene libraries, monoclonal antibodies and cytokines such as interferon.

The Board of Directors currently consists of four members. All directors hold office until the next annual meeting of stockholders and until their successors are duly elected and qualified. Officers are elected to serve, subject to the discretion of the Board of Directors, until their successors are appointed.

Directors receive fees of \$1,000 per month, or an annual fee of \$12,000. Dr. Gelb has, to date, also received options to purchase 129,000 shares of Common Stock with exercise prices ranging from \$2.69 to \$5.00 per share. Mr. Gerson has, to date, received options to purchase 125,000 shares of Common Stock with exercise prices ranging from \$2.69 to \$5.00 per share. Dr. Lovenberg has, to date, received options to purchase 125,000 shares of Common Stock with exercise prices ranging from \$2.69 to \$5.00 per share. See "Executive Compensation" for information regarding stock option grants to Dr. Bollon. Directors are also reimbursed for expenses actually incurred in connection with their attendance at meetings of the Board of Directors.

The Company's Certificate of Incorporation includes certain provisions permitted pursuant to Delaware law whereby officers and directors of the Company are to be indemnified against certain liabilities. The Company's Certificate of Incorporation also limits, to the fullest extent permitted by Delaware law, a director's liability for monetary damages for breach of fiduciary duty, including gross negligence, except liability for (i) breach of the director's duty of loyalty, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of the law, (iii) the unlawful payment of a dividend or unlawful stock purchase or redemption and (iv) any transaction from which the director derives an improper personal benefit. Delaware law does not eliminate a director's duty of care and this provision has no effect on the availability of equitable remedies such as injunction or rescission based upon a director's breach of the duty of care. In addition, the Company has obtained an insurance policy providing coverage for certain liabilities of its officers and directors.

The Company has been advised that it is the position of the Commission that insofar as the foregoing provision may be invoked to disclaim liability for damages arising under the Securities Act, such provision is against public policy as expressed in the Securities Act and is therefore unenforceable.

SCIENTIFIC ADVISORS/CONSULTANTS

The Company's Scientific Advisory Board currently consists of individuals having extensive experience in the fields of molecular genetics, chemistry, oncology and microbiology. At the Company's request, the scientific advisors review and evaluate the Company's research programs and advise the Company with respect to technical matters in fields in which the Company is involved.

The following table sets forth the name and current position of each

scientific advisor:

<TABLE>
<CAPTION>

NAME	POSITION
Hugo David, M.D., Ph.D.....	Consultant, New University of Lisbon, Institute of Hygiene and Topical Medicine
Donald M. Gray, Ph.D.....	Professor, Department of Molecular and Cell Biology, University of Texas at Dallas
Sidney Pestka, M.D.....	Chairman & Professor, Department of Molecular Genetics and Microbiology and Professor of Medicine, University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School
Jeffrey Schlom, Ph.D.....	Chief, Laboratory of Tumor Immunology and Biology, Division of Cancer Biology and Diagnosis, National Cancer Institute, National Institutes of Health
David A. Scheinberg, M.D., Ph.D.....	Chief, Leukemia Service; Head, Hematopoietic Cancer Immunochemistry Laboratory, Memorial Sloan-Kettering Cancer Center
Gary Strobel, Ph.D.....	Professor, Montana State University

All of the scientific advisors are employed by other entities and some have consulting agreements with entities other than the Company, some of which entities may in the future compete with the Company. Four of the current scientific advisors receive \$1,000 per month from the Company. The scientific advisors are expected to devote only a small portion of their time to the Company and are not expected to participate actively in the day-to-day affairs of the Company. Certain of the institutions with which the scientific advisors are affiliated may adopt new regulations or policies that limit the ability of the scientific advisors to consult with the Company. It is possible that any inventions or processes discovered by the scientific advisors will remain the property of such persons or of such persons' employers. In addition, the institutions with which the scientific advisors are affiliated may make available the research services of their personnel, including the scientific advisors, to competitors of the Company pursuant to sponsored research agreements.

Dr. Hugo David is consultant mycobacteriologist to the Institute of Hygiene and Tropical Medicine at New University of Lisbon. He was chief of the mycobacteriology branch at Center for Disease Control (CDC) and was Professor and Head of the Mycobacterial and Tuberculosis Unit at Pasteur Institute in Paris. Dr. David is an authority on mycobacterial infections and vaccine development for tuberculosis and leprosy.

Dr. Donald M. Gray is a Professor and was, until August 1995, Chairman, Department of Molecular and Cell Biology, University of Texas at Dallas. He is a world authority on DNA structures in solution and is working with CPI on anti-sense therapy.

Dr. Sidney Pestka is Professor and Chairman of the Department of Molecular Genetics and Microbiology and Professor of Medicine, University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School. Dr. Pestka was formerly head of the program at the Roche Institute of Molecular Biology which resulted in the development of interferon for commercialization.

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Dr. Jeffrey Schlom is Chief of the Laboratory of Tumor Immunology and Biology, Division of Cancer Biology and Diagnosis at the National Cancer Institute, National Institutes of Health and is one of the world leaders in the development of monoclonal antibodies for cancer therapy.

Dr. David A. Scheinberg is Chief of Leukemia Service and Head of the Hematopoietic Cancer Immunochemistry Laboratory at Memorial Sloan-Kettering Cancer Center. He is an authority on the immunotherapy of cancer and has directed many clinical trials for new anti-cancer products.

Dr. Gary Strobel is Professor at Montana State University. Dr. Strobel and

colleagues Dr. Andrea Stierle and Dr. Donald Stierle isolated the fungus, *Taxomyces andreanae*, which is being used by the Company to make the anti-cancer drug, Paclitaxel.

ITEM 11. EXECUTIVE COMPENSATION

The following summary compensation table sets forth the aggregate compensation paid or accrued by the Company to the Chief Executive Officer and to the four most highly compensated executive officers other than the Chief Executive Officer whose annual compensation exceeded \$100,000 for the fiscal year ended December 31, 1998 (collectively, the "Named Executive Officers") for services during the fiscal years ended December 31, 1998, December 31, 1997 and December 31, 1996:

SUMMARY COMPENSATION TABLE

<TABLE>
<CAPTION>

NAME AND PRINCIPAL POSITION	LONG-TERM COMPENSATION					STOCK OPTIONS #
	ANNUAL COMPENSATION		AWARDS			
	YEAR	SALARY	BONUS	ALL OTHER COMPENSATION(1)		
Arthur P. Bollon,..... Chairman and Chief Executive Officer	1998	\$186,230	--	\$6,000	100,000	
	1997	\$180,856	--	\$6,000	95,000	
	1996	\$165,951	--	\$6,000	150,000	

(1) Consisting of car allowances.

EMPLOYMENT CONTRACTS AND TERMINATION OF EMPLOYMENT AND CHANGE-IN-CONTROL ARRANGEMENTS

Arthur P. Bollon, Ph.D. is employed under an extension effective October 8, 1998 to his 1992 employment agreement with the Company, which agreement has been extended until November 6, 2003. As extended, the agreement provides for the payment to Dr. Bollon of a base salary of \$200,000 per year with annual increases of not less than 5% per year. In addition, in the event Dr. Bollon is terminated without just cause or due to a Disability (as defined in the employment agreement), the employment agreement provides that Dr. Bollon shall receive severance payments of equal monthly installments at the base rate until the earlier of the expiration of the term or the expiration of 36 months. Dr. Bollon also receives a car expense allowance of \$500 per month under the employment agreement. In November 1992, the Company granted Dr. Bollon options to purchase 200,000 shares of Common Stock, at an exercise price of \$1.65 per share. In April 1996, the Company granted Dr. Bollon options to purchase 50,000 shares of Common Stock at an exercise price of \$4.125 per share. In December 1996, the Company granted Dr. Bollon options to purchase 100,000 shares of Common Stock at an exercise price of \$2.25 per share. In January 1997, the Company granted Dr. Bollon options to purchase 50,000 shares of Common Stock at an exercise price of \$2.375 per share. In June 1997, the Company granted Dr. Bollon options to purchase 20,000 shares of Common Stock at an exercise price of \$2.6875 per share. In September 1997, the Company granted Dr. Bollon options to purchase 25,000 shares of Common Stock, at an exercise price of \$4.3125 per share. In September 1998, the Company granted Dr. Bollon options to purchase 25,000 shares of Common Stock at an exercise price equal to \$3.56 per share. In October 1998, the Company granted Dr. Bollon options to purchase 75,000 shares of Common Stock at an exercise price of \$4.75 per share. All such options are exercisable to the extent of 40% after six months of continuous employment from the date of grant and to the extent of an additional 20% on

and after each of the first three anniversaries of the date of grant. In October 1998, the Company's Board of Directors approved an amendment to Dr. Bollon's employment agreement, to extend the term until November 6, 2003 and to increase his base salary to \$200,000 per annum. See "-- Stock Options."

Each of the Company's executive officers and the Company's principal scientists have entered into confidentiality and patent assignment agreements with the Company.

STOCK OPTIONS

In October 1992, the Board of Directors of the Company adopted the Cytoclonal Pharmaceuticals Inc. 1992 Stock Option Plan (the "1992 Plan"). The 1992 Plan provides for the grant of incentive stock options intended to qualify as such under Section 422 of the Internal Revenue Code of 1986, as amended, and nonstatutory stock options which do not so qualify. Under the 1992 Plan, as amended, 520,000 shares of Common Stock were reserved for issuance to officers, employees, consultants and advisors of the Company. As of December 31, 1998, options to purchase 218,500 shares of Common Stock had been exercised, no shares are available for future grant and options to purchase 301,500 shares of Common Stock remain outstanding under the 1992 Plan. The exercise prices of such options range from \$1.65 to \$5.00 per share. In April 1996, the Board of Directors of the Company adopted the Cytoclonal Pharmaceuticals Inc. 1996 Stock Option Plan (the "1996 Plan"). Under the 1996 Plan, 750,000 shares of Common Stock had been reserved for issuance to officers, employees, consultants and advisors of the Company. The 1996 Plan provides for the grant of incentive stock options intended to qualify as such under Section 422 of the Internal Revenue Code of 1986, as amended, and nonstatutory stock options which do not so qualify. On August 22, 1998 and October 2, 1998, Amendment No. 1 to the 1996 Plan was approved by the Company's Board of Directors and stockholders, respectively, thereby increasing the number of stock options available for grant pursuant to the 1996 Plan and shares of Common Stock issuable thereunder from 750,000 to 1,500,000. As of December 31, 1998, options to purchase 4,200 shares of Common Stock have been exercised, options to purchase 487,000 shares of Common Stock are available for future grant and options to purchase 1,008,800 shares of Common Stock remain outstanding under the 1996 Plan. The exercise prices of such options range from \$2.25 to \$8.375 per share. All such options are exercisable to the extent of 40% after six months of continuous employment from the date of grant and to the extent of an additional 20% on and after each of the first three anniversaries of the date of grant. See "Item 4. Submission of Matters to a Vote of Security Holders."

The 1992 Plan and the 1996 Plan are administered by the Compensation Committee of the Board of Directors (the "Compensation Committee"). Subject to the limitations set forth in the 1992 Plan and the 1996 Plan, the Compensation Committee has the authority to determine to whom options will be granted, the term during which options granted under the 1992 and the 1996 Plan may be exercised, the exercise price of options and the rate at which options may be exercised. The maximum term of each incentive stock option granted under the 1992 and the 1996 Plan is ten years. The exercise price of shares of Common Stock subject to options qualifying as incentive stock options may not be less than the fair market value of the Common Stock on the date of the grant. The exercise price of incentive options granted under the 1992 and the 1996 Plan to any participant who owns stock possessing more than 10% of the total combined voting power of all classes of outstanding stock of the Company must be equal to no less than 110% of the fair market value on the date of grant, and incentive stock options granted to such participants must also expire within five years from the date of grant. Under the 1992 Plan, the exercise price of both incentive stock options and nonstatutory stock options is payable in cash or, at the discretion of the Board, in Common Stock or a combination of cash and Common Stock. Under the 1996 Plan, the exercise price of options is payable in cash or such other means which the Board determines are consistent with such Plan and with applicable laws and regulations.

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The following table sets forth certain information with respect to options granted during the year ended December 31, 1998 to the Named Executive Officer:

OPTION GRANTS IN FISCAL YEAR 1998

<TABLE>
<CAPTION>

INDIVIDUAL GRANTS

% OF TOTAL
OPTIONS
GRANTED TO

NAME	EMPLOYEE IN EXERCISE OF			EXPIRATION DATE
	OPTIONS GRANTED(#)	FISCAL YEAR(1)	BASE PRICE(\$/SH)	
<S>	<C>	<C>	<C>	<C>
Arthur P. Bollon, Ph.D.,.....	25,000	8.4	\$3.56	September 1, 2008
President and CEO	75,000	25.3	\$4.75	October 7, 2008

(1) Excludes grants to non-employee directors and consultants.

The following table sets forth certain information with respect to each exercise of stock options during the fiscal year ended December 31, 1998 by the Named Executive Officer and the number and value of unexercised options held by such Named Executive Officer as of December 31, 1998:

<TABLE>
<CAPTION>
AGGREGATED OPTION EXERCISES
IN LAST FISCAL YEAR AND FY-END OPTION VALUES

NAME	SHARES ACQUIRED ON EXERCISE(#)	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT	
		FY-END(#)	EXERCISABLE/ UNEXERCISABLE	FY-END(#)	EXERCISABLE/ UNEXERCISABLE(1)
<S>	<C>	<C>	<C>	<C>	<C>
Arthur P. Bollon, Ph.D.....	0	0	387,000/158,000	\$2,660,625/\$1,086,250	

(1) Based on the fair market value of the Company's Common Stock on December 31, 1998, as determined by the Company's Board of Directors.

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

A person is deemed to be a "beneficial owner" of securities of which that person has the right to acquire ownership of such securities within 60 days. The following table sets forth certain information regarding the beneficial ownership of the capital stock of the Company as March 26, 1999 by (i) each person deemed to be the beneficial owner of more than 5% of any class of capital stock of the Company, (ii) each director of the Company, (iii) the Named Executive Officers, and (iv) all directors and executive officers as a group. Information as to (A) Kinder Investments, L.P. ("Kinder"), (B) Peyser Associates, L.L.C., the general partner of Kinder ("Peyser"), and (C) Brian A. Wasserman, the managing partner of Peyser, was derived from the Schedules 13G, as amended, filed by such stockholders with the Commission on April 8, 1998, and, except for the percentage ownership, reflects the information contained therein as of the date such

Schedules 13G, as amended, were filed. Except as otherwise indicated, each of the persons named has sole voting and investment power with respect to the shares shown below.

<TABLE>
<CAPTION>

NAME AND ADDRESS OF BENEFICIAL OWNER(1)	COMMON STOCK		SERIES A PREFERRED STOCK		
	AMOUNT AND NATURE OF	AMOUNT AND NATURE OF	PERCENT OF BENEFICIAL OWNERSHIP(2)	PERCENT OF BENEFICIAL OWNERSHIP(3)	PERCENT OF ALL VOTING SECURITIES(4)
<S>	<C>	<C>	<C>	<C>	<C>

Janssen-Meyers Associates, L.P.(5).....	2,526,786	23.0%	24,200	3.1%	21.5]%
Bruce Meyers(6).....	1,682,952	15.5%	24,200	3.1%	14.4%
Peter W. Janssen(7).....	1,187,547	11.1%	--	--	10.3%
Kinder Investments, L.P.(8).....	708,000	6.9%	--	--	6.4%
Peyster Associates, L.L.C.(9).....	708,000	6.9%	--	--	6.4%
Brian A. Wasserman(10).....	708,000	6.9%	--	--	6.4%
Arthur P. Bollon, Ph.D.(11).....	621,400	5.8%	--	--	5.4%
Ira J. Gelb, M.D.(12).....	100,000	1.0%	--	--	*
Irwin C. Gerson(13).....	96,000	*	--	--	*
Walter M. Lovenberg, Ph.D.(14).....	107,500	1.0%	--	--	*
Directors and executive officers as a group (5 persons)(15).....	977,900	8.9	--	--	8.3%

</TABLE>

* Less than 1%

- (1) Except as otherwise indicated, the address of each beneficial owner is c/o the Company, 9000 Harry Hines Boulevard, Suite 330, Dallas, Texas 75235.
- (2) Calculated on the basis of 10,256,322 shares of Common Stock outstanding except that shares of Common Stock underlying options or warrants exercisable within 60 days of the date hereof are deemed to be outstanding for purposes of calculating the beneficial ownership of securities of the holder of such options or warrants. This calculation excludes shares of Common Stock issuable upon the conversion of Series A Preferred Stock.
- (3) Calculated on the basis of 791,731 shares of Series A Preferred Stock outstanding.
- (4) Calculated on the basis of an aggregate of 11,048,053 shares of Common Stock and Series A Preferred Stock outstanding except that shares of Common Stock underlying options and warrants exercisable within 60 days of the date hereof are deemed to be outstanding for purposes of calculating beneficial ownership of securities of the holder of such options or warrants. This calculation excludes shares of Common Stock issuable upon the conversion of Series A Preferred Stock.
- (5) The address for Janssen-Meyers Associates, L.P. ("JMA") is 17 State Street, New York, New York 10004. Messrs. Bruce Meyers and Peter Janssen are each 50% stockholders and the sole officers and directors of the corporate general partner of JMA. Includes (i) 262,184 shares of Common Stock issuable upon the exercise of 65,546 Unit Purchase Options and underlying C and D Warrants granted to JMA for underwriting services in connection with the Company's initial public offering in November 1995 (the "IPO"), (ii) 81,530 shares of Common Stock issuable upon the exercise of a Unit Purchase Option and underlying Class E Warrants granted to JMA for placement agent services in connection with the Company's April 1998 private placement (the "April 1998 Private Placement") and (iii) the aggregate amount of shares of Common Stock and Series A Preferred Stock beneficially owned by Messrs. Meyers and Janssen. See (6) and (7) below.
- (6) Mr. Meyers' address is c/o JMA referenced in note (5) above. Consists of (i) 1,054,865 shares of Common Stock, (ii) 24,200 shares of Common Stock issuable upon the conversion of 24,200 shares of Series A Preferred Stock, (iii) 421,468 shares of Common Stock issuable upon the exercise of 105,367 Unit Purchase Options and underlying C and D Warrants originally granted to JMA for underwriting services in connection with the IPO, 39,821 of which is held by Mr. Meyers, (iv) 131,856 shares of Common Stock issuable upon the exercise of a currently exercisable Unit Purchase Option and underlying Class E Warrants granted to JMA for placement agent services in connection with the April 1998 Private Placement, 50,327 shares of which Mr. Meyers has the right to receive directly,
- 29
- (v) 30,563 shares of Common Stock issuable upon the exercise of currently exercisable Class E Warrants directly held by Mr. Meyers and (vi) 20,000 shares of Common Stock held by The Meyers Foundation of which Mr. Meyers has voting control. See note (5) above.
- (7) Mr. Janssen's address is c/o JMA referenced in note (5) above. Consists of (i) 720,563 shares of Common Stock, (ii) 123,270 shares of Common Stock

issuable upon the exercise of options exercisable within 60 days hereof and (ii) shares of Common Stock held by JMA or which JMA has the right to acquire within 60 days hereof. Does not include 397,575 shares of Common Stock issuable upon the exercise of warrants not exercisable within 60 days hereof. See note (5) above.

- (8) The address for Kinder Investments, L.P. is 779 CR403, Greenville, New York 12083. Consists of 668,000 shares of Common Stock and Class A Warrants to acquire 40,000 shares of Common Stock, all of which are currently exercisable.
- (9) Ownership consists of securities beneficially owned by Kinder Investment, L.P. Peyser Associates, L.L.C. is the general partner of Kinder Investments, L.P. See note (8) above.
- (10) Ownership consists of securities beneficially owned by Kinder Investments, L.P. Mr. Wasserman is the managing partner of Peyser Associates, L.L.C., and has sole voting and dispositive control of shares owned by Kinder Investments, L.P. See note (8) above.
- (11) Ownership consists of 184,400 shares of Common Stock and options to purchase 437,000 shares of Common Stock which are currently exercisable or exercisable within 60 days of the date hereof. Does not include options to purchase 108,000 shares of Common Stock not exercisable within 60 days of the date hereof.
- (12) Ownership consists of options to purchase 100,000 shares which are currently exercisable or exercisable within 60 days of the date hereof. Does not include options to purchase 29,000 shares of Common Stock not exercisable within 60 days of the date hereof.
- (13) Ownership consists of options to purchase 96,000 shares which are currently exercisable or exercisable within 60 days of the date hereof. Does not include options to purchase 29,000 shares of Common Stock which are not exercisable within 60 days of the date hereof.
- (14) Ownership consists of 2,500 shares of Common Stock, options to purchase 102,000 shares of Common Stock which are currently exercisable or exercisable within 60 days of the date hereof and warrants to purchase 3,000 shares of Common Stock which are currently exercisable. Does not include options to purchase 23,000 shares of Common Stock which are not exercisable within 60 days of the date hereof.
- (15) Ownership consists of 189,400 shares of Common Stock and options to purchase an aggregate of 783,000 shares of Common Stock which are currently exercisable or exercisable within 60 days of the date hereof. Does not include options to purchase 171,400 shares of Common Stock not exercisable within 60 days of the date hereof.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

JMA acted as placement agent for the 1995 Bridge Financing and as underwriter of the IPO and in consideration thereof, received fees of \$203,750 and \$1,092,500, respectively, plus non-accountable expense allowances of \$61,125 and \$345,000, respectively. In addition, JMA was granted, in connection with its services as placement agent for the 1995 Bridge Financing, a (i) five-year right of first refusal to act as agent for offerings of securities by the Company and certain of its shareholders and (ii) the right to receive certain fees in connection with any merger and acquisition pursuant to an agreement with the Company. In connection with its services as underwriter of the IPO, JMA was granted options to purchase 200,000 units ("Units") at a price equal to \$8.25 per Unit, each Unit consisting of one share of Common Stock, one redeemable Class C Warrant and one redeemable Class D Warrant.

JMA acted as placement agent for the Company's 1998 Private Placement and, in consideration for its services as such, received a sales commission equal to 10% of the \$5,633,675 gross proceeds, or \$563,368, a non-accountable expense allowance equal to 3%, or \$169,010, accountable out-of-pocket expenses equal to \$13,658, plus legal and blue sky fees of \$48,610. JMA also received a warrant, exercisable for a five-year period commencing April 2, 1998, to purchase 20% of the number of Units sold in the 1998 Private Placement for 134,199 shares of

Common Stock and Common Stock Purchase Class E Warrants to purchase 67,101 shares of Common Stock (the "Private Placement Unit Purchase Option").

Bruce Meyers is a principal of JMA and was Vice Chairman of the Board of Directors and Vice President in charge of Business Development for the Company until his resignation from the Company in April 1995. In December 1996, the Company and JMA executed a one year nonexclusive investment banking agreement with the Company providing for a monthly fee of \$5,000 payable by the Company to JMA. During each of 1997 and 1998, the Company paid \$60,000 under this agreement. This agreement was extended through January 1999. See "Management -- Security Ownership of Certain Beneficial Owners and Management."

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES AND REPORTS ON FORM 8-K

<TABLE>

<S> <C> <C>

(a) (1) Independent Auditors' Report

Balance Sheets as of December 31, 1998 and 1997
 Statements of Operations for the years ended December 31, 1998, 1997 and 1996
 Statements of Changes in Stockholders' Equity for years ended December 31, 1998, 1997 and 1996
 Statements of Cash Flows for the years ended December 31, 1998, 1997 and 1996
 Notes to Financial Statements

(2) Financial Statement Schedules

All schedules have been omitted because the required information is included in the financial statements or notes thereto or because they are not required.

(3) Exhibits

</TABLE>

<TABLE>

<CAPTION>

EXHIBIT
 NUMBER

DESCRIPTION

EXHIBIT NUMBER	DESCRIPTION
3.1	-- Certificate of Incorporation, as amended(1)
3.2	-- By-laws(1)
4.1	-- Specimen certificates representing Class C Warrants, Class D Warrants and Common Stock(1)
4.2	-- Form of Warrant Agreement with warrant certificates between the Company, Janssen/Meyers Associates, L.P. and American Stock Transfer and Trust Company(1)
4.3	-- Form of Unit Purchase Option in connection with the Company's Initial Public Offering(1)
4.4	-- Warrant Certificate issued to the Washington State University Research Foundation(4)
10.1	-- Form of Consulting Agreement between the Company and Janssen-Meyers Associates, L.P.(1)
10.2	-- Employment Agreement dated March 1, 1992 between the Company and Arthur P. Bollon, Ph.D.(1)
10.3	-- Employment Agreement dated March 1, 1992 between the Company and Bruce Meyers, as amended(1)
10.4	-- Employment Agreement effective November 7, 1995 between the Company and Daniel Shusterman(1)

</TABLE>

<TABLE>

<CAPTION>

EXHIBIT
 NUMBER

DESCRIPTION

EXHIBIT NUMBER	DESCRIPTION
10.5	-- 1992 Stock Option Plan, as amended(1)
10.6	-- Form of Stock Option Agreement(1)
10.7	-- Lease Agreement dated September 1, 1993 between the Company and Mutual Benefit Life Insurance Company In Rehabilitation(1)

10.8	-- Lease Agreement dated October 1, 1991 between the Company and J.K. and Susie Wadley Research Institute and Blood Bank, as amended(1)
10.9	-- Purchase Agreement dated October 10, 1991 between the Company and Wadley Technologies, Inc. ("Wadley")(1)
10.10	-- Security Agreement dated October 10, 1991 between the Company and Wadley(1)
10.11	-- License Agreement dated March 15, 1989 between the Company and Phillips Petroleum Company, as amended(1)
10.12	-- License Agreement dated June 10, 1993 between the Company and Research & Development Institute, Inc. ("RDI"), as amended, relating to the Paclitaxel Fermentation Production System(1)
10.13	-- Research and Development Agreement effective June 10, 1993 between the Company and RDI, as amended(1)
10.14	-- License Agreement dated February 22, 1995 between the Company and RDI, as amended, relating to FTS-2(1)
10.15	-- Research, Development and License Agreement dated March 26, 1992 between the Company and Enzon, Inc. ("Enzon"), as amended(1)
10.16	-- Research, Development and License Agreement dated July 13, 1992 between the Company and Enzon relating to the Company's tumor necrosis factor technology(1)
10.17	-- Agreement effective June 30, 1992 between the Company and University of Texas at Dallas ("UTD"), as amended(1)
10.18	-- Research Agreement effective April 8, 1994 between the Company and Sloan-Kettering Institute for Cancer Research(1)
10.19	-- Joint Venture Agreement dated September 17, 1992 between the Company and Pestka Biomedical laboratories, Inc. ("Pestka")(1)
10.20	-- Stock Purchase Agreement dated September 17, 1992 between the Company and Pestka(1)
10.21	-- License Agreement dated September 17, 1992 between Cytomune, Inc. and Pestka(1)
10.22	-- Research and Development Agreement dated September 17, 1992 between Cytomune, Inc. and Pestka(1)
10.23	-- Marketing Agreement dated as of November 1, 1994 between Helm AGand the Company(1)
10.24	-- Extension Agreement with RDI dated June 5, 1995(1)
10.25	-- Third Amendment to Lease Agreement dated April 30, 1995(1)
10.26	-- Form of Subordinated Note Extension(1)
10.27	-- Form of Note Extension(1)
10.28	-- September 25, 1995 RDI Extension(1)
10.29	-- October 25, 1995 RDI Extension(1)

</TABLE>

<TABLE>

<CAPTION>

EXHIBIT
NUMBER

DESCRIPTION

<C>

<S>

10.30	-- Amendment to License Agreement dated June 10, 1993, as amended, and Research and Development Agreement effective June 10, 1993, as amended, both agreements between the Company and RDI(2)
10.31	-- License Agreement No. W960206 effective February 27, 1996 between the Company and The Regents of the University of California(2)
10.32	-- License Agreement No. W960207 effective February 27, 1996 between the Company and The Regents of the University of California(2)
10.33	-- License Agreement with the Washington State University, dated July 2, 1996(3)*
10.34	-- Amendment to Agreement, effective June 30, 1992, as amended, between the Company and the University of Texas at Dallas(3)
10.35	-- 1996 Stock Option Plan and Amendment No. 1 thereto.
10.36	-- Patent License Agreement, dated August 4, 1998, between

The Regents of the University of California and the
Company for Peptide Anti-estrogen for Breast Cancer
Therapy(5)*

- 10.37 -- Master License Agreement, dated as of June 12, 1998,
between the Company and Bristol-Myers Squibb Company(6)*
- 10.38 -- Sublicense Agreement, dated May 27, 1998, between the
Company and Bristol-Myers Squibb under The Research &
Development Institute, Inc. License Agreement, as
amended, dated June 10, 1998(6)*
- 10.39 -- Sublicense Agreement, dated May 19, 1998, between the
Company and Bristol-Myers Squibb Company under the
Washington State University Research Foundation License
Agreement, dated June 8, 1996(6)*
- 10.40 -- Amended and Restated License Agreement, dated June 3,
1998, between the Washington State University Research
Foundation and the Company(6)*
- 10.41 -- Amendment, dated May 27, 1998, to the License Agreement,
dated June 10, 1993, between The Research and Development
Institute, Inc. and the Company(6)*
- 11 -- Statement re: Computation of per share earnings
- 21 -- List of Subsidiaries -- None
- 23 -- Consent of Independent Auditors
- 27 -- Financial Data Schedule

</TABLE>

* Confidential portions omitted and filed separately with the U.S. Securities
Commission pursuant to Rule 24b-2 promulgated under the Securities Exchange
Act of 1934, as amended.

- (1) Previously filed as an exhibit to the Company's Registration Statement on
Form SB-2 (File No. 33-91802) and are incorporated by reference herein.
- (2) Previously filed as an exhibit to the Company's Annual Report on Form 10-KSB
for the year ended December 31, 1995.
- (3) Previously filed as an exhibit to the Company's Post-Effective Amendment No.
1 to Form SB-2 (File No. 33-91802) and are incorporated by reference herein.
- (4) Previously filed as an exhibit to the Company's Registration Statement on
Form SB-2 (File No. 333-13409) and is incorporated by reference herein.
- (5) Previously filed as an exhibit to the Post-Effective Amendment to the
Company's Registration Statement on Form SB-2 on Form S-3 (File No.
333-13409) and is incorporated by reference herein.
- (6) Previously filed as an exhibit to the Company's Current Report on Form 8-K
(File No. 000-26078) and is incorporated by reference herein.

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(3) Reports on Form 8-K

No reports on Form 8-K were filed during the last quarter of the fiscal
year ended December 31, 1998.

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SIGNATURES

In accordance with Section 13 or 15(d) of the Exchange Act, the registrant
caused this report to be signed on its behalf by the undersigned, thereunto duly
authorized.

CYTOCLONAL PHARMACEUTICS INC.

By: /s/ ARTHUR P. BOLLON, PH.D.

Arthur P. Bollon, Ph.D., President

Dated: March 30, 1999

In accordance with the Exchange Act, this report has been signed below by the following on behalf of the registrant and in capacities and on the dates indicated.

<TABLE>

<CAPTION>

SIGNATURE	CAPACITY	DATE
/s/ ARTHUR P. BOLLON, PH.D. ----- Arthur P. Bollon, Ph.D.	Chairman, President and CEO	March 30, 1999
/s/ DANIEL SHUSTERMAN, J.D. ----- Daniel Shusterman, J.D	Vice President of Operations, Treasurer and Chief Financial Officer	March 30, 1999
/s/ IRA J. GELB ----- Ira J. Gelb	Director	March 30, 1999
/s/ IRWIN C. GERSON ----- Irwin C. Gerson	Director	March 30, 1999
/s/ WALTER M. LOVENBERG ----- Walter M. Lovenberg	Director	March 30, 1999

</TABLE>

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CYTOCLONAL PHARMACEUTICS INC.

INDEX TO FINANCIAL STATEMENTS

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Notes to financial statements.....	F-7

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INDEPENDENT AUDITORS' REPORT

Board of Directors and Stockholders
Cytoclonal Pharmaceuticals Inc.
Dallas, Texas

We have audited the accompanying balance sheets of Cytoclonal Pharmaceuticals Inc. as of December 31, 1998 and 1997, and the related statements of operations, changes in stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 1998. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain

reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements enumerated above present fairly, in all material respects, the financial position of Cytoclonal Pharmaceuticals Inc. as of December 31, 1998 and 1997, and results of its operations and its cash flows for each of the years in the three-year period ended December 31, 1998, in conformity with generally accepted accounting principles.

Richard A. Eisner & Company, LLP

New York, New York
February 6, 1999

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CYTOCLONAL PHARMACEUTICS INC.

BALANCE SHEETS

ASSETS

<TABLE>
<CAPTION>

	DECEMBER 31,	
	1998	1997
<S>	<C>	<C>
Current assets:		
Cash and cash equivalents (Note B[5]).....	\$ 6,826,000	\$ 1,849,000
Prepaid expenses and other current assets.....	85,000	35,000
	-----	-----
Total current assets.....	6,911,000	1,884,000
Equipment, net (Notes B[1] and E).....	121,000	127,000
Patent rights, less accumulated amortization of \$540,000 and \$463,000 (Notes B[2] and C).....	710,000	787,000
Other assets.....	4,000	4,000
	-----	-----
	\$ 7,746,000	\$ 2,802,000
	=====	=====

LIABILITIES

Current liabilities:		
Accounts payable and accrued expenses (Note F).....	\$ 461,000	\$ 460,000
Deferred revenue.....	67,000	
Current portion of royalties payable (Note C).....	156,000	94,000
	-----	-----
Total current liabilities.....	684,000	554,000
Royalties payable (Note C).....	1,000,000	1,125,000
	-----	-----
	1,684,000	1,679,000
	-----	-----

Commitments and other matters (Notes C and I)

STOCKHOLDERS' EQUITY (NOTE G)

Preferred stock -- \$.01 par value, 10,000,000 shares authorized; 746,864 and 934,563 shares of Series A convertible preferred issued and outstanding (liquidation value \$1,872,000 and \$2,336,000).....	7,000	9,000
Common stock -- \$.01 par value, 30,000,000 shares authorized; 10,209,844 and 8,793,998 shares issued and outstanding.....	102,000	88,000
Additional paid-in capital.....	23,785,000	16,130,000
Accumulated deficit.....	(17,832,000)	(15,104,000)
	-----	-----
	6,062,000	1,123,000
	-----	-----
	\$ 7,746,000	\$ 2,802,000
	=====	=====

</TABLE>

See notes to financial statements

F-3

CYTOCLONAL PHARMACEUTICS INC.

STATEMENTS OF OPERATIONS

<TABLE>
<CAPTION>

	YEAR ENDED DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
Revenue:			
License and research fees (Note D).....	\$ 1,183,000		
Operating expenses:			
Research and development.....	1,692,000	\$ 1,469,000	\$ 1,576,000
General and administrative.....	2,500,000	1,888,000	1,530,000
	4,192,000	3,357,000	3,106,000
Other (income) expenses:			
Interest income.....	(286,000)	(107,000)	(216,000)
Interest expense.....	5,000	2,000	
	(281,000)	(105,000)	(216,000)
Net loss.....	\$(2,728,000)	\$(3,252,000)	\$(2,890,000)
Basic and diluted net loss per common share.....	\$ (.30)	\$ (.42)	\$ (.42)
Weighted average number of shares outstanding -- basic and diluted (Note B[4]).....	9,742,000	8,268,000	7,640,000

</TABLE>

See notes to financial statements

F-4

CYTOCLONAL PHARMACEUTICS INC.

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (NOTE G)

<TABLE>
<CAPTION>

	CONVERTIBLE PREFERRED STOCK		COMMON STOCK		ADDITIONAL PAID-IN ACCUMULATED		TOTAL
	SHARES	AMOUNT	SHARES	AMOUNT	CAPITAL	DEFICIT	
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
BALANCE -- DECEMBER 31, 1995....	1,268,787	\$13,000	7,563,500	\$ 76,000	\$13,903,000	\$ (8,962,000)	\$ 5,030,000
Preferred dividend (stock).....	126,888	1,000		(1,000)		0	
Preferred stock converted to common stock.....	(167,046)	(2,000)	167,046	2,000		0	
Value assigned to 20,000 (\$2.29) and 100,000 (\$0.84) options issued for professional services.....			130,000		130,000		
Value assigned to 36,000 warrants (\$1.17) issued and charged to research and development.....			42,000		42,000		
Net loss for the year.....				(2,890,000)	(2,890,000)		
BALANCE -- DECEMBER 31, 1996....	1,228,629	12,000	7,730,546	78,000	14,074,000	(11,852,000)	2,312,000
Preferred dividend (stock).....	122,788	1,000		(1,000)		0	
Preferred stock converted to							

	-----	-----	-----
Cash and cash equivalents at end of year.....	\$ 6,826,000	\$ 1,849,000	\$ 2,858,000
	=====	=====	=====

Supplemental disclosures of cash flow information:

Cash paid for interest.....	\$ 5,000	\$ 2,000	
Noncash investing activities:			
Equipment acquired included in accounts payable and accrued expenses.....	\$ 28,000	\$ 10,000	

</TABLE>

See notes to financial statements

F-6

CYTOCLONAL PHARMACEUTICS INC.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1998 AND 1997

NOTE A -- THE COMPANY

Cytoclonal Pharmaceuticals Inc. (the "Company") is involved in the research and development of various therapeutic and diagnostic pharmaceutical products for the prevention of cancer, viral and immune diseases. Through June 1998, the Company was in the development stage and its efforts had been principally devoted to research and development, capital formation and organizational development.

NOTE B -- SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

[1] EQUIPMENT:

Equipment is stated at cost. Depreciation is provided using the straight-line method over the estimated useful lives of the assets which range from five to seven years. Leasehold improvements are amortized over the lesser of the economic useful life of the improvement or term of the lease whichever is shorter.

[2] PATENT RIGHTS AND COSTS:

Purchased patents, which were acquired in October 1991, are stated at cost and are being amortized using the straight-line method over the 17 year life of the patents.

[3] RESEARCH AND DEVELOPMENT:

Research and development costs are charged to expense as incurred.

[4] LOSS PER COMMON SHARE:

Basic and diluted loss per common share is based on the net loss increased by dividends on preferred stock (\$187,000 in 1998, \$234,000 in 1997 and \$307,000 in 1996) divided by the weighted average number of common shares outstanding during the year. No effect has been given to outstanding options, warrants or convertible preferred stock in the diluted computation as their effect would be antidilutive.

[5] CASH AND CASH EQUIVALENTS AND CONCENTRATION OF CREDIT RISK:

Financial instruments which potentially subject the Company to concentration of credit risk consist of cash equivalents which amount to \$6,826,000 at December 31, 1998. Cash equivalents consist of interest bearing cash deposits placed with a single financial institution. The Company considers all highly liquid short-term investments purchased with a maturity of three months or less to be cash equivalents.

[6] STOCK-BASED COMPENSATION:

The Company has elected to continue to account for its stock-based compensation plans using the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB No. 25"). Under the provisions of APB No. 25, compensation cost for stock options is measured as the excess, if any, of the quoted market price of the

Company's common stock at the date of the grant over the amount an employee must pay to acquire the stock.

[7] FAIR VALUE OF FINANCIAL INSTRUMENTS:

The carrying value of cash equivalents, accounts payable and accrued expenses approximates their fair value due to the short period to maturity of these instruments. It is not practicable to estimate the fair value of royalties payable due to repayment terms varying based on sales of products by the Company and the lack of such sales at December 31, 1998.

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CYTOCLONAL PHARMACEUTICS INC.

NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)
DECEMBER 31, 1998 AND 1997

[8] USE OF ESTIMATES:

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

[9] REVENUE RECOGNITION:

Revenue from research support agreements is recognized as the expenses for research and development activities performed under the terms of the agreements are incurred. Revenue from nonrefundable license fees is recognized upon signing the agreement. Revenue resulting from the achievement of milestones is recognized when the milestone is achieved. Amounts received in advance of services to be performed are recorded as deferred revenue.

NOTE C -- ROYALTIES PAYABLE

On October 10, 1991, the Company entered into an agreement to acquire certain patent rights, technology and know-how (the "Technology") from Wadley Technologies, Inc. ("Wadtech") for the fixed sum of \$1,250,000 and ongoing royalties.

The agreement provides for the payment of royalties of up to 6.25% of gross selling price of products incorporating the Technology and up to 50% of all compensation received by the Company for sales by sublicensees of any products covered by the Technology, which will be applied to reducing the fixed sum of \$1,250,000, until the fixed sum is paid. Thereafter, the agreement provides for the payment of royalties of up to 3.75% of gross selling price of products incorporating the Technology and up to 50% of all compensation received by the Company for sales by sublicensees of any products covered by the Technology. The agreement also provides for minimum annual royalty payments of \$31,250, \$62,500 and \$125,000 payable quarterly during each twelve-month period beginning October 1, 1996, 1997 and 1998, respectively. Thereafter, during each twelve-month period beginning October 1, 1999, the agreement provides for minimum annual royalty payments of \$125,000 payable quarterly. As of December 31, 1998, the Company has made payments of \$93,750.

The Company granted Wadtech a security interest in the Technology until the fixed sum is paid. The agreement continues for 99 years from October 10, 1991 and the Company has the option to terminate the agreement without cause on three months notice to Wadtech.

NOTE D -- LICENSE AND RESEARCH AGREEMENT

In June 1998, the Company entered into a license and research agreement with Bristol Myers Squibb ("BMS") applicable to two technologies, which are being sublicensed by the Company to BMS, related to production of Paclitaxel, the active ingredient in BMS's largest selling cancer product. The agreement, which is for a term of ten years, subject to earlier termination at the option of BMS, includes fees, milestone payments, research and development support and minimum and sales-based royalties to be paid to the Company. During the year ended December 31, 1998, revenues of \$1,183,000 were earned under the agreement.

unpaid dividends.

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CYTOCLONAL PHARMACEUTICS INC.

NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)
DECEMBER 31, 1998 AND 1997

[3] WARRANTS:

At December 31, 1998, outstanding warrants to acquire shares of the Company's common stock are as follows:

<TABLE>
<CAPTION>

WARRANT TYPE	EXERCISE PRICE	EXPIRATION DATE	NUMBER OF RESERVED SHARES
<S>	<C>	<C>	<C>
Class A.....	\$3.75	November 2000	155,000
Class B.....	\$4.375	November 2000	251,044
Class C.....	\$6.50	November 2000	2,224,358
Class D.....	\$8.75	November 2000	4,675,642
Class E.....	\$9.82 to \$11.35	April 2003	335,540
Other.....	\$4.25 to \$9.00	July 2002-August 2003	111,000(a)
			7,752,584

</TABLE>

(a) See Notes I[3] and I[4]

The Class C and Class D warrants are subject to redemption at \$.05 per warrant on 30 days prior written notice provided the average of the closing bid prices of the common stock for any period of 30 consecutive business days ending within 15 business days of the date on which the notice of redemption is given shall have exceeded \$9.10 per share for redemption of the Class C warrants and \$12.25 per share for redemption of the Class D warrants.

Each Class C warrant entitles the holder to purchase a unit consisting of one share of common stock and one redeemable Class D detachable warrant. Each Class D warrant entitles the holder to purchase one share of common stock.

In addition to the above, options are outstanding to purchase 506,250 warrants at \$.10 per warrant. These warrants are exercisable into an aggregate of 202,500 shares of common stock through November 2000 at a price of \$3.75 per share.

In connection with its initial public offering, the Company sold to the underwriter, at a nominal amount, a unit purchase option to purchase up to an aggregate of 200,000 additional units at \$8.25 per unit. The units purchasable upon exercise of the unit purchase option are comprised of one share of common stock, one Class C warrant and one Class D warrant. The warrants included therein are not subject to redemption by the Company. These units became exercisable November 1998 for a two-year period.

See Note I[5] for unit purchase option issued in connection with private placement in 1998.

[4] STOCK OPTIONS:

During 1992, the Board of Directors and the stockholders of the Company approved a Stock Option Plan (the "1992 Plan") which provides for the granting of options to purchase up to 520,000 shares of common stock, pursuant to which officers, directors, key employees and the Company's Scientific Advisory Board are eligible to receive incentive and/or nonstatutory stock options.

During 1996, the Board of Directors and the stockholders of the Company approved the 1996 Stock Option Plan (the "1996 Plan") which provides for the granting of incentive and nonstatutory options for up to 750,000 shares of

common stock to officers, employees, directors and consultants of the Company. During October 1998, the Board of Directors and the stockholders of the Company approved an amendment to the Plan to allow for the granting of an additional 750,000 options.

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CYTOCLONAL PHARMACEUTICS INC.

NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)
DECEMBER 31, 1998 AND 1997

Options granted under the 1992 Plan and the 1996 Plan are exercisable for a period of up to 10 years from date of grant at an exercise price which is not less than the fair value on date of grant, except that the exercise period of options granted to a stockholder owning more than 10% of the outstanding capital stock may not exceed five years and their exercise price may not be less than 110% of the fair value of the common stock at date of grant. Options generally vest 40% after six months of employment and thereafter 20% annually on the anniversary date of the grant.

Stock option activity under the 1992 Plan and the 1996 Plan is summarized as follows:

<TABLE>
<CAPTION>

	YEAR ENDED DECEMBER 31,					
	1998		1997		1996	
	WEIGHTED AVERAGE EXERCISE SHARES	PRICE	WEIGHTED AVERAGE EXERCISE SHARES	PRICE	WEIGHTED AVERAGE EXERCISE SHARES	PRICE
Options outstanding at beginning of year.....	1,032,500	\$3.04	753,500	\$2.67	440,000	\$2.01
Granted.....	351,000	\$4.52	350,000	\$3.57	335,000	\$3.47
Exercised.....	(73,200)	\$1.80	(69,500)	\$1.71		
Cancelled.....			(1,500)	\$3.94	(21,500)	\$1.81
Options outstanding at end of year.....	1,310,300	\$3.50	1,032,500	\$3.04	753,500	\$2.67
Options exercisable at end of year.....	786,380	\$3.08	604,700	\$2.57	475,500	\$2.28

</TABLE>

The following table presents information relating to stock options outstanding under the plans as of December 31, 1998:

<TABLE>
<CAPTION>

RANGE OF EXERCISE PRICE	OPTIONS OUTSTANDING			OPTIONS EXERCISABLE		
	WEIGHTED AVERAGE EXERCISE SHARES	WEIGHTED AVERAGE REMAINING LIFE IN SHARES	AVERAGE PRICE	WEIGHTED AVERAGE EXERCISE SHARES	WEIGHTED AVERAGE EXERCISE YEARS	PRICE
\$1.65 -- \$2.6875.....	479,500	\$2.09	6.16	399,500	\$2.01	
\$3.25 -- \$4.125.....	342,000	\$3.88	7.82	240,000	\$4.00	
\$4.3125 -- \$5.00.....	482,800	\$4.58	9.04	144,480	\$4.42	
\$8.38.....	6,000	\$8.38	9.23	2,400	\$8.38	
	1,310,300	\$3.50	7.67	786,380	\$3.08	

</TABLE>

As of December 31, 1998, no more options are available for future grant

under the 1992 Plan and 487,000 options are available under the 1996 Plan.

In addition to options issued under the plans, in February 1996, the Company granted options to purchase 100,000 shares of common stock at \$4.25 as compensation for professional services. Such options, which are exercisable and expire in 2001, are outstanding at December 31, 1998.

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CYTOCLONAL PHARMACEUTICS INC.

NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)
DECEMBER 31, 1998 AND 1997

The weighted average fair value at date of grant for options granted during 1998, 1997 and 1996 was \$3.27, \$2.34 and \$2.16 per option, respectively. The fair value of options at date of grant was estimated using the Black-Scholes option pricing model utilizing the following assumptions:

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
Risk-free interest rates.....	4.41% to 5.63%	6.38% to 6.55%	6.30% to 6.80%
Expected option life in years.....	10	10	10
Expected stock price volatility.....	49% to 86%	44% to 51%	33% to 53%
Expected dividend yield.....	0%	0%	0%

</TABLE>

Had the Company elected to recognize compensation cost based on the fair value of the options at the date of grant as prescribed by Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation," net loss in 1998, 1997 and 1996 would have been \$3,199,000, \$3,593,000 and \$3,195,000 or \$.35, \$.46 and \$.46 per share, respectively.

NOTE H -- INCOME TAXES

At December 31, 1998, the Company had approximately \$16,700,000 of net operating loss carryforwards for federal income tax purposes which expire through 2018.

At December 31, 1998, the Company has a deferred tax asset of approximately \$5,900,000 representing the benefits of its net operating loss carryforward and certain expenses not currently deductible. The Company's deferred tax asset has been fully reserved by a valuation allowance since realization of its benefit is uncertain. The difference between the statutory tax rate of 34% and the Company's effective tax rate of 0% is due to the increase in the valuation allowance of \$1,000,000 (1998), \$1,000,000 (1997) and \$1,000,000 (1996). The Company's ability to utilize its net operating loss carryforwards may be subject to an annual limitation in future periods pursuant to Section 382 of the Internal Revenue Code of 1986, as amended.

NOTE I -- COMMITMENTS AND OTHER MATTERS

[1] LEASES:

The Company occupies office and laboratory space under two leases expiring through December 31, 2000. Minimum future annual rental payments are \$177,000 in 1999 and \$201,000 in 2000.

Rent expense was approximately \$142,000, \$140,000 and \$123,000 for the years ended December 31, 1998, 1997 and 1996, respectively.

[2] EMPLOYMENT AGREEMENTS:

The Company has extended the employment agreements of two officers which provide for annual base salaries of \$200,000 and \$90,000 (subject to annual increases of not less than 5% per year and bonuses at the discretion of the Board of Directors), for a period of five years and three years, respectively, commencing November 1998.

On December 31, 1998, the Company entered into an employment agreement with its Vice President for Drug Design. In connection with the employment agreement, the employee assigned to the Company certain technology. The agreement is for a period of three years commencing January 4, 1999, the effective date, and shall be extended for successive twelve-month periods unless terminated by either party. The agreement provides for an annual base salary of \$100,000 (subject to annual increases of 5% at the beginning of each calendar year, commencing on January 1, 2000). Additionally, the employee will receive 25,000 shares of the Company's common stock in full consideration for the assignment of the technology. The Company agreed to

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CYTOCLONAL PHARMACEUTICS INC.

NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)
DECEMBER 31, 1998 AND 1997

grant the employee options to purchase 75,000 shares of the Company's common stock at an exercise price not to exceed fair market value on the date of grant. The Company also agreed to grant the employee bonus options to purchase up to 16,000 shares of the Company's common stock exercisable only upon reaching a certain milestone. The Company further agreed to pay royalties based on net revenues received from the sales of products that incorporate the technology and royalties on net sublicense fees received from sublicensing the technology. The Company also agreed to reimburse the employee for certain expenses and to assume liability for certain payments upon the realization of profit from the technology.

[3] CONSULTING AGREEMENTS:

During 1996, the Company entered into an agreement with a consulting firm whereby the Company has agreed to pay a fee of \$3,000 per month, until the agreement is terminated by either party and to grant warrants to purchase 75,000 shares of common stock at \$4.25 per share in return for financial advisory services. The warrants will be granted and become exercisable in the event a transaction introduced to the Company by the consulting firm is consummated, at which time the Company will record a noncash charge representing the fair value of the warrants.

In August 1998, the Company entered into an agreement with a consulting firm whereby the Company has agreed to pay a fee of \$35,000 in return for financial advisory services. In connection with the agreement, the Company issued five-year warrants to purchase 75,000 shares of common stock. Warrants for 50,000 shares vest on December 31, 1998 of which 37,500 have an exercise price of \$7.00 per share and 12,500 have an exercise price of \$8.00 per share. The Company determined the fair value of these warrants to be approximately \$181,000 which was charged to operations. The remaining 25,000 warrants have an exercise price of \$9.00 per share and vest only if a transaction introduced to the Company by the consulting firm is consummated, at which time the Company will record a noncash charge representing the fair value of the warrants.

[4] COLLABORATION AGREEMENTS:

(a) Agreements With Research and Development Institute, Inc. ("RDI"):

During June 1993, the Company entered into a research and license agreement with RDI of Montana State University pursuant to which the Company finances and RDI conducts research and development at Montana State University in the field of taxol producing organisms. In connection with the agreement, RDI has granted the Company an exclusive license and licensing rights to its patents and know-how throughout the world to develop and market products relating to the technology.

The Company has agreed to finance research to be conducted under the agreement and paid RDI an aggregate fixed fee of \$250,000 per annum for four years commencing in 1993. In July 1998, the Company agreed to finance research for an additional year for \$250,000. In addition, the Company has agreed to pay RDI royalties of up to 6% of net sales of products derived under the agreement with minimum royalty payments as follows: \$25,000 in June 1994, \$50,000 in June 1995, \$75,000 in June 1996 and \$100,000 in June 1997 and annually thereafter. The agreement was amended during May 1998 to require the Company to pay a percentage of royalties received with respect to the manufacture, use or sale of the inventions by sublicensees and a

percentage of all up-front, milestone, and royalty payments which may be received under the agreement with Bristol-Myers Squibb (see Note D). Under the agreement, the minimum royalties shall be credited against royalties paid in connection with the amendment.

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CYTOCLONAL PHARMACEUTICS INC.

NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)
DECEMBER 31, 1998 AND 1997

During August 1998, the Company entered into an additional license agreement with RDI whereby RDI has granted the Company an exclusive license and licensing rights to its patents and know-how throughout the world to research, develop and market products developed with or from the pestalotiopsis microspora organism. The Company paid a license fee of \$10,000 and agreed to pay sales-based royalties.

(b) Agreements With Pestka Biomedical Laboratories, Inc. ("Pestka"):

In September 1992, the Company formed a corporate joint venture with Pestka for the purpose of developing, manufacturing and marketing a therapeutic drug for blood related cancers such as leukemia and lymphomas. The agreement provides for the Company to contribute \$233,000, which was paid during 1992, and certain technology and for Pestka to grant the joint venture an exclusive, worldwide license to certain patents and proprietary rights. Under a related agreement, Pestka agreed to perform certain research and development, as defined, for the joint venture, for \$233,000. The stockholders of Pestka purchased 20,000 shares of the Company's common stock for a price of \$1.65 per share. The investment in the joint venture is accounted for on the equity method. As of December 31, 1997, the Company's share of cumulative losses from the venture equaled its investment and accordingly, the investment has no carrying amount in the accompanying balance sheets. The equity in loss of joint venture, included in research and development costs, was \$0 for the year ended December 31, 1998, \$16,000 for the year ended December 31, 1997 and \$23,000 for the year ended December 31, 1996. The venture is presently inactive, and the Company has no further obligation to fund the venture.

(c) Agreements with Washington State University Research Foundation ("WSURF"):

In July 1996, the Company entered into an agreement with WSURF whereby the Company received an exclusive, world-wide license to use and/or sublicense patented technology or prospective patented technology (the "WSURF Technology"). In June 1998, the agreement was amended to cover additional patents. The Company was required to pay WSURF license fees of \$7,500 per year commencing on July 1, 1997. The agreement was amended during May 1998 to require the Company to pay a percentage of royalties received with respect to the manufacture, use or sale of the inventions by sublicensees and a percentage of all up-front, milestone and royalty payments which may be received under the agreement with Bristol Myers Squibb (see Note D). In addition, the Company agreed to pay minimum royalties of \$50,000 per year payable on July 1, 1999, \$75,000 payable on July 1, 2000, and \$100,000 payable on July 1, 2001 and annually thereafter. This agreement will remain in effect until the last to expire of the patents licensed under the WSURF Technology, subject to termination by either party. In conjunction with this agreement, the Company granted WSURF warrants to purchase 36,000 shares of common stock at \$4.25 per share. An aggregate of 12,000 warrants per annum are exercisable commencing July 1999 and expire July 2002. The Company determined the fair value of these warrants to be approximately \$42,000 which was charged to research and development in 1996.

In July 1996, the Company entered into a research agreement with WSURF for research to be conducted on behalf of the Company. In August 1998, the agreement was extended through July 2000 providing for additional funding of \$500,000. As of December 31, 1998, the Company has incurred approximately \$104,000 of research costs under the agreement.

(d) Agreements with Regents of the University of California:

In February 1996, the Company entered into two license agreements

("Agreements") with the Regents of the University of California, granting to the Company exclusive rights to certain technology and patent rights. Pursuant to the Agreements, the Company paid license fees of \$10,000 and \$15,000 upon issuance of the patents. In addition, the Company must pay a yearly license maintenance fee of \$8,000, increasing by \$4,000 per year until it reaches a maximum of \$24,000 on both licenses until the

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CYTOCLONAL PHARMACEUTICS INC.

NOTES TO FINANCIAL STATEMENTS -- (CONTINUED)
DECEMBER 31, 1998 AND 1997

Company is commercially selling a product based on the technology derived from these license agreements, at which time a royalty based on net sales will be due.

In August 1998, the Company entered into an additional license agreement with the Regents of the University of California, granting to the Company exclusive rights to certain technology and patent rights. Pursuant to the agreement, the Company paid license fees of \$20,000 and has agreed to pay \$25,000 upon issuance of a patent. In addition, the Company must pay a yearly license maintenance fee of \$2,000, increasing by \$2,000 per year until it reaches a maximum of \$12,000 until the Company is commercially selling a product based on the technology derived from these license agreements, at which time a royalty based on net sales will be due.

[5] RELATED PARTY TRANSACTION:

Effective December 1996, the Company entered into a one-year agreement, which was extended in January 1998 for an additional year, with a stockholder of the Company, whereby the Company will receive financial and investment banking services for a consulting fee of \$5,000 per month plus commissions, as defined. The Company paid \$60,000 during each of 1997 and 1998 under this agreement.

In addition, the stockholder acted as placement agent for the Company's 1998 private placement and, in consideration for its services as such, received a sales commission equal to 10% of the \$5,633,675 gross proceeds, or \$563,368, plus approximately \$229,000 as an expense allowance together with other costs. The stockholder also received a unit purchase option, exercisable for a five-year period commencing April 2, 1998, to purchase 134,199 shares of Common Stock at prices ranging from \$8.18 to \$9.46 and Class E Warrants to purchase 67,101 shares of Common Stock exercisable at prices ranging from \$9.82 to \$11.35.

NOTE J -- SUBSEQUENT EVENT

During January 1999, the Board of Directors declared a 10% dividend on Series A preferred stock.

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<TABLE>

<CAPTION>

EXHIBITS

<C>	<S>
10.35	-- 1996 Stock Option Plan and Amendment No. 1 thereto.
11	-- Statement re: Computation of per share earnings
21	-- List of Subsidiaries -- None
23	-- Consent of Independent Auditors
27	-- Financial Data Schedule

</TABLE>

CYTOCLONAL PHARMACEUTICS INC.
1996 STOCK OPTION PLAN

1. Purpose.

The purpose of this plan (the "Plan") is to secure for Cytoclonal Pharmaceuticals Inc. (the "Company") and its shareholders the benefits arising from capital stock ownership by employees, officers and directors of, and consultants or advisors to, the Company and its subsidiary corporations who are expected to contribute to the Company's future growth and success. Those provisions of the Plan which make express reference to Section 422 shall apply only to Incentive Stock Options (as that term is defined in the Plan).

2. Type of Options and Administration.

(a) Types of Options. Options granted pursuant to the Plan shall be authorized by action of the Board of Directors of the Company or a committee (the "Committee") designated by the Board of Directors and may be either incentive stock options ("Incentive Stock Options") meeting the requirements of Section 422 of the Internal Revenue Code of 1986, as amended or replaced from time to time (the "Code") or non-statutory options which are not intended to meet the requirements of Section 422 of the Code.

(b) Administration. The Plan will be administered by the Board of Directors of the Company or the Committee (references herein to the Board of Directors shall be deemed to mean the Committee, if such a Committee has been so designated), whose construction and interpretation of the terms and provisions of the Plan shall be final and conclusive. The delegation of powers to the Board of Directors shall be consistent with applicable laws or regulations (including, without limitation, applicable state law and Rule 16b-3 promulgated under the Securities Exchange Act of 1934 (the "Exchange Act"), or any successor rule ("Rule 16b-3")). The Board of Directors may in its sole discretion grant options to purchase shares of the Company's Common Stock, \$.01 par value per share ("Common Stock") and issue shares upon exercise of such options as provided in the Plan. The Board of Directors shall have authority, subject to the express provisions of the Plan, to construe the respective option agreements and the Plan, to prescribe, amend and rescind rules and regulations relating to the Plan, to determine the terms and provisions of the respective option agreements, which need not be identical, and to make all other determinations in the judgment of the Board of Directors necessary or desirable for the administration of the Plan. The Board of Directors may correct any defect or supply any omission or reconcile any inconsistency in the Plan or in any option agreement in the manner and to the extent it shall deem expedient to carry the Plan into effect and it shall be the sole and final judge of such expediency. No director or person acting pursuant to authority delegated by the Board of Directors shall be liable for any action or determination under the Plan made in good faith. Subject to adjustment as provided in Section 15 below, the aggregate number of shares of Common Stock that may be subject to options granted to any person in a

1

calendar year shall not exceed 20% of the maximum number of shares which may be issued and sold under the Plan, as set forth in Section 4 hereof, as such section may be amended from time to time.

(c) Applicability of Rule 16b-3. Those provisions of the Plan which make express reference to Rule 16b-3 shall apply to the Company only at such time as the Company's Common Stock is registered under the Exchange Act, subject to the last sentence of Section 3(b), and then only to such persons as are required to file reports under Section 16(a) of the Exchange Act (a "Reporting Person").

3. Eligibility.

(a) General. Options may be granted to persons who are, at the time of grant, employees, officers or directors of, or consultants or advisors to, the Company or any subsidiaries of the Company as defined in Sections 424(e) and

424(f) of the Code ("Participants"); provided, that Incentive Stock Options may only be granted to individuals who are employees of the Company (within the meaning of Section 3401(c) of the Code). A person who has been granted an option may, if he or she is otherwise eligible, be granted additional options if the Board of Directors shall so determine.

(b) Grant of Options to Reporting Persons. The selection of a director or an officer who is a Reporting Person (as the terms "director" and "officer" are defined for purposes of Rule 16b-3) as a recipient of an option, the timing of the option grant, the exercise price of the option and the number of shares subject to the option shall be determined either (i) by the Board of Directors, of which all members shall be "disinterested persons" (as hereinafter defined) or (ii) by a committee consisting of two or more directors having full authority to act in the matter, each of whom shall be a "disinterested person." For the purposes of the Plan, a director shall be deemed to be a "disinterested person" only if such person qualifies as a "disinterested person" within the meaning of Rule 16b-3, as such term is interpreted from time to time. If at least two of the members of the Board of Directors do not qualify as a "disinterested person" within the meaning of Rule 16b-3, as such term is interpreted from time to time, then the granting of options to officers and directors who are Reporting Persons under the Plan shall not be determined in accordance with this Section 3(b) but shall be determined in accordance with the other provisions of the Plan.

4. Stock Subject to Plan.

The stock subject to options granted under the Plan shall be shares of authorized but unissued or reacquired Common Stock. Subject to adjustment as provided in Section 15 below, the maximum number of shares of Common Stock of the Company which may be issued and sold under the Plan is 750,000 shares. If an option granted under the Plan shall expire, terminate or is cancelled for any reason without having been exercised in full, the unpurchased shares subject to such option shall again be available for subsequent option grants under the Plan.

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5. Forms of Option Agreements.

As a condition to the grant of an option under the Plan, each recipient of an option shall execute an option agreement in such form not inconsistent with the Plan as may be approved by the Board of Directors. Such option agreements may differ among recipients.

6. Purchase Price.

(a) General. The purchase price per share of stock deliverable upon the exercise of an option shall be determined by the Board of Directors at the time of grant of such option; provided, however, that in the case of an Incentive Stock Option, the exercise price shall not be less than 100% of the Fair Market Value (as hereinafter defined) of such stock, at the time of grant of such option, or less than 110% of such Fair Market Value in the case of options described in Section 11(b). "Fair Market Value" of a share of Common Stock of the Company as of a specified date for the purposes of the Plan shall mean the closing price of a share of the Common Stock on the principal securities exchange (including the Nasdaq National Market) on which such shares are traded on the day immediately preceding the date as of which Fair Market Value is being determined, or on the next preceding date on which such shares are traded if no shares were traded on such immediately preceding day, or if the shares are not traded on a securities exchange, Fair Market Value shall be deemed to be the average of the high bid and low asked prices of the shares in the over-the-counter market on the day immediately preceding the date as of which Fair Market Value is being determined or on the next preceding date on which such high bid and low asked prices were recorded. If the shares are not publicly traded, Fair Market Value of a share of Common Stock (including, in the case of any repurchase of shares, any distributions with respect thereto which would be repurchased with the shares) shall be determined in good faith by the Board of Directors. In no case shall Fair Market Value be determined with regard to restrictions other than restrictions which, by their terms, will never lapse.

(b) Payment of Purchase Price. Options granted under the Plan may

provide for the payment of the exercise price by delivery of cash or a check to the order of the Company in an amount equal to the exercise price of such options, or by any other means which the Board of Directors determines are consistent with the purpose of the Plan and with applicable laws and regulations (including, without limitation, the provisions of Rule 16b-3 and Regulation T promulgated by the Federal Reserve Board).

7. Option Period.

Subject to earlier termination as provided in the Plan, each option and all rights thereunder shall expire on such date as determined by the Board of Directors and set forth in the applicable option agreement, provided, that such date shall not be later than ten (10) years after the date on which the option is granted.

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8. Exercise of Options.

Each option granted under the Plan shall be exercisable either in full or in installments at such time or times and during such period as shall be set forth in the option agreement evidencing such option, subject to the provisions of the Plan. No option granted to a Reporting Person for purposes of the Exchange Act, however, shall be exercisable during the first six months after the date of grant. Subject to the requirements in the immediately preceding sentence, if an option is not at the time of grant immediately exercisable, the Board of Directors may (i) in the agreement evidencing such option, provide for the acceleration of the exercise date or dates of the subject option upon the occurrence of specified events, and/or (ii) at any time prior to the complete termination of an option, accelerate the exercise date or dates of such option.

9. Nontransferability of options.

No option granted under this Plan shall be assignable or otherwise transferable by the optionee except by will or by the laws of descent and distribution or pursuant to a qualified domestic relations order as defined in the Code or Title I of the Employee Retirement Income Security Act, or the rules thereunder. An option may be exercised during the lifetime of the optionee only by the optionee. In the event an optionee dies during his employment by the Company or any of its subsidiaries, or during the three-month period following the date of termination of such employment, his option shall thereafter be exercisable, during the period specified in the option agreement, by his executors or administrators to the full extent to which such option was exercisable by the optionee at the time of his death during the periods set forth in Section 10 or 11(d).

10. Effect of Termination of Employment or Other Relationship.

Except as provided in Section 11(d) with respect to Incentive Stock Options and except as otherwise determined by the Board of Directors at the date of grant of an option, and subject to the provisions of the Plan, an optionee may exercise an option at any time within three (3) months following the termination of the optionee's employment or other relationship with the Company or within three (3) months if such termination was due to the death of the optionee or within one (1) year if such termination was due to the disability of the optionee but, except in the case of the optionee's death, in no event later than the expiration of the option. If the termination of the optionee's employment is for cause or is otherwise attributable to a breach by the optionee of an employment or confidentiality or non-disclosure agreement, the option shall expire immediately upon such termination. The Board of Directors shall have the power to determine what constitutes a termination for cause or a breach of an employment or confidentiality or non-disclosure agreement, whether an optionee has been terminated for cause or has breached such an agreement, and the date upon which such termination for cause or breach occurs. Any such determinations shall be final and conclusive and binding upon the optionee.

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11. Incentive Stock Options.

Options granted under the Plan which are intended to be Incentive Stock Options shall be subject to the following additional terms and conditions:

(a) Express Designation. All Incentive Stock Options granted under the Plan shall, at the time of grant, be specifically designated as such in the option agreement covering such Incentive Stock Options.

(b) 10% Shareholder. If any employee to whom an Incentive Stock Option is to be granted under the Plan is, at the time of the grant of such option, the owner of stock possessing more than 10% of the total combined voting power of all classes of stock of the Company (after taking into account the attribution of stock ownership rules of Section 424(d) of the Code), then the following special provisions shall be applicable to the Incentive Stock Option granted to such individual:

(i) The purchase price per share of the Common Stock subject to such Incentive Stock Option shall not be less than 110% of the Fair Market Value of one share of Common Stock at the time of grant; and

(ii) the option exercise period shall not exceed five years from the date of grant.

(c) Dollar Limitation. For so long as the Code shall so provide, options granted to any employee under the Plan (and any other incentive stock option plans of the Company) which are intended to constitute Incentive Stock Options shall not constitute Incentive Stock Options to the extent that such options, in the aggregate, become exercisable for the first time in any one calendar year for shares of Common Stock with an aggregate Fair Market Value, as of the respective date or dates of grant, of more than \$100,000.

(d) Termination of Employment, Death or Disability. No Incentive Stock Option may be exercised unless, at the time of such exercise, the optionee is, and has been continuously since the date of grant of his or her option, employed by the Company, except that:

(i) an Incentive Stock Option may be exercised within the period of ninety (90) days after the date the optionee ceases to be an employee of the Company (or within such lesser period as may be specified in the applicable option agreement); provided, that the agreement with respect to such option may designate a longer exercise period and that the exercise after such ninety (90) day period shall be treated as the exercise of a non-statutory option under the Plan;

(ii) if the optionee dies while in the employ of the Company, or within three months after the optionee ceases to be such an employee, the Incentive Stock Option may be exercised by the person to whom it is transferred by will or the laws of descent and distribution

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within the period of three (3) months after the date of death (or within such lesser period as may be specified in the applicable option agreement); and

(iii) if the optionee becomes disabled (within the meaning of Section 22(e)(3) of the Code or any successor provisions thereto) while in the employ of the Company, the Incentive Stock Option may be exercised within the period of one (1) year after the date the optionee ceases to be such an employee because of such disability (or within such lesser period as may be specified in the applicable option agreement).

For all purposes of the Plan and any option granted hereunder, "employment" shall be defined in accordance with the provisions of Section 1.421-7(h) of the Income Tax Regulations (or any successor regulations). Notwithstanding the foregoing provisions, no Incentive Stock Option may be exercised after its expiration date.

12. Additional Provisions.

(a) Additional Option Provisions. The Board of Directors may, in its sole discretion, include additional provisions in option agreements covering options granted under the Plan, including without limitation restrictions on

transfer, repurchase rights, rights of first refusal, commitments to pay cash bonuses, to make, arrange for or guaranty loans or to transfer other property to optionees upon exercise of options, or such other provisions as shall be determined by the Board of Directors; provided, that such additional provisions shall not be inconsistent with any other term or condition of the Plan and such additional provisions shall not cause any Incentive Stock Option granted under the Plan to fail to qualify as an Incentive Stock Option within the meaning of Section 422 of the Code.

(b) Acceleration, Extension, Etc. The Board of Directors may, in its sole discretion, (i) accelerate the date or dates on which all or any particular option or options granted under the Plan may be exercised or (ii) extend the dates during which all, or any particular, option or options granted under the Plan may be exercised; provided, however, that no such extension shall be permitted if it would cause the Plan to fail to comply with Section 422 of the Code or with Rule 16b-3 (if applicable).

13. General Restrictions.

(a) Investment Representations. The Company may require any person to whom an option is granted, as a condition of exercising such option, to give written assurances in substance and form satisfactory to the Company to the effect that such person is acquiring the Common Stock subject to the option, for his or her own account for investment and not with any present intention of selling or otherwise distributing the same, and to such other effects as the Company deems necessary or appropriate in order to comply with federal and applicable state securities laws, or with covenants or representations made by the Company in connection with any public offering of its Common Stock, including any "lock-up" or other restriction on transferability.

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(b) Compliance With Securities Law. Each option shall be subject to the requirement that if, at any time, counsel to the Company shall determine that the listing, registration or qualification of the shares subject to such option upon any securities exchange or automated quotation system or under any state or federal law, or the consent or approval of any governmental or regulatory body, or that the disclosure of non-public information or the satisfaction of any other condition is necessary as a condition of, or in connection with the issuance or purchase of shares thereunder, such option may not be exercised, in whole or in part, unless such listing, registration, qualification, consent or approval, or satisfaction of such condition shall have been effected or obtained on conditions acceptable to the Board of Directors. Nothing herein shall be deemed to require the Company to apply for or to obtain such listing, registration or qualification, or to satisfy such condition.

14. Rights as a Shareholder.

The holder of an option shall have no rights as a shareholder with respect to any shares covered by the option (including, without limitation, any rights to receive dividends or non-cash distributions with respect to such shares) until the date of issue of a stock certificate to him or her for such shares. No adjustment shall be made for dividends or other rights for which the record date is prior to the date such stock certificate is issued.

15. Adjustment Provisions for Recapitalizations, Reorganizations and Related Transactions.

(a) Recapitalizations and Related Transactions. If, through or as a result of any recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar transaction, (i) the outstanding shares of Common Stock are increased, decreased or exchanged for a different number or kind of shares or other securities of the Company, or (ii) additional shares or new or different shares or other non-cash assets are distributed with respect to such shares of Common Stock or other securities, an appropriate and proportionate adjustment shall be made in (x) the maximum number and kind of shares reserved for issuance under or otherwise referred to in the Plan, (y) the number and kind of shares or other securities subject to any then outstanding options under the Plan, and (z) the price for each share subject to any then outstanding options under the Plan, without changing the aggregate purchase price as to which such options remain exercisable. Notwithstanding the

foregoing, no adjustment shall be made pursuant to this Section 15 if such adjustment (i) would cause the Plan to fail to comply with Section 422 of the Code or with Rule 16b-3 or (ii) would be considered as the adoption of a new plan requiring stockholder approval.

(b) Reorganization, Merger and Related Transactions. All outstanding options under the Plan shall become fully exercisable for a period of sixty (60) days following the occurrence of any Trigger Event, whether or not such options are then exercisable under the provisions of the applicable agreements relating thereto. For purposes of the Plan, a "Trigger Event" is any one of the following events:

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(i) the date on which shares of Common Stock are first purchased pursuant to a tender offer or exchange offer (other than such an offer by the Company, any Subsidiary, any employee benefit plan of the Company or of any Subsidiary or any entity holding shares or other securities of the Company for or pursuant to the terms of such plan), whether or not such offer is approved or opposed by the Company and regardless of the number of shares purchased pursuant to such offer;

(ii) the date the Company acquires knowledge that any person or group deemed a person under Section 13(d)-3 of the Exchange Act (other than the Company, any Subsidiary, any employee benefit plan of the Company or of any Subsidiary or any entity holding shares of Common Stock or other securities of the Company for or pursuant to the terms of any such plan or any individual or entity or group or affiliate thereof which acquired its beneficial ownership interest prior to the date the Plan was adopted by the Board), in a transaction or series of transactions, has become the beneficial owner directly or indirectly (with beneficial ownership determined as provided in Rule 13d-3, or any successor rule, under the Exchange Act), of securities of the Company entitling the person or group to 30% or more of all votes (without consideration of the rights of any class or stock to elect directors by a separate class vote) to which all shareholders of the Company would be entitled in the election of the Board of Directors were an election held on such date;

(iii) the date, during any period of two consecutive years, when individuals who at the beginning of such period constitute the Board of Directors of the Company cease for any reason to constitute at least a majority thereof, unless the election, or the nomination for election by the shareholders of the Company, of each new director was approved by a vote of at least two-thirds of the directors then still in office who were directors at the beginning of such period; and

(iv) the date of approval by the shareholders of the Company of an agreement (a "reorganization agreement") providing for:

(A) The merger or consolidation of the Company with another corporation where the shareholders of the Company, immediately prior to the merger or consolidation, do not beneficially own, immediately after the merger or consolidation, shares of the corporation issuing cash or securities in the merger or consolidation entitling such shareholders to 80% or more of all votes (without consideration of the rights of any class of stock to elect directors by a separate class vote) to which all shareholders of such corporation would be entitled in the election of directors or where the members of the Board of Directors of the Company, immediately prior to the merger or consolidation, do not, immediately after the merger or consolidation, constitute a majority of the Board of Directors of the corporation issuing cash or securities in the merger or consolidation; or

(B) The sale or other disposition of all or substantially all the assets of the Company.

(c) Board Authority to Make Adjustments. Any adjustments under this Section 15 will be made by the Board of Directors, whose determination as to what adjustments, if any, will be made

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and the extent thereof will be final, binding and conclusive. No fractional

shares will be issued under the Plan on account of any such adjustments.

16. Merger, Consolidation, Asset Sale, Liquidation, etc.

(a) General. In the event of any sale, merger, transfer or acquisition of the Company or substantially all of the assets of the Company in which the Company is not the surviving corporation, and provided that after the Company shall have requested the acquiring or succeeding corporation (or an affiliate thereof), that equivalent options shall be substituted and such successor corporation shall have refused or failed to assume all options outstanding under the Plan or issue substantially equivalent options, then any or all outstanding options under the Plan shall accelerate and become exercisable in full immediately prior to such event. The Board of Directors will notify holders of options under the Plan that any such options shall be fully exercisable for a period of fifteen (15) days from the date of such notice, and the options will terminate upon expiration of such notice.

(b) Substitute Options. The Company may grant options under the Plan in substitution for options held by employees of another corporation who become employees of the Company, or a subsidiary of the Company, as the result of a merger or consolidation of the employing corporation with the Company or a subsidiary of the Company, or as a result of the acquisition by the Company, or one of its subsidiaries, of property or stock of the employing corporation. The Company may direct that substitute options be granted on such terms and conditions as the Board of Directors considers appropriate in the circumstances.

17. No Special Employment Rights.

Nothing contained in the Plan or in any option shall confer upon any optionee any right with respect to the continuation of his or her employment by the Company or interfere in any way with the right of the Company at any time to terminate such employment or to increase or decrease the compensation of the optionee.

18. Other Employee Benefits.

Except as to plans which by their terms include such amounts as compensation, the amount of any compensation deemed to be received by an employee as a result of the exercise of an option or the sale of shares received upon such exercise will not constitute compensation with respect to which any other employee benefits of such employee are determined, including, without limitation, benefits under any bonus, pension, profit-sharing, life insurance or salary continuation plan, except as otherwise specifically determined by the Board of Directors.

19. Amendment of the Plan.

(a) The Board of Directors may at any time, and from time to time, modify or amend the Plan in any respect; provided, however, that if at any time the approval of the shareholders of the

Company is required under Section 422 of the Code or any successor provision with respect to Incentive Stock Options, or under Rule 16b-3, the Board of Directors may not effect such modification or amendment without such approval; and provided, further, that the provisions of Section 3(c) hereof shall not be amended more than once every six months, other than to comport with changes in the Code, the Employer Retirement Income Security Act of 1974, as amended, or the rules thereunder.

(b) The modification or amendment of the Plan shall not, without the consent of an optionee, affect his or her rights under an option previously granted to him or her. With the consent of the optionee affected, the Board of Directors may amend outstanding option agreements in a manner not inconsistent with the Plan. The Board of Directors shall have the right to amend or modify (i) the terms and provisions of the Plan and of any outstanding Incentive Stock Options granted under the Plan to the extent necessary to qualify any or all such options for such favorable federal income tax treatment (including deferral of taxation upon exercise) as may be afforded incentive stock options under Section 422 of the Code and (ii) the terms and provisions of the Plan and

of any outstanding option to the extent necessary to ensure the qualification of the Plan under Rule 16b-3.

20. Withholding.

(a) The Company shall have the right to deduct from payments of any kind otherwise due to the optionee any federal, state or local taxes of any kind required by law to be withheld with respect to any shares issued upon exercise of options under the Plan. Subject to the prior approval of the Company, which may be withheld by the Company in its sole discretion, the optionee may elect to satisfy such obligations, in whole or in part, (i) by causing the Company to withhold shares of Common Stock otherwise issuable pursuant to the exercise of an option or (ii) by delivering to the Company shares of Common Stock already owned by the optionee. The shares so delivered or withheld shall have a Fair Market Value equal to such withholding obligation as of the date that the amount of tax to be withheld is to be determined. An optionee who has made an election pursuant to this Section 20(a) may only satisfy his or her withholding obligation with shares of Common Stock which are not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

(b) The acceptance of shares of Common Stock upon exercise of an Incentive Stock Option shall constitute an agreement by the optionee (i) to notify the Company if any or all of such shares are disposed of by the optionee within two years from the date the option was granted or within one year from the date the shares were issued to the optionee pursuant to the exercise of the option, and (ii) if required by law, to remit to the Company, at the time of and in the case of any such disposition, an amount sufficient to satisfy the Company's federal, state and local withholding tax obligations with respect to such disposition, whether or not, as to both (i) and (ii), the optionee is in the employ of the Company at the time of such disposition.

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(c) Notwithstanding the foregoing, in the case of a Reporting Person whose options have been granted in accordance with the provisions of Section 3(b) herein, no election to use shares for the payment of withholding taxes shall be effective unless made in compliance with any applicable requirements of Rule 16b-3.

21. Cancellation and New Grant of Options, Etc.

The Board of Directors shall have the authority to effect, at any time and from time to time, with the consent of the affected optionees, (i) the cancellation of any or all outstanding options under the Plan and the grant in substitution thereof of new options under the Plan covering the same or different numbers of shares of Common Stock and having an option exercise price per share which may be lower or higher than the exercise price per share of the cancelled options or (ii) the amendment of the terms of any and all outstanding options under the Plan to provide an option exercise price per share which is higher or lower than the then-current exercise price per share of such outstanding options.

22. Effective Date and Duration of the Plan.

(a) Effective Date. The Plan shall become effective when adopted by the Board of Directors, but no Incentive Stock Option granted under the Plan shall become exercisable unless and until the Plan shall have been approved by the Company's shareholders. If such shareholder approval is not obtained within twelve months after the date of the Board's adoption of the Plan, no options previously granted under the Plan shall be deemed to be Incentive Stock Options and no Incentive Stock Options shall be granted thereafter. Amendments to the Plan not requiring shareholder approval shall become effective when adopted by the Board of Directors; amendments requiring shareholder approval (as provided in Section 21) shall become effective when adopted by the Board of Directors, but no Incentive Stock Option granted after the date of such amendment shall become exercisable (to the extent that such amendment to the Plan was required to enable the Company to grant such Incentive Stock Option to a particular optionee) unless and until such amendment shall have been approved by the Company's shareholders. If such shareholder approval is not obtained within twelve months of the Board's adoption of such amendment, any Incentive Stock Options granted on or after the date of such amendment shall terminate to the

extent that such amendment to the Plan was required to enable the Company to grant such option to a particular optionee. Subject to this limitation, options may be granted under the Plan at any time after the effective date and before the date fixed for termination of the Plan.

(b) Termination. Unless sooner terminated in accordance with Section 16, the Plan shall terminate upon the earlier of (i) the close of business on the day next preceding the tenth anniversary of the date of its adoption by the Board of Directors, or (ii) the date on which all shares available for issuance under the Plan shall have been issued pursuant to the exercise or cancellation of options granted under the Plan. If the date of termination is determined under (i) above, then options outstanding on such date shall continue to have force and effect in accordance with the provisions of the instruments evidencing such options.

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23. Provision for Foreign Participants.

The Board of Directors may, without amending the Plan, modify awards or options granted to participants who are foreign nationals or employed outside the United States to recognize differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

24. Governing Law.

The provisions of this Plan shall be governed and construed in accordance with the laws of the State of Delaware without regard to the principles of conflicts of laws.

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CYTOCLONAL PHARMACEUTICS INC.
1996 STOCK OPTION PLAN
AMENDMENT NO. 1

Section 4, captioned "Stock Subject to Plan," of the 1996 Stock Option Plan (the "Plan") of Cytoclonal Pharmaceuticals Inc., a Delaware corporation (the "Company"), is hereby amended and restated in its entirety as follows:

"4. Stock Subject to Plan.

"The stock subject to options granted under the Plan shall be shares of authorized but unissued or reacquired Common Stock. Subject to adjustment as provided in Section 15 below, the maximum number of shares of Common Stock of the Company which may be issued and sold under the Plan is 1,500,000 shares. If an option granted under the Plan shall expire, terminate or is cancelled for any reason without having been exercised in full, the unpurchased shares subject to such option shall again be available for subsequent option grants under the Plan."

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EXHIBIT 11

CYTOCLONAL PHARMACEUTICS INC.

COMPUTATION OF NET (LOSS) PER COMMON SHARE

<TABLE>
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	Year Ended December 31,		
	1998	1997	1996
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Net (loss)	\$(2,728,000)	\$(3,252,000)	\$(2,890,000)
Add cumulative preferred dividend		(187,000)	(234,000) (307,000)
NET (LOSS) USED FOR COMPUTATION		\$(2,915,000)	(3,486,000) \$(3,197,000)
Weighted average number of common shares outstanding - basic and diluted	\$ 9,742,000	\$ 8,268,000	\$ 7,640,000
Net (loss) per common share - basic and diluted	\$ (0.30)	\$ (0.42)	\$ (0.46)

</TABLE>

EXHIBIT 23

CONSENT OF INDEPENDENT AUDITORS

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-37049), Form S-8 (No. 333-11691), Post-Effective Amendment No. 2 to Form SB-2 on Form S-3 (No. 333-13409), Form S-3 (No. 333-66003) and Form S-3 (No. 333-25323) of Cytoclonal Pharmaceuticals Inc. of our report dated February 6, 1999, which is included in the annual report on Form 10-K for the year ended December 31, 1998.

Richard A. Eisner & Company, LLP

New York, New York
March 29, 1999

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