
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 2
TO
FORM SB-2
ON
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CYTOCLONAL PHARMACEUTICS INC.
(Name of Small Business Issuer in its Charter)

| | |
|---|--|
| DELAWARE | 75-2402409 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. employer identification number) |

9000 HARRY HINES BOULEVARD
SUITE 330
DALLAS, TEXAS 75235
(214) 353-2922
(Address and Telephone Number of Principal Executive Offices)

9000 HARRY HINES BOULEVARD
SUITE 330
DALLAS, TEXAS 75235
(Address of Principal Place of Business or Intended Principal Place of Business)

ARTHUR P. BOLLON, PH.D.
CHAIRMAN AND CHIEF EXECUTIVE OFFICER
CYTOCLONAL PHARMACEUTICS INC.
9000 HARRY HINES BOULEVARD
SUITE 330
DALLAS, TEXAS 75235
(214) 353-2922
(Name, Address and Telephone Number of Agent for Service)

COPIES TO:
ROBERT H. COHEN, ESQ.
MORRISON COHEN SINGER & WEINSTEIN, LLP
750 LEXINGTON AVENUE
NEW YORK, NEW YORK 10022
(212) 735-8600

APPROXIMATE DATE OF PROPOSED SALE TO THE PUBLIC:
As soon as practicable after this Registration Statement becomes effective.

If the only securities being registered on this form are being offered
pursuant to a dividend or interest reinvestment plans, please check the
following box. / /

If any of the securities being registered on this form are to be offered on
a delayed or continuous basis pursuant to Rule 415 under the Securities Act of

1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. /X/

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. // _____

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

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. // _____

CALCULATION OF REGISTRATION FEE

<TABLE>

<CAPTION>

| TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED | PROPOSED MAXIMUM AMOUNT TO BE REGISTERED | MAXIMUM OFFERING PRICE PER SECURITY | PROPOSED AMOUNT AGGREGATE OFFERING PRICE | OF REGISTRATION FEE |
|--|---|---|--|------------------------|
| <S> <C> | <C> | <C> | <C> | |
| Class A Warrants (1)..... | 312,500 | -- | -- | -- |
| Class B Warrants (2)..... | 482,720 | -- | -- | -- |
| Warrants (3)..... | 506,250 | -- | -- | -- |
| Common Stock, par value \$.01 per share, issuable upon the exercise of the Class A Warrants (4)..... | 125,000 | \$3.75 | \$468,750 | \$142 |
| Common Stock, par value \$.01 per share, issuable upon the exercise of the Class B Warrants (5)..... | 193,088 | \$4.375 | \$844,760 | \$256 |
| Common Stock, par value \$.01 per share, issuable upon the exercise of the Warrants (6)..... | 202,500 | \$3.75 | \$759,375 | \$231 |
| Total..... | \$2,072,885 | | \$629 | |

</TABLE>

- (1) These Class A Warrants are being registered for resale by Selling Securityholders (defined herein), each of whom was an investor in the Registrant's private placement completed in August 1994 (the "1994 Bridge Financing").
- (2) These Class B Warrants are being registered for resale by Selling Securityholders, each of whom was an investor in the Registrant's private placement completed in April 1995 (the "1995 Bridge Financing").
- (3) The Warrants (the "Blair Warrants") are being registered for resale by D.H. Blair Investment Banking Corp. ("Blair"), who served as placement agent in the 1994 Bridge Financing and who rendered advice and assistance in structuring the 1995 Bridge Financing.
- (4) Issuable upon the exercise of the Class A Warrants being registered for resale by Selling Securityholders.
- (5) Issuable upon the exercise of the Class B Warrants being registered for resale by Selling Securityholders.
- (6) Issuable upon the exercise of the Blair Warrants being registered for resale by Blair.

Pursuant to Rule 416 under the Securities Act of 1933, as amended, there are also being registered such additional shares of Common Stock as may become

issuable pursuant to anti-dilution provisions of the Class A Warrants, the Class B Warrants and the Blair Warrants (as defined herein).

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

Subject to Completion Dated September 30, 1998

Information contained herein is subject to completion of amendment. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. These securities may not be sold nor may offers to buy be accepted prior to the time the registration statement becomes effective. This prospectus shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these securities in any state in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state.

CYTOKLONAL PHARMACEUTICS INC.

312,500 CLASS A WARRANTS
482,720 CLASS B WARRANTS
506,250 BLAIR WARRANTS
520,588 SHARES OF COMMON STOCK

This Prospectus relates to Cytoclonal Pharmaceuticals Inc.'s (called "CPI" or the "Company" throughout this Prospectus) (i) 312,500 Class A Warrants ("Class A Warrants") purchased by investors during the Company's bridge financing completed in August 1994 (the "1994 Bridge Financing"), (ii) 482,720 Class B Warrants (the "Class B Warrants") purchased by investors during the Company's bridge financing completed in April 1995 (the "1995 Bridge Financing," and together with the 1994 Bridge Financing, the "Bridge Financings") and (iii) 506,250 warrants (the "Blair Warrants," and together with the Class A Warrants and Class B Warrants, the "Warrants") that the Company issued to D.H. Blair Investment Banking Corp. ("Blair") as part of its compensation for services as placement agent in the 1994 Bridge Financing and for rendering advice and assistance in structuring the 1995 Bridge Financing. The Warrants are being offered, from time to time, on behalf of and for the account of certain securityholders (the "Selling Securityholders") as identified under the section entitled, "Selling Securityholders." Each Class A Warrant entitles the registered holder thereof to purchase, at any time until November 7, 2000 (the "Expiration Date"), 0.4 share of common stock, \$.01 par value per share (the "Common Stock"), of the Company at an exercise price equal to \$3.75 per share, subject to adjustment. Each Class B Warrant entitles the registered holder thereof to purchase, at any time until the Expiration Date, 0.4 share of Common Stock at an exercise price equal to \$4.375 per share, subject to adjustment. Each Blair Warrant entitles the registered holder thereof to purchase, at any time until the Expiration Date, 0.4 share of Common Stock at an exercise price equal to \$3.75 per share, subject to adjustment. See "Description of Securities."

The Company has agreed to pay all expenses of registration in connection with this offering but will not receive any of the proceeds from the sale of Warrants and underlying Common Stock by the Selling Securityholders (as defined herein). In the event the Warrants are fully exercised, the Company will receive gross proceeds equal to \$2,072,885, less a Solicitation Fee (as defined herein) equal to \$42,238. See "Selling Securityholders" and "Plan of Distribution."

The Company has agreed, in connection with the 1995 Bridge Financing, to pay to Janssen-Meyers Associates, L.P. ("JMA") a solicitation fee equal to 5% of the aggregate exercise price of all the Class B Warrants exercised (the "Solicitation Fee"). The exercise prices and other terms of the Warrants were arbitrarily determined by negotiations between the Company, JMA and Blair, and are not necessarily related to the Company's assets, book value or financial

condition, or to any other recognized criteria of value. The Common Stock and the Company's Class C Warrants and Class D Warrants are quoted on the Nasdaq SmallCap Market ("Nasdaq-SCM") under the symbols "CYPH," "CYPHW" and "CYPHZ," respectively. However, there can be no assurance that an active trading market in the Company's securities will be sustained. See "Risk Factors-Arbitrary Determination of Offering Price" and "-Possible Delisting of Securities from the Nasdaq Stock Market."

<TABLE>

<CAPTION>

| SECURITY | EXERCISE PRICE PER SHARE OF COMMON STOCK | TOTAL | 5% EXERCISE PRICE | NET PROCEEDS TO THE SOLICITATION FEE (1) COMPANY (2)(3) |
|-----------------------|--|-------------|----------------------|---|
| <S> | <C> | <C> | <C> | <C> |
| Class A Warrants..... | \$3.75 | \$ 468,750 | n/a | \$ 468,750 |
| Class B Warrants..... | \$4.375 | \$ 844,760 | \$42,238 | \$ 802,522 |
| Blair Warrants..... | \$3.75 | \$ 759,375 | n/a | \$ 759,375 |
| | ----- | ----- | ----- | ----- |
| Total..... | | \$2,072,885 | \$42,238 | \$2,030,647 |

</TABLE>

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- (1) Represents Solicitation Fees payable to JMA equal to 5% of the aggregate exercise price of all Class B Warrants exercised.
 - (2) Assumes the exercise of all the Warrants and that the Solicitation Fee is paid on all the Class B Warrants that are exercised. There can be no assurance that any of the Warrants will be exercised.
 - (3) Before deducting expenses of this offering, payable by the Company, estimated at \$67,000.

INVESTMENT IN THESE SECURITIES IS SPECULATIVE AND INVOLVES A HIGH DEGREE OF RISK AND SUBSTANTIAL DILUTION. SEE "RISK FACTORS" BEGINNING ON PAGE 7 OF THIS PROSPECTUS AND "DILUTION."

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this Prospectus is October , 1998

AVAILABLE INFORMATION

The Company is a reporting Company under Section 12(g) promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and has filed a Post-Effective Amendment No. 2 to a Registration Statement on Form SB-2 on Form S-3 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"), with the Securities and Exchange Commission (the "Commission") in Washington, D.C. with respect to the Warrants and the underlying shares of Common Stock offered hereby. This Prospectus, which is part of the Registration Statement, does not contain all of the information set forth in the Registration Statement and the exhibits and schedules thereto. The Company will provide to each person who receives a Prospectus, upon written or oral request of such person, a copy of any of the information that is incorporated by reference in this Prospectus (not including exhibits to the information that is incorporated by reference unless the exhibits are themselves specifically incorporated by reference). Written requests may be sent to the Company at 9000 Harry Hines Boulevard, Suite 330, Dallas, Texas 75235, Attention: Arthur B. Bollon, Ph.D., President. Oral requests may be made by calling the Company at (214) 353-2922. Also, for further information with respect to the Company, the Common Stock and the Warrants offered hereby, reference is hereby made to the Registration Statement and such exhibits and schedules, which may be inspected without charge at the office of the Commission

at 450 Fifth Street, N.W., Washington, D.C. 20549 and at its regional offices at 7 World Trade Center, New York, New York 10048. Copies of such material may also be obtained at prescribed rates from the Public Reference Section of the Commission. The Commission maintains a World Wide Web site on the Internet at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission. Statements contained in this Prospectus as to the contents of any contract or other document referred to are not necessarily complete and in each instance reference is made to the copy of such contract or document filed as an exhibit to the Registration Statement, each such statement being qualified in all respects by such reference.

The Company intends to furnish annual reports to its stockholders and holders of its warrants, which will include financial statements audited by its independent certified public accountants, and such other periodic reports as it may determine to furnish or as may be required by law, including Sections 13(a) and 15(d) promulgated under the Exchange Act.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The following documents, previously filed with the Commission by the Company, are hereby incorporated by reference in this Prospectus:

1. The Company's Annual Report on Form 10-KSB for the fiscal year ended December 31, 1997;
2. The Company's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 1998;
3. The Company's Quarterly Report on Form 10-QSB for the fiscal quarter ended March 31, 1998;
4. The Company's Current Report on Form 8-K, dated June 12, 1998, filed with the Commission on September 9, 1998;
5. The Company's definitive proxy statement filed with the Commission, on August 5, 1998, pursuant to Regulation 14A promulgated under the Exchange Act; and
6. The description of the capital stock, including Capital Stock, set forth in the Company's Registration Statement filed pursuant to Section 12 of the Exchange Act on Form 8-A on October 2, 1995, and any amendment or report filed for the purpose of updating any such description.

All reports and other documents subsequently filed by the Company after the date of this Prospectus pursuant to Section 13(a), 14 or 15(d) of the Exchange Act and prior to the termination of this offering shall be deemed to be incorporated by reference in this Prospectus and to be a part hereof from the date of filing such documents or reports.

PROSPECTUS SUMMARY

THE FOLLOWING SUMMARY IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO THE MORE DETAILED INFORMATION AND FINANCIAL STATEMENTS AND NOTES THERETO APPEARING ELSEWHERE IN THIS PROSPECTUS. UNLESS OTHERWISE INDICATED, THE INFORMATION IN THIS PROSPECTUS DOES NOT GIVE EFFECT TO THE EXERCISE OR CONVERSION OF: (i) THE WARRANTS; (ii) THE UNIT PURCHASE OPTION (THE "IPO UNIT PURCHASE OPTION") GRANTED TO THE UNDERWRITERS OF THE IPO TO PURCHASE UP TO AN AGGREGATE OF 200,000 UNITS (AS DEFINED HEREIN), INCLUDING THE SECURITIES ISSUABLE UPON THE EXERCISE THEREOF; (iii) OUTSTANDING OPTIONS, RIGHTS AND WARRANTS AND OTHER SECURITIES CONVERTIBLE OR EXERCISABLE INTO COMMON STOCK; (iv) CURRENTLY OUTSTANDING OPTIONS GRANTED UNDER THE COMPANY'S 1992 STOCK OPTION PLAN (THE "1992 PLAN"); (v) CURRENTLY OUTSTANDING OPTIONS GRANTED UNDER THE COMPANY'S 1996 STOCK OPTION PLAN (THE "1996 PLAN"); (vi) WARRANTS (THE "PRIVATE PLACEMENT WARRANTS") ISSUED IN CONNECTION WITH THE COMPANY'S PRIVATE PLACEMENT COMPLETED IN APRIL 1998 TO PURCHASE UP TO AN AGGREGATE OF 335,550 SHARES OF COMMON STOCK OF THE COMPANY (THE "1998 PRIVATE PLACEMENT") AND (vii) THE UNIT PURCHASE OPTION (THE "PRIVATE PLACEMENT UNIT PURCHASE OPTION") GRANTED TO THE PRIVATE PLACEMENT AGENT OF THE 1998 PRIVATE PLACEMENT TO PURCHASE UNITS FOR AN AGGREGATE OF 134,207 SHARES OF

COMMON STOCK AND WARRANTS TO PURCHASE 67,108 SHARES OF COMMON STOCK. EACH PROSPECTIVE INVESTOR IS URGED TO READ THIS PROSPECTUS IN ITS ENTIRETY.

THE COMPANY

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 developmental stages. The Company's research and development activities relate principally to its (i) proprietary Fungal Paclitaxel Production System, (ii) diagnostic and imaging lung cancer products, (iii) Human Gene Discovery Program and (iv) Vaccine program. TAXOL-TM- (the brand name for Paclitaxel) has been designated by the National Cancer Institute ("NCI") as the most important cancer drug introduced in the past ten years.

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 Microbial Fermentation and Paclitaxel-specific genes, (ii) Paclitaxel treatment of Polycystic Kidney Disease; (iii) 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 and (iv) Vaccine program. Other programs, which involve tumor necrosis factor-polyethylene glycol ("TNF-PEG"), a fusion protein ("IL-T"), a potential anti-leukemia drug ("IL-P") and anti-sense therapeutics-are being pursued at modest levels, and may serve as platforms for future products or alternatives to the two 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 certain proprietary cancer and viral therapeutic technology ("Wadley Technologies") developed at the Wadley Institute 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. The Company has not developed any commercial products, will require significant additional financing to complete development and obtain regulatory approvals for its proposed products which, if ever received, may take several years.

In August 1998, the Company entered into an exclusive world-wide license agreement with the Regents of the University of California, Los Angeles for 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." The agreement grants the Company the right to (i) make, use, sell, offer for sale, import certain products and practice any process or method involving the patents and (iii) sublicense the foregoing rights

to third parties. The agreement provides for up-front and maintenance fees, royalty payments and milestone payments. See "Risk Factors--Royalty Obligations; Possible Loss of Patents and Other Proprietary Rights."

In June 1998, the Company entered into a license and research agreement with Bristol-Myers Squibb concerning two technologies related to the production of Paclitaxel, the active ingredient in Bristol-Myers Squibb's largest-selling cancer product, TAXOL-TM-. The agreement includes fees, milestone payments, research and development support and minimum and sales-based royalties. See "Risk Factors--Dependence upon Bristol-Myers Squibb."

The Company has received an exclusive worldwide license to use patented fungal technology to synthesize Paclitaxel 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 fungal 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. See "Risk--Royalty Obligations; Possible Loss of Patents and Other Proprietary Rights; --Dependence upon Bristol-Myers Squibb."

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 or sublicense patented technology or prospective patented technology related to genes for enzymes and the associated gene products, including the enzymes, in the biosynthetic pathway for Paclitaxel from the yew tree (the "WSURF Technology"). This gene will be used along with a related fungal gene region to further optimize the fungal Paclitaxel production system. 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. See "Risk Factors--Royalty Obligations; Possible Loss of Patents and Other Proprietary Rights; --Dependence upon Bristol-Myers Squibb."

The Company is directing its resources toward developing cancer diagnostic and imaging products utilizing the LCG gene and related MAb ("LCG MAb") isolated by the Company in its Human Gene Discovery Program. The LCG gene and the LCG MAb are associated with specific lung cancer cells. In Phase I human clinical trials, an LCG MAb derived from mouse cells was shown to be highly specific for cancerous lung tissue, but not normal lung tissue. These clinical studies will be expanded with a human derived form of the LCG MAb which is presently under development.

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 a Notice of Allowance of patent claims was received in June 1998. This discovery potentially has broad applications to many human and viral genes involved in human disease. See "Risk Factors--Royalty Obligations; Possible Loss of Patents and other Proprietary Rights."

In February 1996, the Company obtained exclusive rights to a technology and then pending patent developed at the University of California, Los Angeles for the Paclitaxel treatment of polycystic kidney disease. Such patent claim was allowed in August 1997.

Until the fiscal year ended December 31, 1997, the Company had generated no sales revenues. For the six month period ended June 30, 1998, the Company, for the first time, generated revenue of \$789,000 from the \$1,250,000

received from Bristol-Myers Squibb with the remainder of \$461,000 to be applied to the third and fourth quarters of 1998. However, the Company has incurred operating losses of \$2,319,000, \$3,106,000 and \$3,357,000 for the fiscal years ended December 31, 1995, 1996 and 1997, respectively, and \$1,575,000 and \$1,044,000 for the six month periods ended June 30, 1997 and 1998, respectively. Since its inception, the Company has incurred net operating losses. The increase in net loss for 1996 from 1995 was primarily attributable to an increase in research and development expenses and general and administrative expenses partially offset by interest income generated from the proceeds of the Company's initial public offering of November 1995 (the "IPO") and a decrease in interest expenses. The increase in net losses for 1997 from 1996 was attributable to a decrease in interest income and an increase in general and administrative expenses. The Company expects to incur additional losses in the foreseeable future. See "Risk

Factors--Accumulated Deficit; and --History of Significant Losses and Anticipated Continuing Future Losses."

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. The Company's executive offices are located at 9000 Harry Hines Boulevard, Suite 330, Dallas, Texas 75235 and its telephone number is (214) 353-2922.

3 THE OFFERING

SECURITIES OFFERED BY THE COMPANY..... 312,500 Class A Warrants, 482,720 Class B Warrants, 506,250 Blair Warrants and 520,588 shares of Common Stock issuable upon exercise of such Class A Warrants, Class B Warrants and Blair Warrants. See "Description of Securities."

TERMS OF WARRANTS..... Each Class A Warrant entitles the holder to purchase 0.4 share of Common Stock of the Company, for an exercise price of \$3.75 per share, at any time until Expiration Date. Each Class B Warrant entitles the holder to purchase 0.4 share of Common Stock, for an exercise price of \$4.375 per share, at any time until the Expiration Date. Each Blair Warrant entitles the holder to purchase 0.4 share of Common Stock, for an exercise price of \$3.75 per share, at any time until the Expiration Date. The exercise prices and numbers of shares issuable upon the exercise of the Warrants are subject to adjustment in certain circumstances. See "Description of Securities."

CAPITAL STOCK OUTSTANDING AS OF SEPTEMBER 29, 1998 AND ASSUMING NO EXERCISE OF THE WARRANTS

Common Stock(1):..... 10,191,252 shares

Series A Convertible Preferred
Stock:..... 764,003 shares

Class A Warrants:..... 312,500

Class B Warrants:..... 482,720

Blair Warrants:..... 506,250

CAPITAL STOCK OUTSTANDING AS OF SEPTEMBER 29, 1998 AND ASSUMING EXERCISE OF ALL CLASS A WARRANTS

Common Stock(1):..... 10,316,252 shares

Series A Convertible Preferred
Stock:..... 764,003 shares

Class B Warrants:..... 482,720

Blair Warrants:..... 506,250

CAPITAL STOCK OUTSTANDING AS OF SEPTEMBER 29, 1998 AND ASSUMING EXERCISE OF ALL CLASS A WARRANTS AND CLASS B WARRANTS

Common Stock(1):..... 10,509,340 shares

Series A Convertible Preferred

Stock:..... 764,003 shares

4

Blair Warrants:..... 506,250

CAPITAL STOCK OUTSTANDING AS OF
SEPTEMBER 29, 1998 AND ASSUMING
EXERCISE OF ALL CLASS A WARRANTS,
CLASS B WARRANTS AND BLAIR WARRANTS

Common Stock(1):..... 10,711,840 shares

Series A Convertible Preferred

Stock:..... 764,003 shares

USE OF PROCEEDS..... The Company intends to utilize the net
proceeds from the exercise of the
Warrants, if any, to fund research and
development activities (including
certain royalties and licensing fees),
and for general working capital
purposes and operating expenses. See
"Use of Proceeds."

RISK FACTORS..... Investment in these securities is
speculative and involves a high degree
of risk. See "Risk Factors."

NASDAQ--SCM SYMBOLS (3)..... Common Stock - CYPH
Class C Warrants - CYPHW
Class D Warrants - CYPHZ

- -----
(1) Does not include the possible issuance of (i) 1,398,700 shares of Common
Stock reserved for issuance upon exercise of options granted or available
for grant under the 1992 Plan and the 1996 Plan; (ii) 764,003 shares of
Common Stock issuable upon the conversion of the Company's Series A
Convertible Preferred Stock; (iii) 800,000 shares of Common Stock reserved
for issuance upon exercise of the IPO Unit Purchase Option and underlying
warrants; (iv) 335,550 shares issuable upon the exercise of the Private
Placement Warrants; (v) 201,315 shares issuable upon the exercise of the
Private Placement Unit Purchase Option, including the shares issuable upon
the exercise of the warrants issuable upon the exercise thereof; (vi)
170,000 shares of Common Stock issuable upon exercise of options granted as
compensation for professional services; (vii) 36,000 shares of Common
Stock issuable upon the exercise of warrants granted for research and
development; (viii) 75,000 shares of Common Stock issuable upon the
exercise of Warrants granted for financial advisory services; (ix)
2,066,123 shares of Common Stock issuable upon the exercise of the
outstanding Class C Warrants issued in the Company's initial public
offering in November 1995 (the "IPO"); (x) 2,510,877 shares of Common
Stock issuable upon the exercise of the outstanding Class D Warrants
issued in the IPO; and (xi) 2,066,123 shares of Common Stock issuable
upon the exercise of the Class D Warrants underlying the outstanding
Class C Warrants issued in the IPO. See "Description of Securities" and
"Bridge Financings."

5

SUMMARY FINANCIAL INFORMATION(1)

STATEMENT OF OPERATIONS DATA:

<TABLE>
<CAPTION>

YEAR ENDED

SIX MONTHS

| | DECEMBER 31, | | ENDED JUNE 30, | |
|---|--------------|--------------|----------------|-------------|
| | 1997 | 1996 | 1998 | 1997 |
| <S> | <C> | <C> | <C> | <C> |
| Licensing and Research Collaborative Agreement Income..... | - | - | \$ 789,000 | - |
| Research and development expenses..... | \$ 1,469,000 | \$ 1,576,000 | 822,000 | \$ 688,000 |
| General and administrative expenses..... | 1,888,000 | 1,530,000 | 1,011,000 | 887,000 |
| Net interest expense (income)..... | (105,000) | (216,000) | (85,000) | (58,000) |
| Net loss..... | (3,252,000) | (2,890,000) | (959,000) | (1,517,000) |
| Basic and diluted loss per share of common stock..... | \$ (.42) | \$ (.42) | \$ (.11) | \$ (.21) |
| Weighted average number of shares outstanding --basic and diluted loss per share..... | 8,268,000 | 7,640,000 | 9,286,000 | 8,073,000 |

</TABLE>

Balance Sheet Data:

<TABLE>

<CAPTION>

| | AT JUNE 30, 1998 | | | |
|---------------------------------|------------------|----------------|----------------|----------------|
| | ACTUAL | AS ADJUSTED(1) | AS ADJUSTED(2) | AS ADJUSTED(3) |
| <S> | <C> | <C> | <C> | <C> |
| Working capital..... | \$ 7,798,000 | \$ 8,200,000 | \$ 9,002,000 | \$ 9,762,000 |
| Total assets..... | 9,959,000 | 10,361,000 | 11,163,000 | 11,923,000 |
| Total liabilities..... | 2,340,000 | 2,340,000 | 2,340,000 | 2,340,000 |
| Accumulated deficit..... | (16,063,000) | (16,063,000) | (16,063,000) | (16,063,000) |
| Total stockholders' equity..... | 7,619,000 | 8,021,000 | 8,823,000 | 9,583,000 |

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- (1) Gives effect to the exercise of only the 312,500 Class A Warrants and the application of the net proceeds therefrom. See "Plan of Distribution."
 - (2) Gives effect to the exercise of the 312,500 Class A Warrants, 482,720 Class B Warrants, and the application of the net proceeds therefrom and assumes that the Solicitation Fee is paid on the exercise of each Class B Warrant. See "Plan of Distribution."
 - (3) Gives effect to the exercise of the 312,500 Class A Warrants, 482,720 Class B Warrants, 506,250 Blair Warrants, and the application of the net proceeds therefrom and assumes that the Solicitation Fee is paid on the exercise of each Class B Warrant. See "Plan of Distribution."

RISK FACTORS

AN INVESTMENT IN THE SECURITIES OFFERED HEREBY IS HIGHLY SPECULATIVE, INVOLVES A HIGH DEGREE OF RISK AND SHOULD BE MADE ONLY BY INVESTORS WHO CAN AFFORD THE LOSS OF THEIR ENTIRE INVESTMENT. PROSPECTIVE PURCHASERS, PRIOR TO MAKING AN INVESTMENT DECISION, SHOULD CAREFULLY CONSIDER, ALONG WITH OTHER MATTERS REFERRED TO HEREIN, THE FOLLOWING RISK FACTORS:

ACCUMULATED DEFICIT; HISTORY OF SIGNIFICANT LOSSES; ANTICIPATED CONTINUING FUTURE LOSSES; AND SUBSTANTIAL NON-CASH CHARGE TO EARNINGS.

The Company's balance sheet as of the fiscal year ended December 31,

1997 and the six month period ended June 30, 1998 (unaudited) reflects an accumulated deficit of \$(15,104,000) and \$(16,063,000), respectively. In addition, the Company's statement of operations for the fiscal year ended December 31, 1997 and the six month period ended June 30, 1998 (unaudited), reflect net losses of \$(3,252,000) and \$(959,000), respectively, or approximately \$(.42) and \$(.11) per share, respectively. The Company has continued to incur substantial operating losses since its inception in September 1991 through the six month period June 30, 1998, and expects to incur significant operating losses for at least several years. Although the Company generated \$789,000 in revenues from the \$1,250,000 received from Bristol-Myers Squibb for the six month period ended June 30, 1998, there can be no assurances that future revenues will be generated or that, if generated, the Company's operations will be profitable, or that the Company will be able to obtain sufficient additional funds to continue its planned activities. In September 1998, the Company issued stock options, contingent upon stockholder approval, to acquire shares of Common Stock. If, at the time of stockholder approval, the market price of the Common Stock of the Company exceeds the exercise price of such options, the Company will incur a non-cash charge to earnings equal to the difference between the exercise price of such options and the market price, times the number of options granted. See "Use of Proceeds."

NO ASSURANCE OF FUTURE PRODUCT REVENUE.

Up until June 30, 1998, the Company had been in the development stage and, through December 31, 1997, had generated no sales revenue. Although the Company generated \$789,000 in revenues from the \$1,250,000 received from Bristol-Myers Squibb for the six month period ended June 30, 1998, the Company has incurred substantial losses to date resulting principally from costs incurred in research and development activities and general and administrative expenses, as well as from the purchase of equipment and leasehold improvements to the Company's facilities. The Company will be required to conduct significant research, development, testing and regulatory compliance activities which, together with projected general and administrative expenses, are expected to result in additional significant continuing operating losses. The Company does not expect to receive regulatory approvals for any of its proposed products for at least several years, if ever. The Company currently has no source of operating revenue and there can be no assurance that it will be able to develop any such revenue source or that its operations will become profitable, even if it is able to commercialize any products. Further, the Company has a limited relevant operating history upon which an evaluation of its prospects can be made. Such prospects must be considered in light of the risks, expenses and difficulties frequently encountered in establishing a new business in the evolving, heavily regulated biotechnology industry, which is characterized by an increasing number of market entrants, intense competition and a high failure rate. In addition, significant challenges are often encountered in shifting from developmental to commercial activities.

NEED FOR SUBSTANTIAL ADDITIONAL FUNDS; NEGATIVE CASH FLOW.

The Company is currently experiencing, and has since its inception in September 1991, experienced, negative cash flow from operations which is expected to continue in the foreseeable future. Since its inception the Company has been dependent upon equity infusions and upon the private financings and the Company's IPO to fund its continuing operations. The Company's cash requirements may vary materially from current estimates because of results of the Company's research and development programs, results of clinical studies, changes in the focus and direction of the

Company's research and development programs, competitive and technological advances and other factors. In any event, the Company will require substantial funds, in addition to the proceeds of this offering, to conduct development activities and pre-clinical and clinical trials, apply for regulatory approvals and commercialize products, if any, that it develops.

The Company does not have any commitments or arrangements to obtain any additional financing other than pursuant to the BMS License Agreement (as defined herein) and RDI Agreement (as defined herein), and there can be no assurance that required financing will be available to the Company on acceptable terms, if at all. Although the Company will seek to fund a

portion of its product development efforts by entering into collaborative ventures with corporate partners, obtaining research contracts, entering into research and development partnerships and obtaining government grants, there can be no assurance that the Company will be able to enter into any such additional ventures on acceptable terms, if at all. To the extent the Company raises additional capital by issuing securities, further dilution to the investors in this offering may result. See "--Dependence upon Collaborations and Licenses with Others; --Royalty Obligations; Possible Loss of Patents and Other Proprietary Rights; --Competition; --Dependence upon Bristol-Myers Squibb; --Dilution."

DEPENDENCE UPON COLLABORATIONS AND LICENSES WITH OTHERS.

The Company's strategy for the development, clinical testing, manufacturing and commercialization of its proposed products includes entering into various collaborations with corporate partners, licensors, licensees and others, and is dependent upon the subsequent success of these outside parties in performing their responsibilities. In addition to its agreements with RDI and Enzon, Inc. ("Enzon"), the Company has entered into several other research and license agreements and is continually seeking to enter into additional arrangements with other collaborators. There can be no assurance that its current arrangements or any future arrangements will lead to the development of products with commercial potential, that the Company will be able to obtain proprietary rights or licenses for proprietary rights with respect to any technology developed in connection with these arrangements or that the Company will be able to insure the confidentiality of any proprietary rights and information developed in such collaborative arrangements or prevent the public disclosure thereof.

In general, collaborative agreements provide that they may be terminated under certain circumstances. There can be no assurance that the Company will be able to extend any of its collaborative agreements upon their termination or expiration, or that the Company will be able to enter into new collaborative agreements with existing or new partners in the future. To the extent the Company chooses not to or is unable to establish any additional collaborative arrangements, it would require substantially greater capital to undertake research, development and marketing of its proposed products at its own expense. In addition, the Company may encounter significant delays in introducing its proposed products into certain markets or find that the development, manufacture or sale of its proposed products in such markets is adversely affected by the absence of such collaborative agreements. See "--Royalty Obligations; Possible Loss of Patents and Other Proprietary Rights."

EARLY STAGE OF PRODUCT DEVELOPMENT; TECHNOLOGICAL AND OTHER UNCERTAINTIES.

There can be no assurance that the Company's research and development activities will result in any commercially viable products. The development of each product will be subject to the risks of failure inherent in the development of products based on innovative technologies and the expense and difficulty of obtaining regulatory approvals. All of the potential products currently under development by the Company will require significant additional research and development and pre-clinical testing and clinical testing prior to submission of any regulatory application for commercial use.

There can be no assurance that the Company's research or product development efforts will be completed successfully, that the products currently under development will be transformed successfully into marketable products, that required regulatory approvals can be obtained, that products can be manufactured at acceptable costs in accordance with regulatory requirements or that any approved products can be marketed successfully or achieve customer acceptance. Additional risks include the possibility that any or all of the Company's products will be found to be ineffective or toxic, or that, if safe and effective, will be difficult to manufacture on a large scale or uneconomical

to market; that the proprietary rights of third parties will preclude the Company from marketing one or more products; and that third parties will market superior or equivalent products. See "--No Assurance of FDA Approval; Government Regulation; --Dependence upon Third Parties For Manufacturing; No Manufacturing Experience; --Dependence upon Third Parties For Marketing; No Marketing Experience."

ROYALTY OBLIGATIONS; POSSIBLE LOSS OF PATENTS AND OTHER PROPRIETARY RIGHTS.

Pursuant to its License Agreement with RDI relating to Paclitaxel, as amended, (the "RDI Agreement"), the Company paid to RDI minimum royalty payments of \$100,000 and \$100,000 on June 10, 1997 and June 10, 1998, respectively. Such License Agreement requires the Company to pay RDI an annual minimum royalty fee of \$100,000 no later than June 10th as long as such license is retained. Pursuant to the License Agreement between the Company and RDI relating to a fungal strain known as FTS-2, the Company must pay to RDI royalties on sales of products incorporating the licensed technology if the product is covered by a pending or issued patent or a lower rate if the product is not covered by a patent. In May 1998, the Company and RDI amended the RDI Agreement thereby 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 the BMS-RDI Sublicense Agreement (defined herein). In addition, for the purchase of the Wadley Technology, the Company is required to pay royalties to WadTech a fee equal to 6.25% of the gross selling prices of products incorporating any of the Wadley Technology until payments totaling \$1,250,000 (the "Fixed Sum") have been made. Thereafter, the royalty rate will be up to 3.75%. Minimum royalties payable to WadTech were \$31,250 for the year beginning October 1, 1996, which has been paid by the Company, \$62,500 for the year beginning October 1, 1997 and are \$125,000 for each year thereafter. WadTech has a perfected security interest in the Wadley Technology to secure the payment of the first \$1,250,000 of royalties. 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. WadTech has the right to license such intellectual property to a third party or sell it through a foreclosure sale in the event that the Company does not fulfill its obligations under the Wadley Agreement. The Company is also obligated to pay a royalty equal to 3% on sales of products produced through the use of a recombinant yeast expression system pursuant to a license agreement assigned to the Company in connection with its purchase of the Wadley Technology. Also, pursuant to its license agreement with WSURF, as amended (the "WSURF Agreement"), the Company is required to pay WSURF annual license fees per year, commencing on July 1, 1997, which initial payment has been made by the Company, as well as certain royalties and sublicensing fees. The loss by the Company of the RDI, Wadley or WSURF technology could have a material adverse effect on the Company's business and the development of the Company's proposed products.

In addition, the Company's agreements with Enzon provide that if the parties decide to jointly develop any products, the costs and profits of product development will be split equally. If the Company is unable to fund its portion of a product's development costs, the Company will lose its rights to such product, will no longer have the right to split the profits from such product and will only be entitled to a royalty. In addition, the Company has paid \$231,563 as of June 30, 1998 of the \$285,240 owed the University of Texas ("UTD") pursuant to an extended agreement therein granting the Company a 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 exceeding eight percent of the net sales of commercialized products. Furthermore, the Company entered into a Patent License Agreement with the Board of Regents of the University of Texas ("Regents") in which the Company is required to pay Regents certain and sublicensing fees. In addition, the Company entered into a license agreement with the University of California at Los Angeles ("UCLA License Agreement I") pursuant to which the Company paid UCLA \$5,000 and has agreed to pay an additional \$10,000 upon issuance of a patent. Pursuant to an additional license agreement with UCLA ("UCLA License Agreement II"), the Company paid a license issue fee of \$5,000 and has agreed to pay an additional \$5,000 upon the issuance of a patent. In addition, pursuant to an additional license agreement with UCLA ("UCLA License Agreement III"), the Company has agreed to pay a license issuance fee of \$20,000, an additional \$25,000 upon the issuance of a patent, annual maintenance fees based on an escalating sliding-scale and minimum annual royalty payments. The loss by the Company of any of the foregoing agreements could have a material adverse effect on the Company's business and the development of the Company's proposed products.

COMPETITION.

Many of the Company's competitors have greater financial, technical, human and other resources than the Company. In addition, many of these competitors have significantly greater experience than the Company in undertaking pre-clinical testing and human clinical trials of new products and in obtaining United States Food and Drug Administration ("FDA") and other regulatory approvals. Accordingly, certain of the Company's competitors may succeed in obtaining FDA approvals more rapidly and efficiently than the Company. Furthermore, if the Company is able to commence commercial production and sale of any products, it will also be competing with companies having substantially greater resources and experience in these areas. Company personnel currently has limited or no experience in the production and sale of any pharmaceutical or biological products. Investors should be aware that in June 1991, the NCI formalized a Collaborative Research and Development Agreement ("CRADA") for development of Paclitaxel with Bristol-Myers Squibb as its pharmaceutical manufacturing and marketing partner, therein granting to Bristol-Myers Squibb until December 1997 the exclusive use of NCI's clinical data relating to Paclitaxel in seeking approval from the FDA, which shortened significantly the approval process and prevented any other party from obtaining FDA approval using the NCI data. Although Bristol-Myers Squibb has 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 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 Paclitaxel as a treatment for refractory ovarian cancer in December 1992, for refractory breast cancer in April 1994, Kaposi's Sarcoma in August 1997 and lung cancer in 1998. Since December 1992, Bristol-Myers Squibb has been the sole source of Paclitaxel for commercial purposes. It is the Company's understanding that Bristol-Myers Squibb is currently conducting clinical trials required for FDA approval of Paclitaxel for treating other cancers. See "-Dependence upon Bristol-Myers Squibb."

UNCERTAIN ABILITY TO PROTECT PROPRIETARY TECHNOLOGY.

The Company's success will depend, in part, on its ability to obtain patent protection for its products and processes in the United States and elsewhere. The Company has filed and intends to continue to file patent applications as appropriate. No assurance, however, can be given that any additional patents will issue from any of these applications or, if patents do issue, that the claims allowed will be sufficiently broad to protect the Company's technology. In addition, no assurance can be given that any patents issued to or licensed by the Company will not be successfully challenged or circumvented by others, or that the rights granted will provide adequate protection to the Company.

The Company is aware of patent applications and issued patents belonging to competitors and, although it has no knowledge of such, it is uncertain whether any of these, or patent applications of which it may not have any knowledge, will require the Company to alter its potential products or processes, pay licensing fees or cease certain activities. There can be no assurance that the Company will be able to obtain licenses to technology that it may require or, if obtainable, that such licenses will be at an acceptable cost. The Company's failure to obtain any requisite license to any technology may have a material adverse effect on the Company. Expensive and protracted litigation may also be necessary to enforce any patents issued to the Company or to determine the scope and validity of others' claimed proprietary rights.

The Company also relies on trade secrets and confidential information that it seeks to protect, in part, by confidentiality agreements. There can be no assurance that these agreements will not be breached, that the Company would have adequate remedies for any breach or that the Company's trade secrets will not otherwise become known or be discovered independently by competitors.

NO ASSURANCE OF FDA APPROVAL; GOVERNMENT REGULATION.

The FDA and comparable agencies in foreign countries impose substantial requirements upon the introduction of therapeutic and diagnostic pharmaceutical and biological products through lengthy and detailed laboratory and

time-consuming procedures. Satisfaction of these requirements typically takes several years or more and varies substantially based upon the type, complexity and novelty of the product. The regulatory review may result in extensive delay in the regulatory approval process. Regulatory requirements ultimately imposed could adversely affect the Company's ability to clinically test, manufacture or market potential products. Government regulation also applies to the manufacture and marketing of pharmaceutical and biological products. See "--Competition."

The effect of government regulation may be to delay marketing of new products for a considerable period of time, to impose costly procedures upon the Company's activities and to furnish a competitive advantage to larger companies competing with the Company. There can be no assurance that FDA or other regulatory approval for any products developed by the Company will be granted on a timely basis, if at all. Any such delay in obtaining, or failure to obtain, such approvals would adversely affect the marketing of any contemplated products and the ability to earn product revenue. Further, regulation of manufacturing facilities by state, local and other authorities is subject to change. Any additional regulation could result in limitations or restrictions on the Company's ability to utilize any of its technologies, thereby adversely affecting the Company's operations.

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.

UNCERTAINTY RELATED TO HEALTH CARE REIMBURSEMENT AND REFORM MEASURES.

The Company's success in generating revenue from sales of human therapeutic and diagnostic products may depend, in part, on the extent to which reimbursement for the costs of such products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Significant uncertainty exists as to the reimbursement status of newly-approved health care products. There can be no assurance that adequate third-party insurance coverage will be available for the Company to establish and maintain price levels sufficient for realization of an appropriate return on its investment in developing new products. Government and other third-party payers are increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement of new therapeutic and diagnostic products approved for marketing by the FDA and by refusing, in some cases, to provide any coverage of uses of approved products for disease indications for which the FDA has not granted marketing approval. If adequate coverage and reimbursement levels are not provided by government and third-party payers for uses of the Company's products, the market acceptance of these products would be adversely affected. See "--Competition; --No Assurance of FDA Approval, Government Regulation."

DEPENDENCE UPON BRISTOL-MYERS SQUIBB

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 (i) the RDI Agreement (the "BMS-RDI Sublicense Agreement") and (ii) the WSURF Agreement. Pursuant to the RDI Agreement, the Company acquired a license to certain patents and technology relating to the use of microorganisms for the production of Paclitaxel and other taxanes and components. Pursuant to the WSURF Agreement, the Company acquired a license to certain patents and technology relating to the several genes coded for the enzymes involved in the biosynthesis of Paclitaxels and other taxanes. The BMS License Agreement contemplates sales-based royalty payments and payments by Bristol-Myers Squibb to the Company on the advent of certain milestones and royalties, grants Bristol-Myers Squibb a right of first negotiation during the term of the BMS Agreement to obtain from the Company an exclusive, world-wide right to license or sublicense any part of the technology licensed to the Company under the RDI Agreement and WSURF Agreement and potentially new anti-cancer drugs from microorganisms supplied by the Company.

License Agreement shall run, subject to earlier termination in certain circumstances, until the later of (i) ten (10) years from the first commercial sale of the licensed products or (ii) such time as neither the making, use nor sale at the time by Bristol-Myers Squibb, its affiliates or sublicensees in such country of the licensed product does 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 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 shall have the right to terminate the BMS License Agreement after December 12, 1998, effective upon ninety (90) days notice, in which event the Bristol-Myers Squibb sublicense under the RDI Agreement and WSURF Agreement would terminate, although any payment obligations would survive termination. There can be no assurance, however, that Bristol-Myers Squibb will be successful in manufacturing or marketing the licensed property, if at all, or that the Company will be able to maintain the RDI Agreement or the WSURF Agreement. See "--Competition."

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, without assurance, a program directed toward developing microbial fermentation and genetic engineering technologies for the production of Paclitaxel and other taxanes. See "--Competition."

DEPENDENCE UPON THIRD PARTIES FOR MANUFACTURING; NO MANUFACTURING EXPERIENCE.

The Company currently does not have facilities or personnel capable of manufacturing any products in commercial quantities. If the Company completes development of, and obtains regulatory approval for, fungal Paclitaxel, it intends to use third-parties to manufacture Paclitaxel. No assurance can be given that it will be able to enter into any arrangements with such manufacturers on acceptable terms, if at all. In the future, the Company may, if it becomes economically attractive to do so, establish its own manufacturing facilities to produce other products that it may develop. Building and operating production facilities would require substantial additional funds and other resources. However, there can be no assurance that such funds would be available on favorable terms to the Company, if at all. There is no assurance that the Company will be able to successfully make the transition to commercial production, should it choose to do so.

DEPENDENCE UPON THIRD PARTIES FOR MARKETING; NO MARKETING EXPERIENCE.

The Company currently has no marketing and sales personnel and no experience regarding marketing pharmaceutical products. Significant additional expenditures and management resources would be required to develop an internal sales force, and there can be no assurance that such funds would be available. Further, there can be no assurance that, with such a sales force, the Company would successfully penetrate 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 successfully market a product, the Company's business may be adversely affected. The sale of certain products outside the United States will also be dependent upon the successful completion of arrangements with future partners, licensees or distributors in each territory. There can be no assurance, however, 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, if at all.

DEPENDENCE UPON KEY PERSONNEL AND COLLABORATORS; LIMITED MANAGEMENT TEAM.

The Company's success depends on the continued contributions of its

executive officers, scientific and technical personnel and consultants. The Company is particularly dependent on Arthur P. Bollon, Ph.D., its Chairman, Chief Executive Officer and President, and Daniel Shusterman, its Vice President of Operations, Treasurer and Chief Financial Officer, and its senior scientists, Susan L. Berent, Ph.D., Hakim Labidi, Ph.D., Rajinder S. Sidhu, Ph.D. and

Richard M. Torczynski, Ph.D. As of September 25, 1998, the Company had 16 full-time employees, 13 of whom are engaged directly in research and development activities and 3 of whom are 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. The Company currently has an employment agreement with Dr. Bollon which expires on November 6, 2000. Although the Company maintains "key person" life insurance in the amount of \$2 million on the life of Dr. Bollon, his death or incapacity could have a material adverse effect on the Company. During the Company's limited operating history, many key responsibilities within the Company have been assigned to a relatively small number of individuals. The competition for qualified personnel is intense, and the loss of services of certain key personnel could adversely affect the Company.

The Company's scientific collaborators and its scientific advisors are employed by employers other than the Company and some have consulting or other advisory arrangements with other entities that may conflict or compete with their obligations to the Company. Inventions or processes discovered by such persons will not necessarily become the property of the Company but may remain the property of such persons or of such persons' full-time employers.

PRODUCT LIABILITY INSURANCE.

The use of Company products in clinical trials and the marketing of any products may expose the Company to product liability claims. The Company intends to obtain product liability insurance for its ongoing clinical trials. 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, if at all, or that any claims against the Company will not exceed the amount of such coverage. Furthermore, certain distributors of pharmaceutical and biological products require minimum product liability insurance coverage as a condition precedent to purchasing or accepting products for distribution. Failure to satisfy such insurance requirements could impede the ability of the Company to achieve broad distribution of its proposed products, which could have a material adverse effect upon the business and financial condition of the Company.

CONTROL OF THE COMPANY; ABILITY TO DIRECT MANAGEMENT.

The Company's current officers, directors and stockholders of more than 5% of the Company's securities beneficially own or control approximately 32% of the outstanding shares of Common Stock, which represents approximately 29% of the total outstanding voting securities of the Company. Such officers, directors and principal stockholders may, therefore, be able to elect all of the Company's directors, to determine the outcome of most corporate actions requiring stockholder approval, and otherwise to control the business of the Company. Such control could preclude any unsolicited acquisition of the Company and consequently adversely affect the market price of the Company's securities. In addition, the Company's Board of Directors is authorized to issue from time to time shares of preferred stock, without stockholder authorization, in one or more designated series or classes. See "--Possible Restriction on 'Market Making' Activities in the Company's Securities; Illiquidity" and "Description of Securities."

DIVIDEND POLICY.

Since its inception, the Company has not paid any dividends on its Common Stock. The Company intends to retain future earnings, if any, to provide funds for the operation of its business and, accordingly, does not anticipate paying any cash dividends on its Common Stock in the reasonably foreseeable future. Furthermore, the terms of the Company's outstanding Series A Preferred Stock do not allow for the payment of cash dividends on the Common Stock unless and until all accrued and unpaid dividends on the Series A Preferred Stock shall have been paid or set apart for payment. See "Description of Securities."

INDEMNIFICATION OF OFFICERS AND DIRECTORS.

The Company's Certificate of Incorporation includes certain provisions permitted pursuant to the Delaware General Corporation Law ("DGCL") whereby officers and Directors of the Company are to be indemnified against

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certain liabilities. The Company's Certificate of Incorporation also limits, to the fullest extent permitted by DGCL, 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. The DGCL 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, an insurance policy, which provides for coverage for certain liabilities of its officers and Directors has been issued to the Company.

POSSIBLE RESTRICTION ON "MARKET MAKING" ACTIVITIES IN THE COMPANY'S SECURITIES; ILLIQUIDITY.

Bruce Meyers and Peter Janssen beneficially own approximately 14.4% and 9.0%, respectively, of the outstanding shares of Common Stock prior to exercise of the Warrants being registered hereby, which represents approximately 13.5% and 8.4%, respectively, of the total outstanding voting securities of the Company. JMA is a limited partnership of which Messrs. Meyers and Janssen are the principals of the corporate general partner. If JMA or its affiliates are deemed to have control of the Company, regulatory requirements of the Commission, Nasdaq and the New York Stock Exchange, Inc. could prevent JMA from engaging in market-making activities relating to the Company's securities. If JMA is unable to make a market in the Company's securities because it is deemed to have effective voting control of the Company or if, for any other reason, it chooses not to or is unable to make a market in the Company's securities, there can be no assurance that any other broker-dealers would make a market in the Company's securities. Without market-makers, it would be very difficult for holders of the Company's securities to sell their securities in the secondary market and the market prices for such securities would be adversely affected. Moreover, there can be no assurance that an active trading market for the Company's securities will develop or be maintained whether or not JMA makes a market in the Company's securities. In the absence of such a market, investors may be unable to liquidate their investment in the Company. See "-Absence of Public Market; Possible Volatility of Common Stock and Warrant Prices."

POSSIBLE DELISTING OF SECURITIES FROM THE NASDAQ STOCK MARKET.

The Company's Common Stock, Class C Warrants and Class D Warrants are currently quoted on the Nasdaq-SCM under the symbols "CYPH," "CYPHW" and "CYPHZ," respectively. However, there can be no assurance that the Company will continue to meet the criteria for continued listing of securities on the Nasdaq-SCM. For continued inclusion on the Nasdaq-SCM, an issue shall maintain (i) either (A) net tangible assets of \$2 million, (B) market capitalization of \$35 million or (C) net income of \$500,000 in the most recently completed fiscal year or in two of the last three most recently completed fiscal years, (ii) a minimum bid price per share of \$1.00, (iii) in the case of a convertible debt security, a principal amount outstanding of at least \$5 million, (iv) in the case of common stock, at least 300 round lot holders and (v) 500,000 publicly held shares having a market value of at least \$1 million. If the Company becomes unable to meet the continued listing criteria of the Nasdaq-SCM because of continued operating losses or otherwise, and became delisted therefrom, trading, if any, in the Common Stock and the Warrants would thereafter be conducted in the over-the-counter market in the so-called "pink sheets" or, if available, the NASD's "Electronic Bulletin Board." As a result, an investor may find it more difficult to dispose of, or to obtain accurate quotations as to the value of, the Company's securities.

RISK OF LOW-PRICED STOCKS; "PENNY STOCK" REGULATIONS.

If the Company's securities are delisted from the Nasdaq-SCM, they may become subject to Rule 15g-9 promulgated under the Exchange Act, which imposes additional sales practice requirements on broker-dealers that sell such securities except in transactions exempted by such Rule, including transactions meeting the requirements of Rules 505 or 506 under Regulation D promulgated under the Securities Act, and transactions in which the purchaser is an institutional accredited investor (as defined in the Securities Act) or an established customer (as defined in the Securities Act) of the broker-dealer. For transactions covered by this Rule, a broker-dealer must make a special suitability

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determination for the purchaser and have received the purchaser's written consent to the transaction prior to sale. Consequently, the Rule may affect the ability and/or willingness of broker-dealers to sell the Company's securities and may consequently affect the ability of purchasers in this Offering to sell any of the securities acquired in the Offering in the secondary market.

The Commission has also adopted regulations which define a "penny stock" to be any equity security that has a market price (as therein defined) of less than \$5.00 per share or with an exercise price of less than \$5.00 per share, subject to certain exceptions. Unless exempt, the rules require the delivery, prior to any transaction in a penny stock, of a disclosure schedule prepared by the Commission relating to the penny stock market. Disclosure also has to be made about commissions payable to both the broker-dealer and the registered representative and current quotations for the securities. Finally, monthly statements have to be sent disclosing recent price information for the penny stock held in the account and information on the limited market in penny stocks. The foregoing penny stock restrictions will not apply to the Company's securities if such securities retain their listing on the Nasdaq-SCM and have certain price and volume information provided on a current and continuing basis or meet certain minimum net tangible assets or average revenue criteria. There can be no assurance, however, that the Company's securities will continue their current qualification for exemption from these restrictions. In any event, even if the Company were exempt from such restrictions, it would remain subject to Section 15(b)(6) of the Exchange Act, which gives the Commission the authority to prohibit any person that is engaged in unlawful conduct while participating in a distribution of penny stock from associating with a broker-dealer or participating in a distribution of penny stock, if the Commission finds that such a restriction would be in the public interest. If the Company's securities were subject to the rules on penny stocks, the prices of and market liquidity for the Company's securities could be severely adversely affected.

SHARES ELIGIBLE FOR FUTURE SALE; REGISTRATION RIGHTS; POTENTIAL DILUTIVE EFFECT OF OUTSTANDING SECURITIES AND POSSIBLE NEGATIVE IMPACT ON FUTURE FINANCINGS.

Certain of the Company's outstanding securities are, and will be, "restricted securities" as that term is defined in Rule 144 promulgated under the Securities Act and may, under certain circumstances, be sold without registration pursuant to Rule 144. A substantial portion of the outstanding shares of Common Stock are and will be eligible for sale under Rule 144 at varying periods.

The holders of the IPO Unit Purchase Option have certain demand registration rights with respect to the shares of Common Stock issuable upon the exercise of such option, which would permit resale of the securities acquired upon exercise thereof commencing November 2, 1998. Holders of (i) 2,000,000 shares of Common Stock outstanding, (ii) options to purchase 200,000 shares of Common Stock, (iii) 764,003 shares of Series A Preferred Stock convertible into an equal number of shares of Common Stock and (iv) options to purchase 100,000 shares of Series A Preferred Stock convertible into an equal number of shares of Common Stock (the Common Stock referred to in (i) through (iv) above collectively, the "Registrable Securities") are entitled to demand and "piggy-back" registration rights with respect to such Registrable Securities through November 7, 2000. The holders of more than 50% of the Registrable Securities may request that the Company file a registration statement under the Securities Act, and, subject to certain conditions, the Company generally will be required to use its best efforts to effect any such registration. In addition, if the Company proposes to register any of its securities, either for its own account or for the account of other stockholders, the Company is

required, with certain exceptions, to notify the holders described above and, subject to certain limitations, to include in the first two such registration statements filed after December 7, 1996 and before November 7, 2000, all of the shares of the Registrable Securities requested to be included by such holders. In addition, the Company has (i) registered the Warrants and the 520,588 shares of Common Stock issuable upon the exercise of such warrants; (ii) registered 150,000 shares of Common Stock issuable upon exercise of Warrants issued to Blair for services rendered to the Company as placement agent for the Company's private placement completed in 1992; (iii) registered 1,190,000 shares of Common Stock issuable upon exercise of options authorized for grant under the 1992 Plan and 1996 Plan; (iv) agreed to file a registration statement to register the 671,035 shares of Common Stock issued in connection with the 1998 Private Placement and the 335,550 shares of Common Stock issuable upon exercise of the Private Placement Warrants by October 23, 1998; (v) granted certain "piggy-back" registration rights to the holders of 20,000 shares of Common Stock issued by the Company in connection with the formation of the joint venture with Pestka Biomedical Laboratories, Inc.;

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and (vi) granted certain "piggy-back" registration rights to the holders of options and warrants to acquire an aggregate of 245,000 shares of Common Stock granted and issued in connection with financial advisory and public relations services rendered to the Company and pursuant to a license agreement. The exercise of one or more of these registration rights may involve substantial expense to the Company and may adversely affect the terms upon which the Company may obtain additional financing. See "Description of Securities" and "Bridge Financings."

Additionally, any shares of Common Stock purchased upon exercise of the Class C and Class D Warrants or the IPO Unit Purchase Option may be tradeable without restriction, provided that the Company satisfies certain securities registration and qualification requirements. The sale, or availability for sale, of substantial amounts of Common Stock and/or Warrants in the public market pursuant to Rule 144 or otherwise could adversely affect the market price of the Common Stock and the Company's other securities and could impair the Company's ability to raise additional capital through the sale of its equity securities or debt financing. Also, to the extent that the IPO Unit Purchase Option, any options granted under the 1992 Plan, the 1996 Plan, the Warrants, or any other rights, warrants and options are exercised, the ownership interest of the Company's stockholders will be diluted correspondingly. If, and to the extent, that the Company in the future reduces the exercise price(s) of outstanding warrants and/or options, the Company's stockholders could experience additional dilution. See "Description of Securities" and "Bridge Financings."

ARBITRARY DETERMINATION OF OFFERING PRICE.

The exercise prices and other terms of the Warrants have been determined by negotiation between the Company and Blair and JMA and do not necessarily bear any relationship to the Company's assets, book value or financial condition, or to any other recognized criterion of value. It should be noted that JMA, of which Messrs. Bruce Meyers and Peter Janssen are principals, beneficially owns 21.4% of the Company's Common Stock, which represents 20.0% of all of the outstanding voting securities as of September 29, 1998.

ABSENCE OF PUBLIC MARKET; POSSIBLE VOLATILITY OF COMMON STOCK AND WARRANT PRICES.

The Company's Common Stock, Class C Warrants and Class D Warrants are currently listed on the Nasdaq-SCM. There can be no assurances, however, that an active market for such securities of the Company will be sustained. The market prices for securities of emerging health care companies have been highly volatile. Announcements of biological or medical discoveries or technological innovations by the Company or its competitors, developments concerning proprietary rights, including patents and litigation matters, regulatory developments in both the United States and foreign countries, public concern as to the safety of new technologies, general market conditions, quarterly fluctuations in the Company's revenues and financial results and other factors may have a significant impact on the market price of the Company's securities.

POTENTIAL ANTI-TAKEOVER EFFECTS.

The Company is governed by the provisions of Section 203 of the DGCL, an

anti-takeover law enacted in 1988. In general, the law prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. "Business combination" is defined to include mergers, asset sales and certain other transactions resulting in a financial benefit to the stockholders. An "interested stockholder" is defined as a person who, together with affiliates and associates, owns (or, within the prior three years, did own) 15% or more of a corporation's voting stock. As a result of the application of Section 203, potential acquirors of the Company may be discouraged from attempting to effect an acquisition transaction with the Company, thereby possibly depriving holders of the Company's securities of certain opportunities to sell or otherwise dispose of such securities at above-market prices pursuant to such transaction. In addition, certain provisions contained in each of the employment agreements with each of Dr. Arthur P. Bollon, Chairman, President and Chief Executive Officer of the Company, and Mr. Daniel Shusterman, Vice President of Operations, Treasurer and Chief

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Financial Officer of the Company, obligate the Company to make certain salary payments if their respective employment is terminated without just cause or due to a Disability (as defined therein). See "Description of Securities."

POSSIBLE ADVERSE AND ANTI-TAKEOVER EFFECTS OF AUTHORIZATION OF PREFERRED STOCK.

The Company's Certificate of Incorporation authorizes the issuance of a maximum of 10,000,000 shares of preferred stock on terms which may be determined by the Company's Board of Directors without further stockholder action. Of these 10,000,000 shares, 4,000,000 shares have been designated Series A Preferred Stock. The terms of the Series A Preferred Stock include dividend and liquidation preferences and conversion rights which could adversely affect the rights of holders of the Common Stock being offered hereby. In addition, each share of Series A Preferred Stock is entitled to one vote on all matters on which the Common Stock has the right to vote. Holders of Series A Preferred Stock are also entitled to vote as a separate class on any proposed adverse change in the rights, preferences or privileges of the Series A Preferred Stock and any increase in the number of authorized shares of Series A Preferred Stock. Further, the terms of any additional series of preferred stock, which may also include priority claims to assets and dividends, as well as special voting rights, could adversely affect the rights of holders of the Common Stock being offered hereby. Other than 1,663,143 shares of Series A Preferred Stock, of which 899,140 has been converted into Common Stock as of September 29, 1998, no preferred stock has been issued to date and the Company has no current plans to issue additional preferred stock other than in payment of in-kind dividends. The issuance of such preferred stock could make the possible takeover of the Company or the removal of management of the Company more difficult, discourage hostile bids for control of the Company in which stockholders may receive premiums for their shares of Common Stock, otherwise dilute or subordinate the rights of holders of Common Stock and adversely affect the market price of the Common Stock. See "Description of Securities."

CURRENT PROSPECTUS AND STATE REGISTRATION REQUIRED TO EXERCISE WARRANTS.

The Warrants will be exercisable only if a current prospectus relating to the securities underlying the Warrants is then in effect under the Securities Act and such securities are qualified for sale or exempt from qualification under the applicable securities or "blue sky" laws of the states in which the various holders of the Warrants then reside. There can be no assurance that the Company will be able to do so. The value of the Warrants may be greatly reduced if a current prospectus covering the securities issuable upon the exercise of the Warrants is not kept effective or if such securities are not qualified or exempt from qualification in the states in which the holders of the Warrants then reside. See "Description of Securities."

DETERMINATION OF OFFERING PRICE

The exercise prices and other terms of the Warrants have been determined by negotiation between the Company, Blair and JMA and do not necessarily bear any relationship to the Company's assets, book value or financial condition, or to any other recognized criterion of value. It should be noted that Messrs. Meyers and Janssen, who are the principals of JMA, collectively own 21.4% of the

Company's Common Stock and 20.0% of the Company's securities.

USE OF PROCEEDS

Holders of Warrants are not obligated to exercise their Warrants and there can be no assurance that such holders will choose to exercise all or any of their Warrants. Furthermore, the Company is unable to predict the timing, if ever, of the exercise of any of the above securities, although they are likely to be exercised at such time as the market price of the Common Stock is substantially above the exercise price of the Warrants. In the event that all of the 312,500 outstanding Class A Warrants, the 482,720 Class B Warrants and the 506,250 Blair Warrants are exercised, the net proceeds to the Company would be approximately \$2,030,647 after deducting the expenses of the offering and assuming payment of the Solicitation Fee. The net proceeds received upon the exercise of the Warrants will be used for research

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and development and general corporate purposes. The foregoing represents the Company's best estimate of the use of the net proceeds received upon exercise of the Warrants based upon the current status of its business operations, its current plans and current economic conditions. Future events, including the problems, delays, expenses and complications frequently encountered by early stage companies as well as changes in competitive conditions affecting the Company's business and the success or lack thereof of the Company's marketing efforts, may make shifts in the use of funds necessary or desirable.

Prior to expenditure, the net proceeds will be invested in high-liquidity, United States government and corporate obligations, interest-bearing money market funds and other financial instruments.

SELLING SECURITYHOLDERS

An aggregate of up to 312,500 Class A Warrants, 482,720 Class B Warrants, 506,250 Blair Warrants and an aggregate of 520,588 shares of Common Stock issuable upon exercise of the Warrants may be offered by certain securityholders who received their Warrants in connection with the 1994 Bridge Financing and the 1995 Bridge Financing or by their transferees.

Blair is a Selling Security Holder that beneficially owns all 506,250 Blair Warrants and the Common Stock underlying such warrants. The Company is registering all 506,250 Blair Warrants for resale to the public. The following table sets forth certain information with respect to each Selling Security Holder for whom the Company is registering the Class A and Class B Warrants and the Common Stock underlying such warrants for resale to the public. The Company will not receive any of the proceeds from the sale of the Warrants, however, it will receive proceeds from the exercise, if any, of any such Warrants less a 5% Solicitation Fee payable to JMA in certain instances. Except as described below, there are no material relationships between any of the Selling Securityholders and the Company, nor have any such material relationships existed within the past three years.

<TABLE>

<CAPTION>

| SELLING SECURITYHOLDER ----- | NUMBER OF CLASS A WARRANTS BENEFICIALLY OWNED (1) | | NUMBER OF CLASS B WARRANTS BENEFICIALLY OWNED (2) | |
|---|--|--|--|--------|
| | <C> | | <C> | |
| <S> | <C> | | <C> | |
| Lea & Uriel Adar..... | --- | | 25,000 | |
| Argonaut Partnership L.P..... | --- | | 15,094 | |
| Tom & Noreen Axon..... | --- | | 25,000 | |
| Clifford Barr..... | 12,500 | | --- | |
| Anthony Bartone..... | 25,000 | | --- | |
| Robert Bauers..... | --- | | 12,500 | |
| Bear Stearns Sec. Corp. Custodian Marc Friedland IRA... | --- | | --- | 25,000 |
| Andrew Bressman..... | 25,000 | | --- | |
| David F. Burr..... | --- | | 25,000 | |
| Robert V. Call, Jr..... | 12,500 | | 25,000 | |
| Horace J. Caulkins..... | 6,250 | | --- | |
| CLFS, Ltd..... | --- | | 12,500 | |
| Douglas M. Colbert..... | 12,500 | | 6,250 | |
| Howard Commander..... | --- | | 12,500 | |
| Richard H. Davimos | | | | |

| | | |
|---|--------|--------|
| TTEE FBO Richard H. Davimos Trust..... | 25,000 | -- |
| Delaware Charter Guarantee & Trust Co. | | |
| F/B/O Beverly Levy IRA..... | --- | 3,970 |
| Kenneth Eitman IRA Rollover..... | --- | 25,000 |
| Gerstenhaber Investments c/o David Gustenhaber..... | --- | 9,906 |
| Richard J. Haughwout..... | --- | 12,500 |

</TABLE>

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<TABLE>

<CAPTION>

| SELLING SECURITYHOLDER ----- | NUMBER OF CLASS A OWNED (1) | NUMBER OF CLASS B WARRANTS BENEFICIALLY OWNED (2) |
|---|--------------------------------|--|
| | <C> | <C> |
| <S> | | |
| Ginger Huggins..... | --- | 6,250 |
| Barry J. Jacobson c/o Joseph P. Day Realty..... | -- | 18,750 |
| Barry J. Jacobson..... | --- | 50,000 |
| Gary Kaplowitz..... | --- | 12,500 |
| Kinder Investments L.P. | 100,000 | -- |
| Herbert Lerman..... | 12,500 | --- |
| Momentum Enterprises Inc. Money Purchase Trust..... | | 12,500 |
| Todd J. Mueller..... | --- | 12,500 |
| James B. Murphy..... | --- | 12,500 |
| Denis J. Nayden..... | 25,000 | 50,000 |
| Omnitek, Inc..... | 12,500 | --- |
| Charles Potter..... | 12,500 | --- |
| James Rhodes..... | --- | 10,000 |
| Michael McNulty Rosner..... | --- | 12,500 |
| Allan Rothstein..... | --- | 25,000 |
| Barry A. Schatz..... | --- | 25,000 |
| Mark Shnitkin..... | 6,250 | --- |
| Software Marketing Corporation..... | --- | 12,500 |
| Kathleen and Forrest Vander Vliet..... | 12,500 | --- |
| TOTAL..... | 312,500 | 482,720 |

</TABLE>

- (1) Does not include an aggregate of 125,000 shares of Common Stock issuable upon exercise of the Class A Warrants.
- (2) Does not include an aggregate of 193,088 shares of Common Stock issuable upon exercise of the Class B Warrants.

DESCRIPTION OF SECURITIES

CLASS A WARRANTS, CLASS B WARRANTS AND BLAIR WARRANTS

There are currently outstanding Warrants to purchase an aggregate of 520,588 shares of Common Stock. Each warrant entitles the holder to purchase .04 of a share of Common Stock. The Warrants consist of 312,500 Class A Warrants to purchase 125,000 shares of Common Stock, 482,720 Class B Warrants to purchase 193,088 shares of Common Stock and 506,250 Blair Warrants to purchase 202,500 shares of Common Stock. The Class A Warrants are exercisable at \$3.75 per share of Common Stock. The Class B Warrants are exercisable at \$4.375 per share of Common Stock. The Blair Warrants are exercisable at an exercise price of \$3.75 per share of Common Stock. The Warrants are all currently exercisable and expire on November 7, 2000. The Warrants contain provisions that protect holders thereof from dilution by adjustment of the exercise price and rate in the event of a merger, acquisition, recapitalization or split-up of shares of the Company, the issuance by the Company of a stock dividend, sales of stock below current market price and other unusual events. The Blair Warrants were granted as part of Blair's compensation for services as placement agent in the Company's 1994 Bridge Financing and in connection with the waiver of certain rights. See "Bridge Financings."

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GENERAL. The Warrants may be exercised upon surrender of the certificate therefor on or prior to the expiration or redemption date (as explained above) at the offices of the Company with the form of "Election to Purchase" on the reverse side of the certificate filled out and executed as indicated,

accompanied by payment (in the form of a certified or cashier's check payable to the order of the Company) of the full exercise price for the number of Warrants being exercised.

The Warrants contain provisions that protect the holders thereof against dilution by adjustment of the exercise price and rate in certain events, such as stock dividends, stock splits or combinations, mergers, sales of all or substantially all of the Company's assets at less than market value, sales of stock at below market price and other unusual events.

BRIDGE FINANCINGS

In order to fund its continuing operations, the Company completed two Bridge Financings, one in August 1994 (the "1994 Bridge Financing") and one in April 1995 (the "1995 Bridge Financing"). In connection with the 1994 Bridge Financing, the Company issued (i) an aggregate of \$1,000,000 in principal amount of 9% Subordinated Notes ("1994 Notes") and (ii) an aggregate of 500,000 bridge warrants ("Class A Warrants") to purchase an aggregate of 200,000 shares of the Company's Common Stock exercisable at \$3.75, which Class A Warrants are exercisable until November 2, 2000. In connection with the 1995 Bridge Financing, the Company issued (i) an aggregate of \$2,037,500 in principal amount of 9% Subordinated Notes ("1995 Notes") and (ii) an aggregate of 1,018,750 bridge warrants ("Class B Warrants") to purchase an aggregate of 407,500 shares of the Company's Common Stock exercisable at \$4.375, which Class B Warrants are exercisable until November 2, 2000. The Company repaid the 1994 Notes and 1995 Notes in 1995, including \$400,000 of the Notes which were past due, from the net proceeds of the Company's initial public offering completed in November 1995 (the "IPO"). In addition, the Company issued the Blair Warrants to the placement agent of the 1994 Bridge Financing, as described below. The outstanding Class A Warrants, Class B Warrants and underlying shares of Common Stock are being registered under the Securities Act of 1933, as amended (the "Securities Act"), in a registration statement of which this Prospectus is a part.

In connection with the 1994 Bridge Financing, Blair acted as placement agent. In consideration of these services, the Company paid to Blair a fee equal to \$120,000, a non-accountable expense allowance of \$10,000 and an option to acquire warrants to purchase up to an aggregate of 66,667 shares of the Company's Common Stock at an exercise price of \$3.75 per share (the "Blair Placement Agent Warrants"). In addition, in connection with the 1994 Bridge Financing, the Company executed a merger and acquisition agreement ("M/A Agreement") with Blair and granted Blair a right of first refusal with respect to offerings of securities of the Company. In anticipation of the 1995 Bridge Financing, all such rights of Blair with respect to the M/A Agreement and right of first refusal were canceled in consideration of the payment by the Company to Blair of \$50,000. In addition, pursuant to a consulting agreement with the Company, Blair rendered investment banking advice and assistance in structuring the 1995 Bridge Financing. In consideration of these services, the Company granted Blair an option to acquire warrants equaling 33 1/3% of all warrants issued in connection with the 1995 Bridge Financing. Such warrants to purchase an aggregate of 135,833 shares of Common Stock provide for an exercise price of \$3.75 per share (together with the Blair Placement Agent Warrants, the "Blair Warrants"). The holders of these warrants issued to the placement agent of the 1994 Bridge Financing have certain demand and "piggy-back" registration rights. The Blair Warrants and underlying shares of Common Stock are being registered under the Securities Act in a registration statement of which this Prospectus is a part. See "Risk Factors--Arbitrary Determination of Offering Price."

JMA acted as placement agent for the 1995 Bridge Financing and in consideration thereof received a fee of \$203,750 plus a non-accountable expense allowance of \$61,125. In addition, JMA was granted, in connection with its services as Placement Agent for the 1995 Bridge Financing, a (i) 5% Solicitation Fee for the Class B Warrants, (ii) five-year right of first refusal to act as agent for offerings of securities by the Company and certain of its shareholders and (iii) merger and acquisition agreement. See "Possible Restriction on 'Market Making,' Activities in the Company's Securities; Illiquidity--Arbitrary Determination of Offering Price" and "Plan of Distribution."

Notes and Warrants were approximately \$2,500,000. The Company used the proceeds from the 1994 Bridge Financing to fund its operations (including paying for research and development activities, operating expenses and accrued liabilities, and for officers compensation) and a portion of the expenses of the 1994 Bridge Financing and the 1995 Bridge Financing.

PLAN OF DISTRIBUTION

The securities offered hereby are being offered directly by the Company pursuant to the terms of the Warrants. No underwriter is being utilized in connection with this offering.

In connection with the 1995 Bridge Financing, the Company has agreed to pay JMA a fee (the "Solicitation Fee") equal to 5% of the aggregate exercise price of all Class B Warrants exercised after November 2, 1996, if (i) the market price of the Common Stock on the date that the Class B Warrants are exercised is greater than the Class B Warrant exercise price; (ii) the exercise of the Class B Warrants was solicited by JMA or its representative or agent and the warrant holder designates in writing that the exercise was solicited thereby; (iii) the Class B Warrants are not held in a discretionary account; (iv) disclosure of this compensation arrangement is made by JMA at the time of the exercise of the Class B Warrants; and (v) the solicitation of the exercise of the Class B Warrants was not in violation of Rule 10b-6 promulgated under the Exchange Act. JMA will generally be prohibited, pursuant to Rule 10b-6, from engaging in market-making activities with regard to the Company's securities for a period specified by Rule 10b-6 promulgated under the Exchange Act prior to any solicitation of the exercise of Warrants until the termination of such solicitation. Accordingly, JMA may be unable to provide a market for the Company's securities during certain periods while the Class B Warrants are exercisable. See "Bridge Financings."

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for the Company by Morrison Cohen Singer & Weinstein, LLP, New York, New York, a partner of which holds options to acquire shares of Common Stock. Certain legal matters with respect to information contained in this Prospectus under the headings "Risk Factors--Royalty Obligations; Possible Loss of Patents and Other Proprietary Rights; and --Uncertain Ability to Protect Proprietary Technology" will be passed upon for the Company by Gardere & Wynne, LLP, Dallas, Texas.

EXPERTS

The balance sheet as at December 31, 1997 and the statements of operations, changes in stockholders' equity (capital deficiency) and cash flows for each of the years in the two-year period ended December 31, 1997 and for the period from inception (September 11, 1991) through December 31, 1997 included in the Annual Report on Form 10-KSB which is incorporated by reference in this Prospectus have been audited by, and are incorporated by reference herein in reliance upon the report of Richard A. Eisner & Company, LLP, independent auditors, given on the authority of that firm as experts in accounting and auditing.

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NO DEALER, SALESPERSON OR ANY OTHER INDIVIDUAL HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS NOT CONTAINED IN THIS PROSPECTUS AND, IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY OR THE SELLING SECURITYHOLDERS. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL, OR A SOLICITATION TO BUY, ANY SECURITY BY ANY PERSON IN ANY JURISDICTION WHICH SUCH OFFER OR SOLICITATION IS UNLAWFUL. NEITHER THE DELIVERY OF THIS PROSPECTUS NOR ANY SALE MADE HEREUNDER SHALL, UNDER ANY CIRCUMSTANCES IMPLY THAT THE INFORMATION IN THIS PROSPECTUS IS CORRECT AS OF ANY TIME SUBSEQUENT TO THE DATE OF THIS PROSPECTUS.

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CYTOCLONAL PHARMACEUTICS INC.

Consisting of
312,500 Class A Warrants
482,720 Class B Warrants
506,250 Warrants
520,588 Shares of Common Stock

PROSPECTUS

September ____,1998

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The estimated expenses payable by the Registrant in connection with the issuance and distribution of the securities being registered are as follows:

<TABLE>

<CAPTION>

| | AMOUNT |
|-----------------------------------|----------|
| | ----- |
| <S> | <C> |
| Printing Expenses..... | \$ 5,000 |
| Accounting Fees and Expenses..... | 10,000 |
| Legal Fees and Expenses..... | 50,000 |
| Miscellaneous Expenses..... | 2,000 |
| Total..... | \$67,000 |

</TABLE>

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Certificate of Incorporation and By-Laws of the Registrant provides that the Company shall indemnify any person to the full extent permitted by the Delaware General Corporation Law (the "GCL"). Section 145 of the GCL, relating to indemnification, is hereby incorporated herein by reference.

Insofar as indemnification for liabilities under the Securities Act may be permitted to Directors, officers or controlling persons of the Company pursuant to the Company's By-laws and the Delaware General Corporation Law, the Company has been informed that in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

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 Restated 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.

In accordance with Section 102(a)(7) of the GCL, the Certificate of Incorporation of the Registrant eliminates the personal liability of directors to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director with certain limited exceptions set forth in Section 102(a)(7).

ITEM 16. EXHIBITS

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- 1.1 Amended Form of Underwriting Agreement between Registrant and the Underwriters (1)
- 1.2 Agreement Among Underwriters (1)
- 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 Registrant, the Underwriters and Warrant Agent (1)
- 4.3 Form of Unit Purchase Option (1)
- 4.4 Warrant Certificate issued to The Washington State University Research Foundation (1)
- 5.1 Opinion of Morrison Cohen Singer & Weinstein, LLP
- 5.2 Opinion of Gardere & Wynne, LLP
- 10.1 Form of Consulting Agreement between the Registrant and JMA (1)
- 10.2 Employment Agreement dated March 1, 1992 between the Registrant and Arthur P. Bollon, Ph.D. (1)
- 10.3 Employment Agreement dated March 1, 1992 between the Registrant and Bruce Meyers, as amended (1)
- 10.4 Employment Agreement effective November 2, 1995 between the Registrant and Daniel Shusterman (1)
- 10.5 1992 Stock Option Plan, as amended (1)
- 10.6 Form of Stock Option Agreement (1)
- 10.7 Lease Agreement dated August 22, 1997 between the Registrant and Andrews-Dillingham Properties (8)
- 10.8 Lease Agreement dated October 1, 1991 between the Registrant and J.K. and Susie Wadley Research Institute and Blood Bank, as amended (1)
- 10.9 Purchase Agreement dated October 10, 1991 between the Registrant and Wadley Technologies, Inc. ("Wadley") (1)
- 10.10 Security Agreement dated October 10, 1991 between the Registrant and Wadley (1)
- 10.11 License Agreement dated March 15, 1989 between the Registrant and Phillips Petroleum Company, as amended (1)
- 10.12 License Agreement dated June 10, 1993 between Registrant and Research & Development Institute, Inc. ("RDI"), as amended, relating to the Fungal Paclitaxel Production System (1)
- 10.13 Amendment, dated May 27, 1998, to that certain License Agreement, dated June 10, 1993, between the RDI, and the Company (6)*
- 10.14 Research and Development Agreement effective June 10, 1993 between Registrant and RDI, as amended (1)
- 10.15 License Agreement dated February 22, 1995 between Registrant and RDI, as amended, relating to FTS-2 (1)
- 10.16 Research, Development and License Agreement dated March 26, 1992 between Registrant and Enzon, Inc. ("Enzon"), as amended (1)

- 10.17 Research, Development and License Agreement dated July 13, 1992 between Registrant and Enzon relating to the Registrant's tumor necrosis factor technology (1)
- 10.18 Agreement effective June 30, 1992 between Registrant and University of Texas at Dallas ("UTD"), as amended (1)
- 10.19 Research Agreement effective April 8, 1994 between Registrant and Sloan-Kettering Institute for Cancer Research (1)
- 10.20 Joint Venture Agreement dated September 17, 1992 between Registrant and Pestka Biomedical Laboratories, Inc. ("Pestka") (1)
- 10.21 Stock Purchase Agreement dated September 17, 1992 between Registrant and Pestka (1)
- 10.22 License Agreement dated September 17, 1992 between Cytomune, Inc. and Pestka (1)
- 10.23 Research and Development Agreement dated September 17, 1992 between Cytomune, Inc. and Pestka (1)

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- 10.24 Marketing Agreement dated as of November 1, 1994 between Helm AG and the Registrant (1)
- 10.25 Extension Agreement with RDI dated June 5, 1995 (1)
- 10.26 Third Amendment to Lease Agreement dated April 30, 1995 (1)
- 10.27 Form of Subordinated Note Extension (1)
- 10.28 Form of Note Extension (1)
- 10.29 September 25, 1995 RDI Extension (1)
- 10.30 October 25, 1995 RDI Extension (1)
- 10.31 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 (1)
- 10.32 License Agreement No. W960206 effective February 27, 1996 between the Company and The Regents of the University of California (2)
- 10.33 License Agreement No. W960207 effective February 27, 1996 between the Company and The Regents of the University of California (2)
- 10.34 Amended and Restated License Agreement between the Washington State University Research Foundation and the Company, dated June 3, 1998 (6)*
- 10.35 Amendment to Agreement, effective June 30, 1992, as amended, between Registrant and the University of Texas at Dallas (3)
- 10.36 1996 Stock Option Plan (4)
- 10.37 Patent License Agreement between the Registrant and The University of
- 10.39 Texas System (1) Master License Agreement, dated as of June 12, 1998, between the Company and Bristol-Myers Squibb Company, Inc. (6)*
- 10.40 Sublicense Agreement, dated May 27, 1998, between the Company and Bristol-Myers Squibb Company, Inc. under the Research & Development Institute, Inc. License Agreement, as amended, dated June 10, 1993 (6)*
- 10.41 Sublicense Agreement, dated May 19, 1998, between the Company and Bristol-Myers Squibb Company, Inc. under the Washington State University Research Foundation License Agreement, dated July 8, 1996 (6)*
- 10.42 Exclusive License Agreement between The Regents of the University of California and the Company for Peptide Antiestrogen for Breast Cancer Therapy Case No. LA97-103*
- 11.1 Statement re: Computation of per share earnings (5)
- 24.1 Consent of Morrison Cohen Singer & Weinstein, LLP (included in its opinion filed as Exhibit 5.1 hereto)
- 24.3 Consent of Richard A. Eisner & Company, LLP

 * Confidential Portions omitted and filed separately with the Commission pursuant to Rule 24b-2 promulgated under the Securities Act.

- (1) Filed as an exhibit to the Company's Registration Statement on Form SB-2 (File No. 33-91802) and is incorporated by reference herein.
- (2) Filed as an exhibit to the Company's Annual Report on Form 10-KSB for the fiscal year ended December 31, 1995 and is incorporated by reference herein.
- (3) Filed as an exhibit to the Company's Post-Effective Amendment No.1 to its Registration Statement on Form SB-2 (File No. 33-91802) and is incorporated by reference herein.
- (4) Filed as an exhibit to the Company's Registration Statement on Form S-8 (File No. 333-11691) and is incorporated by reference herein.
- (5) Filed as an exhibit to the Company's Annual Report on Form 10-KSB for the fiscal year ended December 31, 1996 and is incorporated by reference herein.

- (6) Filed as an exhibit to the Company's Current Events on Form 8-K (File No. 000-26078) and is incorporated by reference herein.
- (7) Filed as an exhibit to the Company' Post Effective Amendment No. 1 to Registration Statement on Form SB-2 (File No. 333-13409) and is incorporated by reference herein.

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ITEM 17. UNDERTAKINGS

RULE 415 OFFERING--UNDERTAKINGS REQUIRED BY REGULATION S-B, ITEM 512(a).

The undersigned registrant hereby undertakes:

- (1) file, during any period in which it offers or sells securities, a post-effective amendment to this registration statement to:
 - (i) Include any prospectus required by Section 10(a)(3) of the Securities Act of 1933.
- (2) That, for determining liability under the Securities Act of 1933, each post-effective amendment shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be an initial BONA FIDE offering.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 133, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunder duly authorized, in the city of Dallas, state of Texas, on September 30, 1998.

CYTOCLONAL PHARMACEUTICS INC.

By: Arthur P. Bollon

 Arthur P. Bollon, Ph.D.,
 CHAIRMAN, PRESIDENT AND CHIEF EXECUTIVE
 OFFICER

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

<TABLE>

<CAPTION>

| SIGNATURE | TITLE | DATE |
|-----------|-------|------|
| ----- | ---- | ---- |
| <S> | <C> | <C> |

| | | |
|-------------------------|--|--------------------|
| Arthur P. Bollon | Chairman, President, Chief Executive Officer and Director | |
| Arthur P. Bollon, Ph.D. | (principal executive officer) | September 30, 1998 |

| | | | |
|--|---|--|--------------------|
| | Vice President Operations, Daniel Shusterman | Treasurer and Chief Financial Officer (principal financial and accounting officer) | |
| | Daniel Shusterman, J.D. | | September 30, 1998 |

| | | |
|----------------|----------|--------------------|
| Ira Gelb | | |
| Ira Gelb, M.D. | Director | September 30, 1998 |

| | | |
|-----------------|----------|--------------------|
| Irwin Gerson | | |
| Irwin C. Gerson | Director | September 30, 1998 |

| | | |
|----------------------------|----------|--------------------|
| Walter Lovenberg | | |
| Walter M. Lovenberg, Ph.D. | Director | September 30, 1998 |

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| 5.2 Opinion of Gardere & Wynne, LLP | | |
| 10.42 Exclusive License Agreement between The Regents of the University of California and the Company for Peptide Antiestrogen for Breast Cancer Therapy Case No. LA97-103* | | |
| 24.3 Consent of Richard A. Eisner & Company, LLP | | |

* Confidential Portions omitted and filed separately with the Commission pursuant to Rule 24b-2 promulgated under the Securities Act.

EXHIBIT 5.1

MORRISON COHEN SINGER & WEINSTEIN, LLP
750 Lexington Avenue
New York, New York 10022

Telephone: (212) 735-8600

Facsimile (212) 735-8708

September 30, 1998

Cytoclonal Pharmaceuticals Inc.
9000 Harry Hines Boulevard
Dallas, Texas 75235

Re: Post Effective Amendment No. 2 to
Registration Statement on Form SB-2
on Registration Statement on Form S-3

Dear Sirs:

We refer to Post-Effective Amendment No. 2 to the Registration Statement on Form SB-2 on Registration Statement on Form S-3 (the "Registration Statement") filed by you, Cytoclonal Pharmaceuticals Inc., a Delaware corporation (the "Company"), pursuant to the Securities Act of 1933, as amended, with the Securities and Exchange Commission thereby registering (i) 312,500 Class A Warrants (the "Class A Warrants") entitling the registered holders thereof to acquire 0.4 share of common stock, \$.01 par value per share (the "Common Stock"), of the Company per Class A Warrant at an exercise price equal to \$3.75 per share of Common Stock, subject to adjustment, until November 7, 2000 (the "Expiration Date"), (ii) 482,720 Class B Warrants (the "Class B Warrants") entitling the registered holders thereof to acquire 0.4 share of Common Stock of the Company per Class B Warrant at an exercise price equal to \$4.375 per share of Common Stock, subject to adjustment, until the Expiration Date, (iii) 506,250 warrants (together with the Class A Warrants and Class B Warrants, the "Warrants") entitling the registered holders thereof to purchase 0.4 share of Common Stock of the Company per warrant at an exercise price equal to \$3.75 per share of Common Stock, subject to adjustment, until the Expiration Date and (iv) 520,588 shares of Common Stock of the Company issuable upon the exercise of the Warrants (the "Warrant Shares").

Cytoclonal Pharmaceuticals Inc.
September 30, 1998
- -Page Two-

We have examined and are familiar with originals, or copies certified or otherwise identified to our satisfaction, of such corporate records of the Company, certificates of officers of the Company and of public officials and such other documents as we have deemed appropriate as a basis for the opinions expressed below.

Based upon the foregoing, we are of the opinion that:

1. The Warrants have been duly and validly authorized and when sold, paid for and issued as contemplated by the Registration Statement will be duly and validly issued and fully paid and nonassessable.
2. The Warrant Shares have been duly and validly authorized and when

sold, paid for, and issued upon exercise of the Warrants in accordance with the terms of the Warrants will be duly and validly issued and fully paid and nonassessable.

We hereby consent to the use of this opinion in the above-mentioned Registration Statement and to the reference to our name under the heading "Legal Matters" in the Prospectus constituting a part of such Registration Statement.

Very truly yours,

/s/ MORRISON COHEN SINGER & WEINSTEIN, LLP
MORRISON COHEN SINGER & WEINSTEIN, LLP

EXHIBIT 5.2

CONSENT OF COUNSEL

The undersigned hereby consents to the use of our name and the statement with respect to us appearing under the heading "Legal Matters" included in this Post-Effective Amendment No. 2 to Form SB-2 on Form S-3.

GARDERE & WYNNE, L.L.P.

| | |
|-----------------|--------------------|
| Daniel F. Perez | September 30, 1998 |
| ----- | ----- |
| Daniel F. Perez | Date |

EXCLUSIVE LICENSE AGREEMENT

BETWEEN

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

AND

CYTOCLONAL PHARMACEUTICALS, INC.

FOR

PEPTIDE ANTIESTROGEN FOR BREAST CANCER THERAPY

CASE NO. LA97-103

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UC Case No. LA97-103

Print date: August 4, 1998

EXCLUSIVE LICENSE AGREEMENT

FOR

CYTOKLONAL PHARMACEUTICS, INC.

This license agreement ("Agreement") is effective this 6th day of August, 1998, by and between The Regents of the University of California ("The Regents"), a California corporation, having its statewide administrative offices at 1111 Franklin Street, 12th Floor, Oakland, California 94607-5200, and Cytoclonal Pharmaceuticals, Inc. ("Licensee"), a corporation, having a principal place of business at 9000 Harry Hines Blvd., Dallas, TX 75235.

RECITALS

Whereas, certain inventions, characterized as "Peptide Antiestrogen for Breast Cancer Therapy" ("Invention") were made at the University of California, Los Angeles by Dr. Richard Pietras and are claimed in Patent Rights defined below;

Whereas, the Licensee entered into a Secrecy Agreement ("Secrecy Agreement"), effective 3-31-98 that allowed the Licensee to evaluate its interest in taking a license to the Invention;

Whereas, the Invention was made under funding provided by UC Breast Cancer Research Program;

Whereas, Dr. Pietras is an employee of the University of California;

Whereas, the Licensee is a "small entity" as defined in 37 CFR Section 1.9 and a "small-business concern" defined in 15 U.S.C. Section 632;

Whereas, both parties recognize that royalties due under this Agreement will be paid on pending patent applications and issued patents;

Whereas, the Licensee requested certain rights from The Regents to commercialize the Invention; and

Whereas, The Regents responded to the request of the Licensee by granting the following rights to the Licensee so that the products and other benefits derived from the Invention can be enjoyed by the general public.

The parties agree as follows:

1. DEFINITIONS.

As used in this Agreement, the following terms will have the meaning set forth below:

1.1 "Patent Rights" means all U.S. patents and patent applications and foreign patents and patent applications assigned to The Regents, and in the case of foreign patents and patent applications those requested under Paragraph 14.4 herein, including any reissues, extensions, substitutions, continuations, divisions, and continuations-in-part applications (only to the extent, however, that claims in the continuations-in-part applications are supported in the specification of the parent patent application) based on and including any subject matter claimed in or covered by U.S. Patent Provisional Application Serial Number [] entitled Peptide Antiestrogen Compositions and Methods for Treating Breast Cancer, filed by The Regents as well as the PCT application [] filed 4-17-98 based upon the U.S. provisional and both of which are assigned to The Regents.

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1.2 "Patent Products" means:

- i any kit, composition of matter, material, or product;
- ii any kit, composition of matter, material, or product to be used in a manner requiring the performance of the Patent Method; or
- iii any kit, composition of matter, material, or product

produced by the Patent Method;

to the extent that the manufacture, use, or sale of such kit, composition of matter, material, or product, in a particular country, would be covered by or infringe, but for the license granted to the Licensee pursuant to this Agreement, an unexpired claim of a patent or pending claim of a patent application were it issued as a claim in a patent under Patent Rights in that country in which such patent has issued or application is pending. This definition of Patent Products also includes a service either used by the Licensee or provided by the Licensee to its customers when such service requires the practice of the Patent Method.

1.3 "Patent Method" means any process or method covered by the claims of a patent application or patent within Patent Rights or the use or practice of which would constitute in a particular country, but for the license granted to the Licensee pursuant to this Agreement, an infringement of an unexpired claim of a patent or pending claim of a patent application were it issued as a claim in a patent within Patent Rights in that country in which the Patent Method is used or practiced.

1.4 "Net Sales" means the gross invoice prices from the sale of Patent Products by the Licensee, an Affiliate, a Joint Venture, or a sublicensee to independent third parties for cash or other forms of consideration in accordance with generally accepted accounting principles limited to the

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following deductions (if not already deducted from the gross invoice price and at rates customary within the industry): (a) allowances (actually paid and limited to rejections, returns, and prompt payment and volume discounts granted to customers of Patent Products, whether in cash or Patent Products in lieu of cash); (b) freight, transport packing, insurance charges associated with transportation; and (c) taxes, tariff, or import/export duties based on sales when included in gross sales, but not value-added taxes or taxes assessed on income derived from such sales. Where the Licensee distributes Patent Products for end use to itself, an Affiliate, a Joint Venture, or a sublicensee, then such distribution will be considered a sale at the price normally charged to independent third parties, and The Regents will be entitled to collect a royalty on such sale in accordance with Article 4 (Royalties).

1.5 "Affiliate(s)" of the Licensee means any entity which, directly or indirectly, controls the Licensee, is controlled by the Licensee, or is under common control with the Licensee ("control" for these purposes being defined as the actual, present capacity to elect a majority of the directors of such affiliate, or if not, the power to direct at least forty percent (40%) of the voting rights entitled to elect directors) provided, however, that in any country where the local law will not permit foreign equity participation of a majority, then an "Affiliate" will include any company in which the Licensee owns or controls, directly or indirectly, the maximum percentage of such outstanding stock or voting rights permitted by local law. Each reference to the Licensee herein will be meant to include its Affiliates.

1.6 "Joint Venture" means any separate entity established pursuant to an agreement between a third party and the Licensee to constitute a vehicle for a joint venture, in which the

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separate entity manufactures, uses, purchases, sells, or acquires Patent Products from the Licensee. Each reference to the Licensee herein will be meant to include its Joint Venture(s).

2. GRANT.

2.1 Subject to the limitations set forth in this Agreement and subject to the licenses granted to the U.S. Government as set forth in the Recitals above, The Regents hereby grants to the Licensee exclusive licenses under Patent Rights to make, use, sell, offer for sale, and import Patent Products and to practice the Patent Method where Patent Rights exist.

2.2 The licenses granted hereunder will be subject to the overriding

obligations to the U.S. Government including those set forth in 35 U.S.C. 200-212 and applicable governmental implementing regulations.

2.3 The manufacture of Patent Products and the practice of the Patent Method will be subject to applicable government importation laws and regulations of a particular country on Patent Products made outside the particular country in which such Patent Products are used or sold.

2.4 The Regents also grants to the Licensee the right to issue sublicenses to third parties to make, use, sell, offer for sale, and import Patent Products and to practice Patent Method where Patent Rights exist, provided the Licensee retains current exclusive rights thereto under this Agreement. To the extent applicable, such sublicenses will include all of the rights of and obligations due to The Regents (and, if applicable, the United States Government) that are contained in this Agreement including payment to The Regents of [] of the issue fee provided for in Article 3 (License Issue Fee) and payment of royalties at the rates provided for in Article 4 (Royalties).

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2.5 The Licensee will notify The Regents of each sublicense granted hereunder and provide The Regents with a copy of each sublicense. The Licensee will collect and pay all fees and royalties due The Regents as set forth in Paragraphs 3.1 and 4.1 below (and guarantee all such payments due) from the sublicensees. The Licensee will require the sublicensees to provide it with progress and royalty reports in accordance with the provisions herein, and the Licensee will collect and deliver to The Regents all such reports due from the sublicensees.

2.6 Upon termination of this Agreement for any reason, The Regents, at its sole discretion, will determine whether any or all sublicenses will be canceled or assigned to The Regents.

2.7 Because this Agreement grants the exclusive right to use or sell the Patent Products in the United States, the Licensee acknowledges that any Patent Products embodying the Invention or produced through the use thereof will be manufactured substantially in the United States.

2.8 Nothing in this Agreement will be deemed to limit the right of The Regents to publish any and all technical data resulting from any research performed by The Regents relating to the Invention and to make and use the Invention, Patent Product(s), Patent Method(s), and associated technology solely for educational and research purposes and for purposes not covered by this Agreement.

3. LICENSE ISSUE FEE.

3.1 As partial consideration for all the rights and licenses granted to the Licensee, the Licensee will pay to The Regents a license issue fee of \$20,000 within 30 days after the execution of this Agreement by both parties.

3.2 Upon issuance of a patent application under the Patent Rights, the Licensee will also pay to The Regents \$25,000. This fee is nonrefundable and is not an advance against royalties.

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3.3 Licensee must pay to The Regents a license maintenance fee according to the schedule below:

Year 1 []

Year 2 []

Year 3 []

Year 4 []

Year 5 []

Year 6 []

And thereafter

Payment of the license maintenance fee begins on the one-year anniversary date of the effective date of this Agreement and continues annually on each anniversary date of the effective date of this Agreement. The license maintenance fee will not be due and payable on any anniversary date of the effective date of this Agreement if on such date the Licensee is commercially selling Patent Products and paying an earned royalty to The Regents on the sales of such Patent Products.

3.4 The fees set forth in Paragraphs 3.1, 3.2 and 3.3 above are non-refundable, non-creditable, and not an advance against royalties.

4. ROYALTIES.

4.1 As further consideration for all the rights and licenses granted to the Licensee, the Licensee and its sublicensees will pay to The Regents an earned royalty at the rate of [] percent [] based on the Net Sales of Patent Products.

4.2 Paragraphs 1.1, 1.3, and 1.4 define Patent Rights, Patent Products, and Patent Method so that royalties will be payable on Patent Products and Patent Method covered by both pending

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patent applications and issued patents. Earned royalties will accrue in each country for the duration of Patent Rights in that country and will be payable to The Regents when Patent Products are invoiced, or if not invoiced, when delivered to a third party or to itself, an Affiliate, Joint Venture, or the sublicensee in the case where such delivery of the Patent Products to the Licensee, an Affiliate, Joint Venture, or the sublicensee is intended for end use or FOR PURPOSES OTHER THAN CLINICAL TRIALS.

4.3 Royalties accruing to The Regents will be paid to The Regents quarterly on or before the following dates of each calendar year:

- February 28 for the calendar quarter ending December 31;
- May 31 for the calendar quarter ending March 31;
- August 31 for the calendar quarter ending June 30; and
- November 30 for the calendar quarter ending September 30.

4.4 Each such payment will be for royalties which accrued up to the most recently completed calendar quarter of the Licensee.

4.5 If Licensee is required to pay a non-Affiliate third party royalties with respect to a Licensed Product under agreements for patent rights which Licensee in its reasonable judgement determines are necessary to license or acquire with respect to such Licensed Product, Licensee may deduct [] % from the Regents' royalty rate pursuant to Paragraph 4.1 for every [] in royalty paid to such non-Affiliate third parties. In no event will the royalties due to The Regents pursuant to Paragraph 4.1 above be reduced to less than [] of the amount that would be otherwise due to The Regents thereunder.

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Beginning in the first year of commercial sales, the Licensee will pay to The Regents a minimum annual royalty of []. This minimum annual royalty will be paid to The Regents by February 28 of each year and will be credited against the earned royalty due and owing for the calendar year in which the minimum payment was made.

4.6 Milestone payments will be made on each Licensed Product as indicated below. Licensee will pay to The Regents the following payments within 30 days of reaching the milestones:

Filing of IND []

Filing of NDA []

4.7 All monies due The Regents will be payable in United States funds collectible at par in San Francisco, California. When Patent Products are sold for monies other than United States dollars, the earned royalties will first be determined in the foreign currency of the country in which such Patent Products were sold and then converted into equivalent United States funds. The exchange rate will be that rate quoted in the Wall Street Journal on the last business day of the reporting period.

4.8 Earned royalties on sales of Patent Products occurring in any country outside the United States will not be reduced by any taxes, fees, or other charges imposed by the government of such country except those taxes, fees, and charges allowed under the provisions of Paragraph 1.4 (Net Sales). The Licensee will also be responsible for all bank transfer charges.

4.9 Notwithstanding the provisions of Article 26 (Force Majeure), if at any time legal restrictions prevent prompt remittance of part or all royalties owed to The Regents by the Licensee

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with respect to any country where a Patent Product is sold or distributed, the Licensee will convert the amount owed to The Regents into United States funds and will pay The Regents directly from another source of funds for the amount impounded.

4.10 In the event that any patent or any claim thereof included within the Patent Rights is held invalid in a final decision by a court of competent jurisdiction and last resort and from which no appeal has or can be taken, all obligation to pay royalties based on such patent or claim or any claim patentably indistinct therefrom will cease as of the date of such final decision. The Licensee will not, however, be relieved from paying any royalties that accrued before such decision or that are based on another patent or claim that has not expired or that is not involved in such decision.

4.11 No royalties will be collected or paid hereunder to The Regents on Patent Products sold to the account of the U.S. Government. The Licensee and its sublicensee will reduce the amount charged for Patent Products distributed to the United States Government by an amount equal to the royalty for such Patent Products otherwise due The Regents as provided herein.

5. DUE DILIGENCE.

5.1 Upon the execution of this Agreement, Licensee must diligently proceed with the development, manufacture and sale ("Commercialization") of Licensed Products and must earnestly and diligently endeavor to market them within a reasonable time after execution of this Agreement and in quantities sufficient to meet the market demands for them.

5.2 Licensee must endeavor to obtain all necessary governmental approvals for the Commercialization of Licensed Products.

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5.3 The Regents has the right and option to terminate this Agreement if Licensee fails to perform any of the terms in this Paragraph 5.3. This right, if exercised by The Regents, supersedes the rights granted in Article 2 (Grant).

I Identify a lead compound by []

II Complete toxicity studies by []

III File IND by []

IV Complete Phase I clinical trials by []

V Complete Phase II clinical trials by []

VI Complete Phase III clinical trials by []

5.4 To exercise its right under Paragraph 5.3 to terminate this Agreement, The Regents must give Licensee written notice of the deficiency. Licensee thereafter has 60 days to cure the deficiency or request arbitration. If The Regents does not receive within 60 days either a written request for arbitration or satisfactory tangible evidence that Licensee has cured the deficiency, then The Regents may, at its option, terminate this Agreement by giving written notice to Licensee.

5.5 Licensee has the sole discretion for making all decisions as to how to commercialize any Licensed Product.

6. PROGRESS AND ROYALTY REPORTS.

6.1 Beginning August 15, 1999 and semi-annually thereafter, the Licensee will submit to The Regents a progress report covering activities by the Licensee related to the development and testing of all Patent Products and the obtaining of the governmental approvals necessary for marketing them. These progress reports will be provided to The Regents to cover the progress of

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the research and development of the Patent Products until their first commercial sale in the United States.

6.2 The progress reports submitted under Paragraph 6.1 will include, but not be limited to, the following topics so that The Regents may be able to determine the progress of the development of Patent Products and may also be able to determine whether or not the Licensee has met its diligence obligations set forth in Article 5 (Due Diligence) above:

- summary of work completed
- key scientific discoveries
- summary of work in progress
- current schedule of anticipated events or milestones
- market introduction date of Patent Products,
- a summary of resources (dollar value) spent in the reporting period, and
- activities of the sublicensees, if any.

6.3 The Licensee will also report to The Regents in its immediately subsequent progress and royalty report the date of first commercial sale of a Patent Product(s) in each country.

6.4 After the first commercial sale of a Patent Product, the Licensee will provide The Regents with quarterly royalty reports to The Regents on or before each February 28, May 31, August 31, and November 30 of each year. Each such royalty report will cover the most recently completed calendar quarter of the Licensee (October through December, January through March, April through June, and July through September) and will show:

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6.4a the gross sales and Net Sales of Patent Products sold by the Licensee and reported to the Licensee as sold by its sublicensees during the most recently completed calendar quarter;

6.4b the number of Patent Products sold or distributed by the Licensee and reported to the Licensee as sold or distributed by its sublicensees;

6.4c the royalties, in U.S. dollars, payable hereunder with respect to Net Sales; and

6.4d the exchange rates used, if any.

6.5 If no sales of Patent Products have been made during any reporting period after the first commercial sale of a Patent Product, then a statement to this effect is required.

7. BOOKS AND RECORDS.

7.1 The Licensee will keep books and records accurately showing all Patent Products manufactured, used, and/or sold under the terms of this Agreement. Such books and records will be preserved for at least five years after the date of the royalty payment to which they pertain and will be open to inspection by representatives or agents of The Regents at reasonable times to determine the accuracy of the books and records and to determine compliance by the Licensee with the terms of this Agreement.

7.2 The fees and expenses of representatives of The Regents performing such an examination will be borne by The Regents. However, if an error in royalties of more than five percent (5%) of the total royalties due for any year is discovered, then the fees and expenses of these representatives will be borne by the Licensee.

8. LIFE OF THE AGREEMENT.

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8.1 Unless otherwise terminated by operation of law or by acts of the parties in accordance with the terms of this Agreement, this Agreement will be in force from the effective date recited on page one and will remain in effect for the life of the last-to-expire patent licensed under this Agreement, or until the last patent application licensed under this Agreement is abandoned.

8.2 Any termination of this Agreement will not affect the rights and obligations set forth in the following Articles:

| | |
|----------------|---|
| Article 7 | Books and Records |
| Article 11 | Disposition of Patent Products on Hand Upon Termination |
| Article 12 | Use of Names and Trademarks |
| Paragraph 14.6 | Patent Prosecution and Maintenance |
| Article 17 | Indemnification |
| Article 22 | Failure to Perform |
| Article 27 | Confidentiality |

8.3 Any termination of this Agreement shall not relieve the Licensee of its obligation to pay any monies due or owing at the time of such termination and shall not relieve any obligations, of either party to the other party, established prior to termination.

9. TERMINATION BY THE REGENTS.

9.1 If the Licensee should violate or fail to perform any term or covenant of this Agreement, then The Regents may give written notice of such default ("Notice of Default") to the Licensee. If the Licensee should fail to repair such default within 60 days after the date of such notice takes effect, The Regents will have the right to terminate this Agreement and the licenses herein by a second written notice ("Notice of Termination") to the Licensee. If a Notice of Termination is sent to the Licensee, this Agreement will automatically terminate on the date such notice takes effect. Such termination will not relieve the Licensee of its obligation to pay any royalty

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or license fees owing at the time of such termination and will not impair any accrued right of The Regents. These notices will be subject to Article 18 (Notices).

10. TERMINATION BY THE LICENSEE.

10.1 The Licensee will have the right at any time to terminate this Agreement in whole or as to any portion of Patent Rights by giving notice in

writing to The Regents. Such Notice of Termination will be subject to Article 18 (Notices) and termination of this Agreement will be effective 60 days after the effective date thereof.

10.2 Any termination pursuant to the above paragraph will not relieve the Licensee of any obligation or liability accrued hereunder prior to such termination or rescind anything done by the Licensee or any payments made to The Regents hereunder prior to the time such termination becomes effective, and such termination will not affect in any manner any rights of The Regents arising under this Agreement prior to such termination. Such termination will not relieve the Licensee of its obligation to pay any fees or royalties owing at the time of such termination and will not impair any accrued right of The Regents.

11. DISPOSITION OF PATENT PRODUCTS ON HAND UPON TERMINATION.

11.1 Upon termination of this Agreement, the Licensee will have the privilege of selling of all previously made or partially made Patent Products, but no more, within a period of 120 days, provided, however, that the sale of such Patent Products will be subject to the terms of this Agreement including, but not limited to the payment of royalties based on the Net Sales of Patent Products at the rates and at the times provided herein and the rendering of reports in connection therewith.

12. USE OF NAMES AND TRADEMARKS.

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12.1 Nothing contained in this Agreement will be construed as conferring any right to use in advertising, publicity, or other promotional activities any name, trade name, trademark, or other designation of either party hereto by the other (including contraction, abbreviation or simulation of any of the foregoing). Unless required by law or consented to in writing by the Executive Director, Office of Technology Transfer of The Regents, the use by the Licensee of the name "The Regents of the University of California" or the name of any campus of the University of California for use in advertising, publicity, or other promotional activities is expressly prohibited.

12.2 It is understood that The Regents will be free to release to the inventors and senior administrative officials employed by The Regents the terms of this Agreement upon their request. If such release is made, The Regents will request that such terms will be kept in confidence in accordance with the provisions of Article 27 (Confidentiality) and not be disclosed to others. It is further understood that should a third party inquire whether a license to Patent Rights is available, The Regents may disclose the existence of this Agreement and the extent of the grant in Article 2 (Grant) to such third party, but will not disclose the name of the Licensee, except where The Regents is required to release such information under either the California Public Records Act or other applicable law.

13. LIMITED WARRANTY.

13.1 The Regents warrants to the Licensee that it has the lawful right to grant this license.

13.2 This license and the associated Invention, Patent Rights, Patent Products, and Patent Methods are provided WITHOUT WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED. THE REGENTS MAKES NO REPRESENTATION OR WARRANTY THAT THE INVENTION,

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PATENT RIGHTS, PATENT PRODUCTS, OR PATENT METHOD WILL NOT INFRINGE ANY PATENT OR OTHER PROPRIETARY RIGHT.

13.3 IN NO EVENT WILL THE REGENTS BE LIABLE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM EXERCISE OF THIS LICENSE OR THE USE OF THE INVENTION, PATENT RIGHTS, PATENT METHOD, OR PATENT PRODUCTS.

13.4 Nothing in this Agreement will be construed as:

13.4a a warranty or representation by The Regents as to the

validity, enforceability, or scope of any Patent Rights; or

13.4b a warranty or representation that anything made, used, sold, or otherwise disposed of under any license granted in this Agreement is or will be free from infringement of patents of third parties; or

13.4c an obligation to bring or prosecute actions or suits against third parties for patent infringement except as provided in Article 16. (Patent Infringement); or

13.4d conferring by implication, estoppel, or otherwise any license or rights under any patents of The Regents other than Patent Rights as defined herein, regardless of whether such patents are dominant or subordinate to Patent Rights; or

13.4e an obligation to furnish any know-how not provided in Patent Rights or Patent Products.

14. PATENT PROSECUTION AND MAINTENANCE.

14.1 The Regents will diligently prosecute and maintain the United States and foreign patents comprising Patent Rights using counsel of its choice. The Regents will promptly provide

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the Licensee with copies of all relevant documentation so that the Licensee may be currently and promptly informed and apprised of the continuing prosecution, and may comment upon such documentation sufficiently in advance of any initial deadline for filing a response, provided, however, that if the Licensee has not commented upon such documentation prior to the initial deadline for filing a response with the relevant government patent office or The Regents must act to preserve Patent Rights, The Regents will be free to respond appropriately without consideration of comments by the Licensee, if any. Both parties hereto will keep this documentation in confidence in accordance with the provisions of Article 27 (Confidentiality) herein. Counsel for The Regents will take instructions only from The Regents.

14.2 The Regents will use all reasonable efforts to amend any patent application to include claims requested by the Licensee and required to protect the Patent Products contemplated to be sold or Patent Method to be practiced under this Agreement.

14.3 The Regents and the Licensee will cooperate in applying for an extension of the term of any patent included within Patent Rights, if appropriate, under the Drug Price Competition and Patent Term Restoration Act of 1984. The Licensee will prepare all such documents, and The Regents will execute such documents and will take such additional action as the Licensee may reasonably request in connection therewith.

14.4 The Regents will, at the request of the Licensee, file, prosecute, and maintain patent applications and patents covered by Patent Rights in foreign countries if available. The Licensee must notify The Regents within seven months of the filing of the corresponding United States application of its decision to request The Regents to file foreign counterpart patent applications. This notice concerning foreign filing must be in writing and must identify the countries desired. The

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absence of such a notice from the Licensee to The Regents within the seven month period will be considered an election by the Licensee not to request The Regents to secure foreign patent rights on behalf of the Licensee. The Regents will have the right to file patent applications at its own expense in any country the Licensee has not included in its list of desired countries, and such applications and resultant patents, if any, will not be included in the licenses granted under this Agreement.

14.5 All past, present and future costs of preparing, filing, prosecuting and maintaining all United States and foreign patent applications and all costs and fees relating to the preparation and filing of patents covered by Patent Rights in Paragraph 1.1 will be borne by the Licensee. This includes patent preparation and prosecution costs for this Invention

incurred by The Regents prior to the execution of this Agreement. Such costs will be due upon execution of this Agreement and will be payable at the time that the license issue fee is payable. The costs of all interferences and oppositions will be considered prosecution expenses and also will be borne by the Licensee. The Licensee will reimburse The Regents for all costs and charges within 30 days following receipt of an itemized invoice from The Regents for same.

14.6 The obligation of the Licensee to underwrite and to pay patent preparation, filing, prosecution, maintenance, and related costs will continue for costs incurred until three months after receipt by either party of a Notice of Termination. The Licensee will reimburse The Regents for all patent costs incurred during the term of the Agreement and for three months thereafter whether or not invoices for such costs are received during the three-month period after receipt of a Notice of Termination. The Licensee may with respect to any particular patent application or patent terminate its obligations to the patent application or patent in any or all designated countries upon three months written notice to The Regents. The Regents may continue prosecution and/or maintenance of such

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application(s) or patent(s) at its sole discretion and expense, provided, however, that the Licensee will have no further right or licenses thereunder.

14.7 The Licensee will notify The Regents of any change of its status as a small entity (as defined by the United States Patent and Trademark Office) and of the first sublicense granted to an entity that does not qualify as a small entity as defined therein.

15. PATENT MAKING.

15.1 The Licensee will mark all Patent Products made, used, or sold under the terms of this Agreement, or their containers, in accordance with the applicable patent marking laws.

16. PATENT INFRINGEMENT.

16.1 In the event that the Licensee learns of the substantial infringement of any patent licensed under this Agreement, the Licensee will call the attention of The Regents thereto in writing and will provide The Regents with reasonable evidence of such infringement. Both parties to this Agreement acknowledge that during the period and in a jurisdiction where the Licensee has exclusive rights under this Agreement, neither will notify a third party of the infringement of any of Patent Rights without first obtaining consent of the other party, which consent will not be unreasonably withheld. Both parties will use their best efforts in cooperation with each other to terminate such infringement without litigation.

16.2 If the Licensee desires that Patent Rights be enforced against infringers, the Licensee either may request permission from The Regents to file suit against the infringement of Patent Rights or may request that The Regents take legal action against the infringement of Patent Rights. Such request must be made in writing and must include reasonable evidence of such infringement and

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damages to the Licensee. If the infringing activity has not been abated within 90 days following the effective date of such request, The Regents will have the right to elect to:

16.2a commence suit on its own account; or

16.2b refuse to participate in such suit and The Regents will give notice of its election in writing to the Licensee by the end of the 100th day after receiving notice of such request from Licensee. The Licensee may thereafter bring suit for patent infringement if and only if The Regents elects not to commence suit and if the infringement occurred during the period and in a jurisdiction where the Licensee had exclusive rights under this Agreement. However, in the event the Licensee elects to bring suit in accordance with this Paragraph, The Regents may thereafter join such suit at its own expense.

16.3 Such legal action as is decided upon will be at the expense of the party on account of whom suit is brought and all recoveries recovered thereby will belong to such party, provided, however, that legal action brought jointly by The Regents and the Licensee and participated in by both will be at the joint expense of the parties and all recoveries will be allocated in the following order: a) to each party reimbursement in equal amounts of the attorney's costs, fees, and other related expenses to the extent each party paid for such costs, fees, and expenses until all such costs, fees, and expenses are consumed for each party; and b) any remaining amount shared jointly by them in proportion to the share of expenses paid by each party.

16.4 Each party will cooperate with the other in litigation proceedings instituted hereunder but at the expense of the party on account of whom suit is brought. Such litigation will be controlled by the party bringing the suit, except that The Regents may be represented by counsel of its choice in any suit brought by the Licensee.

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17. INDEMNIFICATION.

17.1 The Licensee will (and require its sublicensees to) indemnify, hold harmless, and defend The Regents, its officers, employees, and agents; the sponsors of the research that led to the Invention; the inventors of any invention covered by patents or patent applications in Patent Rights (including the Patent Products and Patent Method contemplated thereunder) and their employers against any and all claims, suits, losses, damage, costs, fees, and expenses resulting from or arising out of exercise of this license or any sublicense. This indemnification will include, but will not be limited to, any product liability.

17.2 The Licensee, at its sole cost and expense, will insure its activities in connection with the work under this Agreement and obtain, keep in force, and maintain insurance as follows: (or an equivalent program of self insurance).

17.3 Comprehensive or Commercial Form General Liability Insurance (contractual liability included) with limits as follows:

<TABLE>

| <S> | | <C> | |
|--|-------|-------------|--|
| Each Occurrence | | \$5,000,000 | |
| Products/Completed Operations Aggregate | | \$5,000,000 | |
| Personal and Advertising Injury | | \$5,000,000 | |
| General Aggregate (commercial form only) | | \$5,000,000 | |

</TABLE>

It should be expressly understood, however, that the coverages and limits referred to under the above will not in any way limit the liability of the Licensee. The Licensee will furnish The Regents with certificates of insurance evidencing compliance with all requirements. Such certificates will:

17.3a Provide for 30 day advance written notice to The Regents of any modification;

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17.3b Indicate that The Regents has been endorsed as an additional Insured under the coverages referred to under the above; and

17.3c Include a provision that the coverages will be primary and will not participate with nor will be excess over any valid and collectable insurance or program of self-insurance carried or maintained by The Regents.

17.4 The Regents will promptly notify the Licensee in writing of any claim or suit brought against The Regents in respect of which The Regents intends to invoke the provisions of this Article 17 (Indemnification). The

Licensee will keep The Regents informed on a current basis of its defense of any claims pursuant to this Article 17 (Indemnification).

18. NOTICES.

18.1 Any notice or payment required to be given to either party will be deemed to have been properly given and to be effective:

18.1a on the date of delivery if delivered in person;

18.1b on the date of mailing if mailed by first-class certified mail, postage paid; or

18.1c on the date of mailing if mailed by any global express carrier service that requires the recipient to sign the documents demonstrating the delivery of such notice of payment; to the respective addresses given below, or to another address as designated in writing by the party changing its prior address.

In the case of the Licensee: XXX
 XXX
 XXX, XXX XXX
 Telephone: XXX
 Facsimile: XXX
 Attention: XXX

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In the case of The Regents: THE REGENTS OF THE UNIVERSITY
 OF CALIFORNIA
 Business Research Partnerships
 University of California, Los Angeles
 10945 LeConte Avenue, Suite 1401
 Los Angeles, CA 90095
 Telephone: 310-206-4401
 Facsimile: 310-206-3619
 Attention: Emily E. Waldron

19. ASSIGNABILITY.

19.1 This Agreement is binding upon and will inure to the benefit of The Regents, its successors and assigns, but will be personal to the Licensee and assignable by the Licensee only with the written consent of The Regents. Any other attempt by Licensee to assign this Agreement is void unless Licensee obtains the prior written consent of The Regents.

20. LATE PAYMENTS.

20.1 In the event royalty payments, fees, or patent prosecution costs are not received by The Regents when due, the Licensee will pay to The Regents interest charges at a rate of ten percent (10%) simple interest per annum. Such interest will be calculated from the date payment was due until actually received by The Regents. Acceptance by The Regents of any late payment interest from the Licensee under this Paragraph 20 will in no way affect the provision of Article 21 (Waiver) herein.

21. WAIVER.

21.1 It is agreed that no waiver by either party hereto of any breach or default of any of the covenants or agreements herein set forth will be deemed a waiver as to any subsequent and/or similar breach or default.

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22. FAILURE TO PERFORM.

22.1 In the event of a failure of performance due under the terms of this Agreement and if it becomes necessary for either party to undertake legal action against the other on account thereof, then such legal action will be conducted in San Francisco, California, and the prevailing party will be entitled to reasonable attorney's fees in addition to costs and necessary disbursements.

23. GOVERNING LAWS.

23.1 THIS AGREEMENT WILL BE INTERPRETED AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA, excluding any choice of law rules that would direct the application of the laws of another jurisdiction, but the scope and validity of any patent or patent application will be governed by the applicable laws of the country of such patent or patent application.

24. GOVERNMENT APPROVAL OR REGISTRATION.

24.1 If this Agreement or any associated transaction is required by the law of any nation to be either approved or registered with any governmental agency, the Licensee will assume all legal obligations to do so. The Licensee will notify The Regents if it becomes aware that this Agreement is subject to a United States or foreign government reporting or approval requirement. The Licensee will make all necessary filings and pay all costs including fees, penalties, and all other out-of-pocket costs associated with such reporting or approval process.

25. EXPORT CONTROL LAWS.

25.1 The Licensee will observe all applicable United States and foreign laws with respect to the transfer of Patent Products and related technical data to foreign countries, including, without

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limitation, the International Traffic in Arms Regulations (ITAR) and the Export Administration Regulations.

26. FORCE MAJEURE.

26.1 The parties to this Agreement will be excused from any performance required hereunder if such performance is rendered impossible or unfeasible due to any acts of God, catastrophes, or other major events beyond their reasonable control, including, without limitation, war, riot, and insurrection; laws, proclamations, edicts, ordinances, or regulations; strikes, lock-outs, or other serious labor disputes; and floods, fires, explosions, or other natural disasters. However, any party to this Agreement will have the right to terminate this Agreement upon 30 days' prior written notice if either party is unable to fulfill its obligations under this Agreement due to any of the causes mentioned above and such inability continues for a period of one year. Notices will be subject to Article 18 (Notices).

27. CONFIDENTIALITY.

27.1 The Licensee and The Regents respectively will treat and maintain the proprietary business, patent prosecution, software, engineering drawings, process and technical information, and other proprietary information ("Proprietary Information") of the other party in confidence using at least the same degree of care as that party uses to protect its own proprietary information of a like nature for a period from the date of disclosure until five years after the date of termination of this Agreement. This confidentiality obligation will apply to the information defined as "Data" under the Secrecy Agreement, and such Data will be treated as Proprietary Information hereunder.

27.2 All Proprietary Information will be labeled or marked confidential or as otherwise similarly appropriate by the disclosing party, or if the Proprietary Information is orally disclosed,

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it will be reduced to writing or some other physically tangible form, marked and labeled as set forth above by the disclosing party, and delivered to the receiving party within 30 days after the oral disclosure as a record of the disclosure and the confidential nature thereof. Notwithstanding the foregoing, the Licensee and The Regents may use and disclose Proprietary Information to its employees, agents, consultants, contractors, and, in the case of the Licensee, its sublicensees, provided that any such parties are bound by a like duty of confidentiality.

27.3 Nothing contained herein will in any way restrict or impair the right of the Licensee or The Regents to use, disclose, or otherwise deal with any Proprietary Information:

27.3a that recipient can demonstrate by written records was previously known to it;

27.3b that is now, or becomes in the future, public knowledge other than through acts or omissions of recipient;

27.3c that is lawfully obtained without restrictions by recipient from sources independent of the disclosing party;

27.3d that is required to be disclosed to a governmental entity or agency in connection with seeking any governmental or regulatory approval, or pursuant to the lawful requirement or request of a governmental entity or agency;

27.3e that is furnished to a third party by the recipient with similar confidentiality restrictions imposed on such third party, as evidenced in writing; or

27.3f that The Regents is required to disclose pursuant to the California Public Records Act or other applicable law.

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27.4 Upon termination of this Agreement, the Licensee and The Regents will destroy or return to the disclosing party proprietary information received from the other in its possession within 15 days following the effective date of termination. The Licensee and The Regents will provide each other, within 30 days following termination, with a written notice that Proprietary Information has been returned or destroyed. Each party may, however, retain one copy of Proprietary Information for archival purposes in non-working files.

28. INFRINGEMENT UNDER DRUG PRICE COMPETITION ACT.

28.1 In the event either party receives notice pertaining to any patent included within Patent Rights pursuant to the DRUG PRICE COMPETITION AND PATENT TERM RESTORATION ACT OF 1984, (Public Law 98-417, "the Act") including but not necessarily limited to notices pursuant to Sections 101 and 103 of the Act from persons who have filed an abbreviated NDA ("ANDA") or a "paper" NDA, or in the case of an infringement of Patent Rights as defined in Section 271(e) of Title 35 of the United States Code, such party will notify the other party promptly but in no event later than ten days after receipt of such notice.

28.2 If the Licensee wishes action to be taken against such infringement, as provided in the Act, the Licensee will request such action by written notice to The Regents. Within 30 days after receiving such request, The Regents will give written notice to the Licensee of its election to:

28.2a commence suit on its own account; or

28.2b refuse to participate in such suit. The Licensee may thereafter bring suit for patent infringement as provided by the Act if and only if The Regents elects not to commence suit and if the infringement occurred during the period that the Licensee had exclusive rights in the

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United States under this Agreement. However, in the event the Licensee elects to bring suit in accordance with this paragraph, The Regents may thereafter join such suit at its own expense.

28.3 The provisions of Paragraphs 16.3 and 16.4 will likewise apply to any legal action brought under this Article 28.

28.4 The Regents hereby authorizes the Licensee to include in any NDA for a Patent Product, a list of patents included within Patent Rights identifying The Regents as patent owner.

29. MISCELLANEOUS.

29.1 The headings of the several sections are inserted for convenience of reference only and are not intended to be a part of or to affect the meaning or interpretation of this Agreement.

29.2 This Agreement will not be binding upon the parties until it has been signed below on behalf of each party, in which event, it will be effective as of the date recited on page one.

29.3 No amendment or modification hereof will be valid or binding upon the parties unless made in writing and signed on behalf of each party.

29.4 This Agreement embodies the entire understanding of the parties and will supersede all previous communications, representations or understandings, either oral or written, between the parties relating to the subject matter hereof. The Secrecy Agreement specified in the Recitals in this Agreement and dated 3-31-98 is hereby terminated.

29.5 In case any of the provisions contained in this Agreement are held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability will not affect any other provisions hereof, but this Agreement will be construed as if such invalid or illegal or unenforceable provisions had never been contained herein.

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29.6 This Agreement has been negotiated and prepared jointly by both parties and shall not be construed for or against any party but shall be given a fair and reasonable construction in accordance with the intention of the parties.

In witness whereof, both The Regents and the Licensee have executed this Agreement, in duplicate originals, by their respective officers hereunto duly authorized, on the date and year hereinafter written.

THE REGENTS OF THE UNIVERSITY
CYTOCLONAL PHARMACEUTICS, INC. OF CALIFORNIA

By: /s/ Arthur P. Bollon

(Signature) 8/6/98

By: /s/ Emily Waldron

(Signature) 8/4/98

Name: Arthur P. Bollon

(Please Print)

Name: Emily E. Waldron
Title: Technology Transfer Officer

Title: Chairman &
Chief Executive Officer

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EXHIBIT 24.3

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in this Registration Statement on Form S-3 (Post-Effective Amendment No. 2 to Form SB-2) of Cytoclonal Pharmaceuticals Inc. of our report, dated February 6, 1998, (with respect to Note K[2], April 13, 1998) on our audits of the financial statements of Cytoclonal Pharmaceuticals Inc. as of December 31, 1997 and for each of the years in the two-year period ended December 31, 1997 and for the period from September 11, 1991 (inception) through December 31, 1997, included in the Company's Annual Report on Form 10-KSB for the year ended December 31, 1997. We also consent to the reference of our firm under the caption "Experts" included in the Prospectus.

RICHARD A. EISNER & COMPANY, LLP

Richard A. Eisner & Company, LLP

New York, New York

September 25, 1998