

REGISTRATION NO. 333-15415

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

AMENDMENT NO. 1

TO  
FORM S-1  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

AASTROM BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

MICHIGAN	2834	94-3096597
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(IRS Employer Identification No.)

24 FRANK LLOYD WRIGHT DRIVE  
P.O. BOX 376  
ANN ARBOR, MICHIGAN 48106  
(313) 930-5555

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

R. DOUGLAS ARMSTRONG, PH.D.  
PRESIDENT, CHIEF EXECUTIVE OFFICER  
AASTROM BIOSCIENCES, INC.  
24 FRANK LLOYD WRIGHT DRIVE

P.O. BOX 376  
ANN ARBOR, MICHIGAN 48106  
(313) 930-5555

(Name, address, including zip code, and telephone number, including area code, of agent for service)

COPIES TO:

T. KNOX BELL, ESQ. DOUGLAS J. REIN, ESQ. MATT KIRMAYER, ESQ. DAYNA J. PINEDA, ESQ. GRAY CARY WARE & FREIDENRICH 4365 EXECUTIVE DRIVE, SUITE 1600 SAN DIEGO, CALIFORNIA 92121	RICHARD R. PLUMRIDGE, ESQ. MICHAEL A. CONZA, ESQ. BROBECK, PHLEGER & HARRISON LLP 1633 BROADWAY NEW YORK, NEW YORK 10019
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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

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, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) 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 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.

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 or until the Registration Statement shall become effective on such date as the Commission acting pursuant to said Section 8(a), may determine.

+-----+  
 +INFORMATION CONTAINED HEREIN IS SUBJECT TO COMPLETION OR 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. +  
 +-----+

PROSPECTUS (Subject to Completion)

Dated November 18, 1996

3,250,000 Shares

[LOGO of AASTROM BIOSCIENCES INC]

Common Stock

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All of the shares of Common Stock, no par value per share (the "Common Stock"), offered are being sold by Aastrom Biosciences, Inc. ("Aastrom" or the "Company").

Prior to this offering, there has been no public market for the Common Stock of the Company. It is currently estimated that the initial public offering price will be between \$8.00 and \$10.00 per share. See "Underwriting" for a discussion of the factors considered in determining the initial public offering price. The Company has applied for quotation of the Common Stock on the Nasdaq National Market under the symbol "ASTM."

Cobe Laboratories, Inc. has agreed to purchase \$5,000,000 of shares of Common Stock in this offering at the Price to the Public set forth below. See "Certain Transactions."

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THIS OFFERING INVOLVES A HIGH DEGREE OF RISK. SEE "RISK FACTORS" BEGINNING ON PAGE 5 OF THIS PROSPECTUS.

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THESE SECURITIES HAVE NOT BEEN APPROVED OR  
 DISAPPROVED BY THE SECURITIES AND EXCHANGE  
 COMMISSION OR ANY STATE SECURITIES COMMISSION  
 NOR HAS THE SECURITIES AND EXCHANGE  
 COMMISSION OR ANY STATE SECURITIES  
 COMMISSION PASSED UPON THE ACCURACY OR  
 ADEQUACY OF THIS PROSPECTUS. ANY  
 REPRESENTATION TO THE CONTRARY IS A  
 CRIMINAL OFFENSE.

	Price to Public	Underwriting Discounts and Commissions(1)	Proceeds to Company(2)
Per Share.....	\$	\$	\$
Total(3).....	\$	\$	\$

- (1) The Company has agreed to indemnify the Underwriters against certain liabilities, including liabilities under the Securities Act of 1933. See "Underwriting."
- (2) Before deducting expenses payable by the Company, estimated to be \$900,000.
- (3) The Company has granted to the Underwriters an option, exercisable within 30 days of the date hereof, to purchase an aggregate of up to 487,500 additional shares at the Price to Public less Underwriting Discounts and Commissions to cover over-allotments, if any. If all such additional shares are purchased, the total Price to Public, Underwriting Discounts and Commissions and Proceeds to Company will be \$ , \$ and \$ , respectively. See "Underwriting."

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The Common Stock is offered by the several Underwriters named herein when, as and if received and accepted by them, subject to their right to reject orders in whole or in part and subject to certain other conditions. It is expected that delivery of the certificates for the shares will be made at the offices of

Cowen & Company, New York, New York, on or about \_\_\_\_\_, 1996.

COWEN & COMPANY

J.P. MORGAN & CO.

, 1996

[COLOR FLOW CHART DEPICTING "STEM CELL THERAPY METHODS"  
DESCRIBING STEM CELL THERAPY UTILIZING BONE MARROW HARVEST,  
PROGENITOR BLOOD CELL MOBILIZATION AND THE AASTROM CPS]

[COLOR PHOTOGRAPH OF A PROTOTYPE OF THE AASTROM CPS WITH A  
CLINICIAN INNOCULATING CELLS]

A prototype of the Aastrom CPS is currently being used in a clinical trial and ongoing development activities are directed at completing production level components of the Aastrom CPS. The Company may not market the Aastrom CPS unless and until FDA and other necessary regulatory approvals are received.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE COMMON STOCK OFFERED HEREBY AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH TRANSACTIONS MAY BE EFFECTED ON THE NASDAQ NATIONAL MARKET, IN THE OVER-THE-COUNTER MARKET OR OTHERWISE. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

## PROSPECTUS SUMMARY

The following summary is qualified in its entirety by the more detailed information and financial statements, including the notes thereto, appearing elsewhere in this Prospectus. Prospective investors should carefully consider the information set forth under the heading "Risk Factors."

### THE COMPANY

Aastrom Biosciences, Inc. is developing proprietary process technologies and devices for a range of cell therapy applications, including stem cell therapies and gene therapy. The Company's lead product under development, the Aastrom Cell Production System (the "Aastrom CPS") consists of a clinical cell culture system with disposable cassettes and reagents for use in the rapidly growing stem cell therapy market. The Company believes that the Aastrom CPS method will be less costly, less invasive and less time consuming than currently available stem cell collection methods. The Aastrom CPS is designed as a platform product which implements the Company's pioneering stem cell replication technology and which the Company believes can be modified to produce a wide variety of cell types for emerging therapies. The Aastrom CPS is currently in a pre-pivotal clinical trial under an Investigational Device Exemption for autologous stem cell therapy. The Company has entered into a strategic collaboration for the development of the Aastrom CPS in stem cell therapy with Cobe BCT, Inc., a subsidiary of Gambro AB and a leading provider of blood cell processing products. In ex vivo gene therapy, the Company is developing a proprietary directed motion gene transfer process (the "Aastrom Gene Loader") and the Aastrom CPS to enable high efficiency genetic modification and production of cells.

Stem cell therapy is a rapidly growing form of cell therapy used to restore blood and immune system function to cancer patients following chemotherapy or radiation therapy. The Company estimates that over 35,000 stem cell therapy procedures were completed worldwide in 1995 and that the number of such procedures has been growing at a compound annual rate of over 20%. Other novel cell therapies are under development by third parties, including stem cell therapy for the treatment of autoimmune diseases and for augmenting recipient acceptance of organ transplants. Current stem cell therapy methods, including bone marrow harvest and peripheral blood progenitor cell mobilization, are costly, invasive and time-consuming for both medical personnel and patients. Technologies which facilitate a more readily available source of cells may contribute to additional growth in cell therapy procedures. Umbilical cord blood ("UCB") is emerging as a new source of cells for stem cell therapy, offering additional market opportunity, although the more widespread use of UCB transplants has been restricted by cell quantity limitations.

The Company believes that the Aastrom CPS will offer significant advantages over traditional stem cell collection methods. Compared with current methods, the Aastrom CPS is expected to involve two patient care episodes rather than approximately eight to 21 care episodes, less than three hours of patient procedure time rather than approximately 16 to 39 hours of patient procedure time and approximately four to ten needle sticks rather than 22 or more needle sticks over the course of collection and infusion. The Aastrom CPS may permit higher and more frequent doses of chemotherapy to be administered to cancer patients by enabling the production of multiple doses of therapeutic stem cells from patient samples taken at the initial collection.

Aastrom is currently conducting a pre-pivotal autologous stem cell therapy trial. The trial is designed to show that cells produced in the Aastrom CPS can by themselves safely enable recovery of bone marrow and cells of the blood and immune systems in accordance with trial endpoints in patients who have received ablative chemotherapy. Based on the outcome of this and other related trials, the Company intends to seek FDA approval to begin a multi-center pivotal trial for use of the Aastrom CPS in stem cell therapy. It is anticipated that the results of this pivotal trial will be used to support the Company's Pre-Market Approval ("PMA") submission to the FDA. In the near future, the Company plans to initiate a stem cell therapy clinical trial in France, the results of which are expected to be used for the CE Mark registration necessary to market the Aastrom CPS in Europe.

The Company's business strategy is to: (i) establish a consumable-based business model; (ii) focus initially on the currently-reimbursed stem cell therapy market; (iii) leverage Aastrom's cell production technology across multiple cell therapy market opportunities; and (iv) market through collaborative relationships.

Aastrom has entered into a strategic collaboration with Cobe BCT to support the development and marketing of the Aastrom CPS in the field of stem cell therapy. In 1993, the Company entered into a series of agreements in which Cobe BCT purchased \$15,000,000 of the Company's equity securities and acquired the worldwide distribution rights to the Aastrom CPS for stem cell therapy. Under the terms of the collaboration, Aastrom retains manufacturing rights as well as the majority share of all revenue generated by Cobe BCT's sale of the Aastrom CPS. Aastrom also retains all marketing and distribution rights to the Aastrom CPS for other cell types and ex vivo gene therapy applications, including stem cells. Cobe Laboratories Inc., an affiliate of Cobe BCT, has agreed to purchase \$5,000,000 of Common Stock in this offering at the initial public offering price per share.

The Company's patent portfolio includes patents relating to both stem and progenitor cell production, processes for the genetic modification of stem and other cell types, and cell culture devices for human cells. As of September 30, 1996, the Company had exclusive rights to five issued U.S. and three foreign patents, and a number of U.S. patent applications and certain corresponding foreign applications.

THE OFFERING

Common Stock offered..... 3,250,000 shares(1)  
 Common Stock to be out-  
 standing after this of-  
 fering..... 13,235,734 shares(2)  
 Use of proceeds..... For clinical trials, the development and manufacture  
 of the Astron CPS, research and development of  
 other product candidates, working capital and other  
 general corporate purposes.  
 Proposed Nasdaq National  
 Market symbol..... ASTM

SUMMARY FINANCIAL DATA

	YEAR ENDED JUNE 30,					THREE MONTHS ENDED SEPTEMBER 30,	
	1992	1993	1994	1995	1996	1995	1996
<b>STATEMENT OF OPERATIONS DATA:</b>							
Total revenues.....	\$ --	\$ 784,000	\$ 872,000	\$ 517,000	\$ 1,609,000	\$ 211,000	\$ 224,000
Costs and expenses:							
Research and development.....	1,090,000	2,600,000	5,627,000	4,889,000	10,075,000	1,195,000	3,160,000
General and administrative.....	272,000	1,153,000	1,565,000	1,558,000	2,067,000	446,000	452,000
Total costs and expenses.....	1,362,000	3,753,000	7,192,000	6,447,000	12,142,000	1,641,000	3,612,000
Other income, net.....	94,000	122,000	180,000	213,000	616,000	131,000	115,000
Net loss.....	\$(1,268,000)	\$(2,847,000)	\$(6,140,000)	\$(5,717,000)	\$(9,917,000)	\$(1,299,000)	\$(3,273,000)
Pro forma net loss per share(3).....	\$ (.32)	\$ (.49)	\$ (.82)	\$ (.66)	\$ (.98)	\$ (.13)	\$ (.32)
Pro forma weighted average number of shares outstanding(3).....	3,919,000	5,840,000	7,461,000	8,644,000	10,103,000	10,094,000	10,107,000
						SEPTEMBER 30, 1996	
						ACTUAL	AS ADJUSTED(4)
<b>BALANCE SHEET DATA:</b>							
Cash, cash equivalents and short-term investments.....						\$ 7,108,000	\$33,410,500
Working capital.....						6,540,000	32,842,500
Total assets.....						8,931,000	35,233,500
Deficit accumulated during the development stage.....						(30,298,000)	(30,298,000)
Total shareholders' equity.....						7,618,000	33,920,500

- (1) Includes 555,556 shares which Cobe Laboratories, Inc. has agreed to purchase, assuming an initial public offering price of \$9.00 per share.
- (2) Excludes options and warrants to purchase 1,132,361 shares of Common Stock at a weighted average exercise price of \$6.50 per share, assuming the closing of this offering at an initial public offering price of \$9.00 per share. See "Management--Stock Option and Employee Benefit Plans" and Notes 4 and 9 of Notes to Financial Statements.
- (3) See Note 1 of Notes to Financial Statements for information concerning the computation of pro forma net loss per share and shares used in computing pro forma net loss per share.
- (4) Adjusted to reflect the sale by the Company of 3,250,000 shares of Common Stock offered hereby at an assumed initial public offering price of \$9.00 per share, after deduction of underwriting discounts and commissions and estimated offering expenses. See "Use of Proceeds" and "Capitalization."

Unless otherwise indicated, all information contained in this Prospectus (i) gives effect to a two-for-three reverse stock split to be effected prior to the closing of this offering, (ii) gives effect to the conversion of all outstanding shares of the Company's Preferred Stock into 8,098,422 shares of Common Stock upon the closing of this offering, (iii) gives effect to the filing of an Amended and Restated Articles of Incorporation upon the closing of

this offering to, among other things, create a new class of undesignated preferred stock and (iv) assumes no exercise of the Underwriters' over-allotment option. See "Description of Capital Stock" and "Underwriting." This Prospectus contains forward-looking statements which involve risks and uncertainties. The Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in "Risk Factors."



## RISK FACTORS

In addition to the other information in this Prospectus, prospective investors should consider the following risk factors in evaluating the Company and its business before purchasing any of the Common Stock offered hereby.

### UNCERTAINTIES RELATED TO PRODUCT DEVELOPMENT AND MARKETABILITY

The Company has not completed the development or clinical trials of any of its cell culture technologies or product candidates and, accordingly, has not begun to market or generate revenue from their commercialization. Furthermore, the Company's technologies and product candidates are based on cell culture processes and methodologies which are not widely employed. Commercialization of the Company's lead product candidate, the Aastrom CPS, will require substantial additional research and development by the Company as well as substantial clinical trials. There can be no assurance that the Company will successfully complete development of the Aastrom CPS or its other product candidates, or successfully market its technologies or product candidates, which lack of success would have a material adverse effect on the Company's business, financial condition and results of operations.

The Company or its collaborators may encounter problems and delays relating to research and development, regulatory approval and intellectual property rights of the Company's technologies and product candidates. There can be no assurance that the Company's research and development programs will be successful, that its cell culture technologies and product candidates will facilitate the ex vivo production of cells with the expected biological activities in humans, that its technologies and product candidates, if successfully developed, will prove to be safe and efficacious in clinical trials, that the necessary regulatory approvals for any of the Company's technologies or product candidates and the cells produced in such products will be obtained or, if obtained, will be as broad as sought, that patents will issue on the Company's patent applications or that the Company's intellectual property protections will be adequate. The Company's product development efforts are primarily directed toward obtaining regulatory approval to market the Aastrom CPS as an alternative to the bone marrow harvest and peripheral blood progenitor cell ("PBPC") stem cell collection methods. These stem cell collection methods have been widely practiced for a number of years, and there can be no assurance that any of the Company's technologies or product candidates will be accepted by the marketplace as readily as these or other competing processes and methodologies, or at all. The failure by the Company to achieve any of the foregoing would have a material adverse effect on the Company's business, financial condition and results of operations.

### UNCERTAINTIES RELATED TO CLINICAL TRIALS

The approval of the United States Food and Drug Administration (the "FDA") will be required before any commercial sales of the Company's product candidates may commence in the United States, and approvals from foreign regulatory authorities will be required before international sales may commence. Prior to obtaining necessary regulatory approvals, the Company will be required to demonstrate the safety and efficacy of its processes and product candidates and the cells produced by such processes and in such products for application in the treatment of humans through extensive preclinical studies and clinical trials. To date, the Company has only tested the safety of cells produced in the cell culture chamber predecessor of the Aastrom CPS, and only in a limited number of patients. The Company is currently conducting a pre-pivotal clinical trial to demonstrate the safety and biological activity of patient-derived cells produced in the Company's cell culture chamber in a limited number of patients with breast cancer and, if the results from this pre-pivotal trial are successful, the Company intends to seek clearance from the FDA to commence its pivotal clinical trial. The results of preclinical studies and clinical trials of the Company's product candidates, however, may not necessarily be predictive of results that will be obtained from subsequent or more extensive clinical trials. Further, there can be no assurance that pre-pivotal or pivotal clinical trials of any of the Company's product candidates will demonstrate the safety and efficacy of such products, or of the cells produced in such products, to the extent necessary to obtain required regulatory approvals or market acceptance.

The ability of the Company to complete its clinical trials in a timely manner is dependent upon many factors, including the rate of patient enrollment. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of suitable patients to clinical sites and the eligibility criteria for the

study. The Company has experienced delays in patient accrual in its current pre-pivotal clinical trial. Further delays in patient accrual, in the Company's current pre-pivotal clinical trial or in future clinical trials, could result in increased costs associated with clinical trials or delays in receiving regulatory approvals and commercialization, if any. Furthermore, the progress of clinical investigations with the Aastrom CPS and the Company's other product candidates will be monitored by the FDA, which has the authority to cease clinical investigations, at any time, due to patient safety or other considerations. Any of the foregoing would have a material adverse effect on the Company's business, financial condition and results of operations. See "-- Uncertainty of Regulatory Approval; --Extensive Government Regulation."

The Company's current pre-pivotal trial is designed to demonstrate specific biological safety and activity of cells produced in the Aastrom CPS, but is not designed to demonstrate long-term sustained engraftment of such cells. The patients enrolled in this pre-pivotal trial will have undergone extensive chemotherapy treatment prior to the infusion of cells produced in the Aastrom CPS. Such treatments will have substantially weakened these patients and may have irreparably damaged their hematopoietic systems. Due to these and other factors, it is possible that one or more of these patients may die or suffer severe complications during the course of the pre-pivotal trial. Further, there can be no assurance that patients receiving cells produced with the Company's technologies and product candidates will demonstrate long-term engraftment in a manner comparable to cells obtained from current stem cell therapy procedures, or at all. The failure to adequately demonstrate the safety or efficacy of the Company's technologies and product candidates, including long-term sustained engraftment, or the death of, or occurrence of severe complications in, one or more patients could substantially delay, or prevent, regulatory approval of such product candidates and have a material adverse effect on the Company's business, financial condition and results of operations.

#### MANUFACTURING AND SUPPLY UNCERTAINTIES; DEPENDENCE ON THIRD PARTIES

The Company does not operate and has no current intention to operate manufacturing facilities for the production of its product candidates. The Company currently arranges for the manufacturing of its product candidates and their components with third parties, and expects to continue to do so in the foreseeable future. The Company has entered into collaborative product development agreements with SeaMED Corporation ("SeaMED") and Ethox Corporation ("Ethox") for the collaborative development and manufacture of certain components of the Aastrom CPS. The Company is also dependent upon Immunex Corporation ("Immunex"), Life Technologies, Inc., Biowittaker and Anchor Advanced Products for the supply of certain cytokines, serum, media and injection molded materials, respectively, to be used in conjunction with, or as components of, the Aastrom CPS. With regard to cytokines that are not commercially available from other sources, Immunex is currently the Company's sole supplier and few alternative supply sources exist. Apart from SeaMED, Ethox and Immunex, the Company currently does not have contractual commitments from any of these manufacturers or suppliers. There can be no assurance that the Company's supply of such key cytokines, components and other materials will not become limited, be interrupted or become restricted to certain geographic regions. Furthermore, the Company currently only has the right to distribute cytokines obtained from Immunex in the United States and there can be no assurance that the Company will be able to obtain the worldwide right to distribute such cytokines or manufacture such cytokines by or for itself in the event that the Company's agreement with Immunex is terminated. There can also be no assurance that the Company will be able to obtain alternative components and materials from other manufacturers of acceptable quality, or on terms or in quantities acceptable to the Company or that the Company will not require additional cytokines, components and other materials to manufacture or use its product candidates. In the event that any of the Company's key manufacturers or suppliers fail to perform their respective obligations or the Company's supply of such cytokines, components or other materials become limited or interrupted, the Company would not be able to market its product candidates on a timely and cost-competitive basis, if at all, which would have a material adverse effect on the Company's business, financial condition and results of operations.

Like SeaMED and Ethox, other suppliers would need to meet FDA manufacturing requirements and undergo rigorous facility and process validation tests required by federal and state regulatory authorities. Any significant delays in the completion and validation of such facilities could have a material adverse effect on the

ability of the Company to complete clinical trials and to market its products on a timely and profitable basis, which in turn would have a material adverse effect on the Company's business, financial condition and results of operations.

There can also be no assurance that the Company will be able to continue its present arrangements with its suppliers, supplement existing relationships or establish new relationships or that the Company will be able to identify and obtain the ancillary materials that are necessary to develop its product candidates in the future. The Company's dependence upon third parties for the supply and manufacture of such items could adversely affect the Company's ability to develop and deliver commercially feasible products on a timely and competitive basis.

#### HISTORY OF OPERATING LOSSES; ANTICIPATION OF FUTURE LOSSES

The Company is a development stage company and there can be no assurance that its product applications for cell therapy will be successful. The Company has not yet completed the development and clinical trials of any of its product candidates and, accordingly, has not yet begun to generate revenues from the commercialization of any of its product candidates. Aastrom was incorporated in 1989 and has experienced substantial operating losses since inception. As of September 30, 1996, the Company has incurred net operating losses totaling approximately \$30.3 million. Such losses have resulted principally from costs incurred in the research and development of the Company's cell culture technologies and the Aastrom CPS, general and administrative expenses, and the prosecution of patent applications. The Company expects to incur significant and increasing operating losses for at least the next several years, primarily owing to the expansion of its research and development programs, including preclinical studies and clinical trials. The amount of future losses and when, if ever, the Company will achieve profitability, are uncertain. The Company's ability to achieve profitability will depend, among other things, on successfully completing the development of its product candidates, obtaining regulatory approvals, establishing manufacturing, sales and marketing arrangements with third parties, and raising sufficient funds to finance its activities. No assurance can be given that the Company's product development efforts will be successful, that required regulatory approvals will be obtained, that any of the Company's product candidates will be manufactured at a competitive cost and will be of acceptable quality, or that the Company will be able to achieve profitability or that profitability, if achieved, can be sustained.

#### LIMITED SALES AND MARKETING CAPABILITIES; DEPENDENCE ON COLLABORATIVE RELATIONSHIPS

The Company has limited internal sales, marketing and distribution capabilities. If any of the Company's product candidates are successfully developed and the necessary regulatory approvals are obtained, the Company intends to market such products through collaborative relationships with companies that have established sales, marketing and distribution capabilities. The Company has established a strategic alliance with Cobe Laboratories, Inc. and Cobe BCT, Inc. (collectively, "Cobe") for the worldwide distribution of the Aastrom CPS for stem cell therapy and related uses. Cobe has the right to terminate its Distribution Agreement with the Company upon twelve months' notice upon a change of control of the Company, other than to Cobe, or at any time after December 31, 1997, if Cobe determines that commercialization of the Aastrom CPS for stem cell therapy on or prior to December 31, 1998 is unlikely. See "--Consequences of Cobe Relationship."

The amount and timing of resources that Cobe commits to its strategic alliance activities with the Company are, to a significant extent, outside of the control of the Company. There can be no assurance that Cobe will pursue the marketing and distribution of the Company's products, continue to perform its obligations under its agreements with the Company or that the Company's strategic alliance with Cobe will result in the successful commercialization and distribution of the Company's technologies and product candidates. There can also be no assurance that Cobe will be successful in its efforts to market and distribute the Company's products for stem cell therapy. The suspension or termination of the Company's strategic alliance with Cobe or the failure of the strategic alliance to be successful would have a material adverse effect on the Company's business, financial condition and results of operations.

Subject to the contractual requirements of the Cobe relationship, the Company will seek to enter into other agreements relating to the development and marketing of product candidates and in connection with such

agreements may rely upon corporate partners to conduct clinical trials, seek regulatory approvals for, manufacture and market its potential products. There can be no assurance that the Company will be able to establish collaborative relationships for the development or marketing of the Company's product candidates on acceptable terms, if at all. The inability of the Company to establish such collaborative relationships may require the Company to curtail its development or marketing activities with regard to its potential products which would have a material adverse effect on the Company's business, financial condition and results of operations.

#### FUTURE CAPITAL NEEDS; UNCERTAINTY OF ADDITIONAL FUNDING

To date, Aastrom has funded its operations primarily through the sale of equity securities and corporate collaborations. The Company anticipates that the net proceeds of this offering, together with the Company's available cash and expected interest income thereon, will be sufficient to finance its research and development and other working capital requirements for 18 months or less. This estimate is based on certain assumptions which could be negatively impacted by the matters discussed under this heading and elsewhere under the caption "Risk Factors." In order to grow and expand its business, and to introduce its product candidates into the marketplace, the Company will need, among other things, to raise additional funds.

The Company's future capital requirements will depend upon many factors, including, but not limited to, continued scientific progress in its research and development programs, costs and timing of conducting clinical trials and seeking regulatory approvals and patent prosecutions, competing technological and market developments, possible changes in existing collaborative relationships, the ability of the Company to establish additional collaborative relationships, and effective commercialization activities and facilities expansions if and as required. Because of the Company's potential long-term funding requirements, it may attempt to access the public or private equity markets if and whenever conditions are favorable, even if it does not have an immediate need for additional capital at that time. There can be no assurance that any such additional funding will be available to the Company on reasonable terms, or at all. If adequate funds are not available, the Company may be required to delay or terminate research and development programs, curtail capital expenditures, and reduce business development and other operating activities. If the Company is not successful in finding, entering into and maintaining arrangements with collaborative partners, its development efforts could be delayed. Furthermore, there can be no assurance that the Company will be able to implement collaborative development agreements under acceptable terms, if at all. Any of the foregoing capital constraints would have a material adverse effect on the Company's business, financial condition and results of operations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations--Liquidity and Capital Resources."

#### UNCERTAINTY OF REGULATORY APPROVAL; EXTENSIVE GOVERNMENT REGULATION

The Company's research and development activities, preclinical studies, clinical trials, and the anticipated manufacturing and marketing of its product candidates are subject to extensive regulation by the FDA and other regulatory authorities in the United States. These activities are also regulated in other countries where the Company intends to test and market its product candidates. The approval of the FDA will be required before any commercial sales of the Company's product candidates may commence in the United States. Additionally, the Company will be required to obtain approvals from foreign regulatory authorities before international sales may commence.

The Company's products are potentially subject to regulation as medical devices under the Federal Food, Drug, and Cosmetic Act, or as biological products under the Public Health Service Act, or both. Different regulatory requirements may apply to the Company's products depending on how they are categorized by the FDA under these laws. To date, the FDA has indicated that it intends to regulate the Aastrom CPS for stem cell therapy as a Class III medical device through the Center for Biologics Evaluation and Research. However, there can be no assurance that the FDA will ultimately regulate the Aastrom CPS for stem cell therapy as a medical device or that regulatory approval for such product will be obtained in a timely fashion or at all.

Further, it is unclear whether the FDA will separately regulate the cell therapies derived from the Aastrom CPS. The FDA is in the process of developing its requirements with respect to somatic cell therapy and gene cell therapy products, and recently proposed a new type of license for autologous cells manipulated ex vivo and

intended for structural repair or reconstruction; autologous cells are cells obtained from, and administered to, the same patient. This proposal may indicate that the FDA will impose a similar approval requirement on other types of autologous cellular therapies, such as autologous cells for stem cell therapy. Any such additional regulatory or approval requirement could significantly delay the introduction of the Company's product candidates to the market, and have a material adverse effect on the Company's business, financial condition and results of operations. Until the FDA issues definitive regulations covering the Company's product candidates, the regulatory requirements for approval of such product candidates will continue to be subject to significant uncertainty.

Before marketing, the Aastrom CPS or other product candidates developed by the Company must undergo an extensive regulatory approval process. The regulatory process, which includes preclinical studies and clinical trials to establish safety and efficacy, takes many years and requires the expenditure of substantial resources. Data obtained from preclinical and clinical activities are susceptible to varying interpretations which could delay, limit or prevent FDA approval. In addition, delays or rejections may be encountered based upon changes in FDA policy for medical product approvals during the period of product development and FDA regulatory review of applications submitted by the Company for product approval. Similar delays may also be encountered in foreign countries. There can be no assurance that, even after the expenditures of substantial time and financial resources, regulatory approval will be obtained for any products developed by the Company. Moreover, if regulatory approval of a product is obtained, such approval may be subject to limitations on the indicated uses for which it may be marketed. Further, even if such regulatory approval is obtained, a marketed product, its manufacturer and its manufacturing facilities are subject to continual review and periodic inspections by the FDA, and later discovery of previously unknown problems with a product, manufacturer or facility may result in restrictions on such product or manufacturer, including a withdrawal of the product from the market. Failure to comply with the applicable regulatory requirements can, among other things, result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution. Further, additional government regulation may be established which could prevent or delay regulatory approval of the Company's products. See "Business--Government Regulation."

#### CONSEQUENCES OF COBE RELATIONSHIP

Following the completion of this offering, Cobe will be the largest single shareholder of the Company, beneficially owning approximately 23.1% of the outstanding Common Stock. In addition, Cobe has certain preemptive rights to maintain its relative percentage ownership and voting interest in the Company following this offering, and has the option, for a period of three years following this offering, to purchase from the Company an amount of Common Stock equal to 30% of the Company's fully diluted shares after the exercise of such option, at a purchase price equal to 120% of the public market trading price of the Company's Common Stock. If such option is exercised, Cobe would significantly increase its ownership interest in the Company and, as a consequence of such share ownership, obtain effective control of the Company. Such effective control would include the ability to influence the outcome of shareholder votes, including votes concerning the election of directors, the amendment of provisions of the Company's Restated Articles of Incorporation or Bylaws, and the approval of mergers and other significant transactions. Cobe also has been granted a "right of first negotiation" in the event that the Company determines to sell all, or any material portion, of its assets to another company or to merge with another company. Furthermore, the Company has agreed to use reasonable and good faith efforts to cause a nominee designated by Cobe to be elected to the Board of Directors for as long as Cobe owns at least 15% of the outstanding Common Stock. In addition, Edward C. Wood, Jr., the President of Cobe BCT, is a director of the Company. The existence of the foregoing rights or the exercise of such control by Cobe could have the effect of delaying, deterring or preventing certain takeovers or changes in control of the management of the Company, including transactions in which shareholders might otherwise receive a premium for their shares over then current market prices. See "Description of Capital Stock--Rights of Cobe."

#### UNCERTAINTY REGARDING PATENTS AND PROPRIETARY RIGHTS

Aastrom's success depends in part on its ability, and the ability of its licensors, to obtain patent protection for its products and processes, preserve its trade secrets, defend and enforce its rights against infringement and

operate without infringing the proprietary rights of third parties, both in the United States and in other countries. The validity and breadth of claims in medical technology patents involve complex legal and factual questions and, therefore, may be highly uncertain. No assurance can be given that any patents based on pending patent applications or any future patent applications of the Company or its licensors will be issued, that the scope of any patent protection will exclude competitors or provide competitive advantages to the Company, that any of the patents that have been or may be issued to the Company or its licensors will be held valid if subsequently challenged or that others will not claim rights in or ownership of the patents and other proprietary rights held or licensed by the Company. Furthermore, there can be no assurance that others have not developed or will not develop similar products, duplicate any of the Company's products or design around any patents that have been or may be issued to the Company or its licensors. Since patent applications in the United States are maintained in secrecy until patents issue, the Company also cannot be certain that others did not first file applications for inventions covered by the Company's and its licensors' pending patent applications, nor can the Company be certain that it will not infringe any patents that may issue to others on such applications. The Company relies on certain licenses granted by the University of Michigan and Dr. Cremonese for the majority of its patent rights. If the Company breaches such agreements or otherwise fails to comply with such agreements, or if such agreements expire or are otherwise terminated, the Company may lose its rights under the patents held by the University of Michigan and Dr. Cremonese, which would have a material adverse effect on the Company's business, financial condition and results of operation. See "Business--Patents and Proprietary Rights--University of Michigan Research Agreement and License Agreement" and "--Patents and Proprietary Rights--License Agreement with J.G. Cremonese." The Company also relies on trade secrets and unpatentable know-how which it seeks to protect, in part, by confidentiality agreements with its employees, consultants, suppliers and licensees. 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 or unpatentable know-how will not otherwise become known or be independently developed by competitors.

The Company's success will also depend in part on its ability to develop commercially viable products without infringing the proprietary rights of others. The Company has not conducted freedom of use patent searches and no assurance can be given that patents do not exist or could not be filed which would have an adverse effect on the Company's ability to market its products or maintain its competitive position with respect to its products. If the Company's technology components, devices, designs, products, processes or other subject matter are claimed under other existing United States or foreign patents or are otherwise protected by third party proprietary rights, the Company may be subject to infringement actions. In such event, the Company may challenge the validity of such patents or other proprietary rights or be required to obtain licenses from such companies in order to develop, manufacture or market its products. There can be no assurance that the Company would be able to obtain such licenses or that such licenses, if available, could be obtained on commercially reasonable terms. Furthermore, the failure to either develop a commercially viable alternative or obtain such licenses could result in delays in marketing the Company's proposed products or the inability to proceed with the development, manufacture or sale of products requiring such licenses, which could have a material adverse effect on the Company's business, financial condition and results of operations. If the Company is required to defend itself against charges of patent infringement or to protect its own proprietary rights against third parties, substantial costs will be incurred regardless of whether the Company is successful. Such proceedings are typically protracted with no certainty of success. An adverse outcome could subject the Company to significant liabilities to third parties, and force the Company to curtail or cease its development and sale of its products and processes. See "Business--Patents and Proprietary Rights."

#### NO ASSURANCE OF THIRD PARTY REIMBURSEMENT

The Company's ability to successfully commercialize its product candidates will depend in part on the extent to which payment for the Company's products and related treatments will be available from government healthcare programs, such as Medicare and Medicaid, as well as private health insurers, health maintenance organizations and other third party payors. Government and other third-party payors are increasingly attempting to contain health care costs, in part by challenging the price of medical products and services. Reimbursement by third-party payors depend on a number of factors, including the payor's determination that use of the product

is safe and effective, not experimental or investigational, medically necessary, appropriate for the specific patient and cost-effective. Since reimbursement approval is required from each payor individually, seeking such approvals is a time-consuming and costly process which will require the Company to provide scientific and clinical support for the use of each of the Company's products to each payor separately. Significant uncertainty exists as to the payment status of newly approved medical products, and there can be no assurance that adequate third-party payments will be available to enable the Company to establish or maintain price levels sufficient to realize an appropriate return on its investment in product development. If adequate payment levels are not provided by government and third-party payors for use of the Company's products, the market acceptance of those products will be adversely affected.

There can be no assurance that reimbursement in the United States or foreign countries will be available for any of the Company's product candidates, that any reimbursement granted will be maintained, or that limits on reimbursement available from third-party payors will not reduce the demand for, or negatively affect the price of, the Company's products. The unavailability or inadequacy of third-party reimbursement for the Company's product candidates would have a material adverse effect on the Company. Finally, the Company is unable to forecast what additional legislation or regulation relating to the healthcare industry or third-party coverage and reimbursement may be enacted in the future, or what effect such legislation or regulation would have on the Company's business.

#### COMPETITION AND TECHNOLOGICAL CHANGE

The Company is engaged in the development of medical products and processes which will face competition in a marketplace characterized by rapid technological change. Many of the Company's competitors have significantly greater resources than the Company, and have developed and may develop product candidates and processes that directly compete with the Company's products. Moreover, competitors that are able to achieve patent protection, obtain regulatory approvals and commence commercial sales of their products before the Company, and competitors that have already done so, may enjoy a significant competitive advantage. The Company's product development efforts are primarily directed toward obtaining regulatory approval to market the Aastrom CPS for stem cell therapy. That market is currently dominated by the bone marrow harvest and PBPC collection methods. The Company's clinical data, although early, is inconclusive as to whether or not cells expanded in the Aastrom CPS will enable hematopoietic recovery within the time frames currently achieved by the bone marrow harvest and PBPC collection methods. In addition, the bone marrow harvest and PBPC collection methods have been widely practiced for a number of years and, recently, the patient costs associated with these procedures have begun to decline. There can be no assurance that the Aastrom CPS method, if approved for marketing, will prove to be competitive with these established collection methods on the basis of hematopoietic recovery time, cost or otherwise. The Company also is aware of certain other products manufactured or under development by competitors that are used for the prevention or treatment of certain diseases and health conditions which the Company has targeted for product development. In particular, the Company is aware that competitors such as Amgen, Inc., CellPro, Incorporated, Systemix, Inc., Baxter Healthcare Corp. and Rhone-Poulenc Rorer Inc. ("RPR") are in advanced stages of development of technologies and products for use in stem cell therapy and other market applications currently being pursued by the Company. In addition, Cobe, a significant shareholder of the Company, is a market leader in the blood cell processing products industry and, accordingly, a potential competitor of the Company. There can be no assurance that developments by others will not render the Company's product candidates or technologies obsolete or noncompetitive, that the Company will be able to keep pace with new technological developments or that the Company's product candidates will be able to supplant established products and methodologies in the therapeutic areas that are targeted by the Company. The foregoing factors could have a material adverse effect on the Company's business, financial condition and results of operations.

#### HAZARDOUS MATERIALS

The Company's research and development activities involve the controlled use of hazardous materials, chemicals and various radioactive compounds. The Company is subject to federal, state and local laws and

regulations governing the use, manufacture, storage, handling and disposal of such materials and certain waste products. In the event of any contamination or injury from these materials, the Company could be held liable for any damages that result and any such liability could exceed the resources of the Company. Furthermore, the failure to comply with current or future regulations could result in the imposition of substantial fines against the Company, suspension of production, alteration of its manufacturing processes or cessation of operations. There can be no assurance that the Company will not be required to incur significant costs to comply with any such laws and regulations in the future, or that such laws or regulations will not have a material adverse effect on the Company's business, financial condition and results of operations. Any failure by the Company to control the use, disposal, removal or storage of, or to adequately restrict the discharge of, or assist in the cleanup of, hazardous chemicals or hazardous, infectious or toxic substances could subject the Company to significant liabilities, including joint and several liability under certain statutes. The imposition of such liabilities would have a material adverse effect on the Company's business, financial condition and results of operations.

#### POTENTIAL PRODUCT LIABILITY; AVAILABILITY OF INSURANCE

The Company is, and will continue to be, subject to the risk of product liability claims alleging that the use of its products has adverse effects on patients. This risk exists for product candidates tested in human clinical trials as well as products that are sold commercially, if any. Further, given the medical conditions for which the Aastrom CPS is expected to be utilized, any product liability claim could entail substantial compensatory and punitive damages. The assertion of product liability claims against the Company could result in a substantial cost to, and diversion of efforts by, the Company. There can be no assurance that the Company would prevail in any such litigation or that product liability claims, if made, would not result in a recall of the Company's products or a change in the indications for which they may be used. The Company maintains product liability insurance coverage in the aggregate of \$5,000,000 for claims arising from the use of its product candidates in clinical trials. There can be no assurance that the Company will be able to maintain such insurance or obtain product liability insurance in the future to cover any of its product candidates which are commercialized or that such existing or any future insurance and the resources of the Company would be sufficient to satisfy any liability resulting from product liability claims. Consequently, a product liability claim or other claim with respect to uninsured or underinsured liabilities could have a material adverse effect on the Company's business, financial condition and results of operations.

#### DEPENDENCE ON KEY PERSONNEL

The success of the Company depends in large part upon the Company's ability to attract and retain highly qualified scientific and management personnel. The Company faces competition for such personnel from other companies, research and academic institutions and other entities. There can be no assurance that the Company will be successful in hiring or retaining key personnel. See "Business--Employees" and "Management."

#### SHARES ELIGIBLE FOR FUTURE SALE

Sales of substantial amounts of Common Stock in the public market following this offering could adversely affect the prevailing market price of the Common Stock and the Company's ability to raise capital in the future. Upon completion of this offering, the Company will have a total of 13,235,734 shares of Common Stock outstanding, of which the 3,250,000 shares offered hereby will be freely tradeable without restriction under the Securities Act of 1933, as amended (the "Securities Act") by persons other than "affiliates" of the Company, as defined under the Securities Act. The remaining 9,985,734 shares of Common Stock outstanding are "restricted securities" as the term is defined by Rule 144 promulgated under the Securities Act (the "Restricted Shares"). Of the 9,985,734 Restricted Shares, 6,996,920 shares may be sold under Rule 144, subject in some cases to certain volume restrictions and other conditions imposed thereby. An additional 152,056 shares will become eligible for sale 90 days after completion of the offering pursuant to Rule 144 and 701. The remaining 2,836,758 shares will be eligible for sale upon the expiration of their respective holding periods as set forth in Rule 144. The Securities and Exchange Commission has proposed certain amendments to Rule 144 that would reduce by one year the holding periods required for shares subject to Rule 144 to become eligible for resale in



the public market. This proposal, if adopted, would permit earlier resale of shares of Common Stock currently subject to holding periods under Rule 144. No assurance can be given concerning whether or when the proposal will be adopted by the Securities and Exchange Commission. Furthermore, 9,947,757 of the Restricted Shares are subject to lock-up agreements expiring 180 days following the date of this Prospectus. Such agreements provide that Cowen & Company may, in its sole discretion and at any time without notice, release all or a portion of the shares subject to these lock-up agreements. Upon the expiration of the lock-up agreements, 7,148,976 of the 9,985,734 Restricted Shares may be sold pursuant to Rule 144 or 701, subject in some cases to certain volume restrictions imposed thereby. Certain existing shareholders have rights to include shares of Common Stock owned by them in future registrations by the Company for the sale of Common Stock or to request that the Company register their shares under the Securities Act. See "Description of Capital Stock--Registration Rights." Following the date of this Prospectus, the Company intends to register on one or more registration statements on Form S-8 approximately 1,837,160 shares of Common Stock issuable under its stock option and stock purchase plans. Of the 1,837,160 shares issuable under its stock option and stock purchase plans, 336,254 shares are subject to outstanding options as of September 30, 1996, all of which shares are subject to lock-up agreements. Shares covered by such registration statements will immediately be eligible for sale in the public market upon the filing of such registration statements. The Company also has issued warrants to purchase 69,444 shares of Common Stock which become exercisable 90 days after the closing of this offering and, upon the effective date of this offering, will grant an immediately exercisable option to purchase 333,333 shares of Common Stock. The shares issuable upon exercise of such warrants and the shares issuable upon exercise of such option will be subject to lock-up agreements. In addition, Cobe has agreed to purchase \$5,000,000 of Common Stock in this offering at the initial public offering price per share, all of which shares will be subject to a lock-up agreement. See "Management--Benefit Plans," "Certain Transactions" and "Shares Eligible for Future Sale."

#### CONTROL BY EXISTING MANAGEMENT AND SHAREHOLDERS

Upon completion of this offering, the Company's directors, executive officers, and certain principal shareholders, including Cobe, affiliated with members of the Board of Directors and their affiliates will beneficially own approximately 44% of the Common Stock (approximately 42% if the Underwriters' over-allotment option is exercised in full). Accordingly, such shareholders, acting together, may have the ability to exert significant influence over the election of the Company's Board of Directors and other matters submitted to the Company's shareholders for approval. The voting power of these holders may discourage or prevent certain takeovers or changes in control of the management of the Company unless the terms are approved by such holders. See "Principal Shareholders."

#### NO PRIOR PUBLIC MARKET; POSSIBLE STOCK PRICE VOLATILITY

Prior to this offering there has been no public market for the Common Stock, and an active public market for the Common Stock may not develop or be sustained. The initial public offering price will be determined through negotiation between the Company and the Representatives of the Underwriters based on several factors that may not be indicative of future market prices. See "Underwriting" for a discussion of the factors considered in determining the initial public offering price. The trading price of the Common Stock and the price at which the Company may sell securities in the future could be subject to wide fluctuations in response to announcements of clinical results, research activities, technological innovations or new products by the Company or competitors, changes in government regulation, developments concerning proprietary rights, variations in the Company's operating results, announcements by the Company of regulatory developments, litigation, disputes concerning patents or proprietary rights or public concern regarding the safety, efficacy or other implications of the products or methodologies to be developed by the Company or its collaborators or enabled by the Company's technology, general market conditions, the liquidity of the Company or its ability to raise additional funds, and other factors or events. In addition, the stock market has experienced extreme fluctuations in price and volume. This volatility has significantly affected the market prices for securities of emerging biotechnology companies for reasons frequently unrelated to or disproportionate to the operating performance of the specific companies. These market fluctuations as well as general fluctuations in the stock markets may adversely affect the market price of the Common Stock.

#### ANTI-TAKEOVER EFFECT OF CHARTER AND BY-LAW PROVISIONS AND MICHIGAN LAW

The Company's Restated Articles of Incorporation authorize the Board of Directors to issue, without shareholder approval, 5,000,000 shares of Preferred Stock with voting, conversion, and other rights and preferences that could materially and adversely affect the voting power or other rights of the holders of Common Stock. The issuance of Preferred Stock or of rights to purchase Preferred Stock could be used to discourage an unsolicited acquisition proposal. The Company's Bylaws contain procedural restrictions on director nominations by shareholders and the submission of other proposals for consideration at shareholder meetings. The possible issuance of Preferred Stock and the procedures required for director nominations and shareholder proposals could discourage a proxy contest, make more difficult the acquisition of a substantial block of Common Stock, or limit the price that investors might be willing to pay in the future for shares of Common Stock. In addition, certain provisions of Michigan law applicable to the Company could also delay or make more difficult a merger, tender offer, or proxy contest involving the Company. See "Description of Capital Stock."

#### IMMEDIATE AND SUBSTANTIAL DILUTION; ABSENCE OF DIVIDENDS

Purchasers of the Common Stock in this offering will experience immediate and substantial dilution in the net tangible book value of the Common Stock. Additional dilution is likely to occur upon the exercise of outstanding options granted by the Company. The Company has never paid cash dividends and does not anticipate paying any cash dividends in the foreseeable future. See "Dilution" and "Dividend Policy."

#### THE COMPANY

Astrom was incorporated in Michigan in March 1989 under the name Ann Arbor Stromal, Inc. In 1991, the Company changed its name to Astrom Biosciences, Inc. The Company's principal executive offices are located at 24 Frank Lloyd Wright Drive, P.O. Box 376, Ann Arbor, Michigan 48106 and its telephone number is (313) 930-5555. Astrom(TM) and the Company's stylized logo are trademarks of the Company. Leukine and Neupogen are registered trademarks of Immunex Corporation and Amgen, Inc., respectively.

#### USE OF PROCEEDS

The net proceeds to the Company from the sale of the 3,250,000 shares of Common Stock offered hereby are estimated to be \$26,302,500 (\$30,382,875 if the Underwriters exercise their over-allotment option in full), at an assumed initial public offering price of \$9.00 per share and after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company.

The net proceeds from this offering are expected to be used to fund product development of the Astrom CPS, other research and development activities, including pre-pivotal and pivotal clinical trials of the Astrom CPS, and for working capital and other general corporate purposes, including scheduled repayments of obligations under equipment leases. The Company has \$339,000 of outstanding equipment lease commitments as of September 30, 1996 with final payments due between November 1996 and May 1999 and bear interest ranging from 9.7% to 12.1%.

The Company anticipates that the net proceeds of this offering, together with the Company's available cash and expected interest income thereon, should be sufficient to finance the Company's research and development and other working capital requirements for approximately 18 months. This estimate is based on certain assumptions which could be negatively impacted by the matters discussed in "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations--Liquidity and Capital Resources." Pending such uses, the net proceeds will be invested in short-term, interest bearing investment grade securities.

#### DIVIDEND POLICY

The Company has never declared or paid any cash dividends on its Common Stock and does not anticipate paying such cash dividends in the foreseeable future. The Company currently anticipates that it will retain all future earnings, if any, for use in the development of its business.

CAPITALIZATION

The following table sets forth the capitalization of the Company (i) as of September 30, 1996, and (ii) on a pro forma as adjusted basis to reflect the conversion of all outstanding shares of Preferred Stock into Common Stock upon the closing of this offering and the receipt of the estimated net proceeds from the Company's sale of 3,250,000 shares of Common Stock pursuant to this offering. See "Use of Proceeds" and "Certain Transactions."

	SEPTEMBER 30, 1996	
	ACTUAL	PRO FORMA AS ADJUSTED
Long-term portion of capital lease obligations(1)....	\$ 147,000	\$ 147,000
Shareholders' equity(2):		
Preferred stock, no par value: 10,157,647 shares authorized, 9,657,648 shares issued and outstanding, actual; 5,000,000 shares authorized, no shares issued and outstanding, as adjusted.....	37,718,000	--
Common stock, no par value: 18,500,000 shares authorized, 1,887,312 shares issued and outstanding, actual; 40,000,000 shares authorized, 13,235,734 issued and outstanding, as adjusted, in each case net of shareholder notes receivable.....	198,000	64,218,500
Deficit accumulated during the development stage.....	(30,298,000)	(30,298,000)
Total shareholders' equity.....	7,618,000	33,920,500
Total capitalization.....	\$ 7,765,000	\$ 34,067,500

(1) See Note 7 of Notes to Financial Statements.

(2) Excludes options and warrants to purchase 1,132,361 shares of Common Stock at a weighted average exercise price of \$6.50 per share, assuming the closing of this offering at an initial public offering price of \$9.00 per share. See "Management--Stock Option and Employee Benefit Plans" and Notes 4 and 9 of Notes to Financial Statements.

DILUTION

The Company's pro forma net tangible book value at September 30, 1996 was approximately \$7,618,000 or \$.76 per share. Pro forma net tangible book value per share represents the amount of the Company's shareholders' equity, less intangible assets, divided by 9,985,734, the number of shares of Common Stock outstanding as of September 30, 1996, after giving effect to the automatic conversion of all Preferred Stock into Common Stock upon the closing of this offering.

After giving effect to the sale of 3,250,000 shares of Common Stock in this offering at an assumed initial public offering price of \$9.00 per share and after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company, the pro forma net tangible book value of the Company as of September 30, 1996 would have been \$33,920,500, or \$2.56 per share. This represents an immediate increase in pro forma net tangible book value of \$1.80 per share to existing shareholders and an immediate dilution in pro forma net tangible book value of \$6.44 per share to purchasers of Common Stock in this offering, as illustrated in the following table:

Assumed initial public offering price per share.....	\$9.00
Pro forma net tangible book value per share as of September 30, 1996.....	\$ .76
Increase per share attributable to new investors.....	1.80
	-----
Pro forma net tangible book value per share after this offering.....	2.56
	-----
Dilution per share to new investors.....	\$6.44
	=====

Utilizing the foregoing assumptions, the following table summarizes the total consideration paid to the Company and the average price per share paid by the existing shareholders and by purchasers of shares of Common Stock in this offering:

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE PER SHARE
	NUMBER	PERCENTAGE	AMOUNT	PERCENTAGE	
Existing shareholders...	9,985,734	75%	\$38,083,000	57%	\$3.81
New investors.....	3,250,000	25%	29,250,000	43%	9.00
	-----	---	-----	---	---
Total.....	13,235,734	100%	\$67,333,000	100%	
	=====	===	=====	===	

The foregoing excludes options and warrants to purchase 1,132,361 shares of Common Stock at a weighted average exercise price of \$6.50 per share, assuming the closing of this offering at an initial public offering price of \$9.00 per share. In the event such options and warrants are exercised, investors may experience further dilution. See "Management--Stock Option and Employee Benefit Plans" and Notes 4 and 9 of Notes to Financial Statements.

SELECTED FINANCIAL DATA

The statement of operations data for the fiscal years ended June 1994, 1995 and 1996, and the balance sheet data at June 30, 1995 and 1996, are derived from, and are qualified by reference to, the audited financial statements included elsewhere in the Prospectus and should be read in conjunction with those financial statements and notes thereto. The statement of operations data for the fiscal years ended June 30, 1992 and 1993, and the balance sheet data at June 30, 1992, 1993 and 1994, are derived from audited financial statements not included herein. The information presented below for the three-month periods ended September 30, 1995 and 1996, and as of September 30, 1996, have been derived from the unaudited financial statements of the Company. In the opinion of the Company's management, the unaudited financial statements have been prepared by the Company on a basis consistent with the Company's audited financial statements and include all adjustments, consisting of only normal recurring accruals, necessary for a fair presentation of the financial position and the results of operations for those periods. Operating results for the three-month period ended September 30, 1996 are not necessarily indicative of the results that will be achieved for the entire year ended June 30, 1997. The data set forth below are qualified by reference to, and should be read in conjunction with, the financial statements and notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations.

	YEAR ENDED JUNE 30,					THREE MONTHS ENDED SEPTEMBER 30,	
	1992	1993	1994	1995	1996	1995	1996
<b>STATEMENT OF OPERATIONS DATA:</b>							
<b>Revenues:</b>							
Research and development agreements.....	\$ --	\$ --	\$ 49,000	\$ 396,000	\$ 1,342,000	\$ 172,000	\$ 195,000
Grants.....	--	784,000	823,000	121,000	267,000	39,000	29,000
Total revenues.....	--	784,000	872,000	517,000	1,609,000	211,000	224,000
<b>Costs and expenses:</b>							
Research and development....	1,090,000	2,600,000	5,627,000	4,889,000	10,075,000	1,195,000	3,160,000
General and administrative..	272,000	1,153,000	1,565,000	1,558,000	2,067,000	446,000	452,000
Total costs and expenses....	1,362,000	3,753,000	7,192,000	6,447,000	12,142,000	1,641,000	3,612,000
Loss before other income and expense.....	(1,362,000)	(2,969,000)	(6,320,000)	(5,930,000)	(10,533,000)	(1,430,000)	(3,388,000)
<b>Other income (expense):</b>							
Interest income.....	94,000	148,000	245,000	279,000	678,000	149,000	126,000
Interest expense.....	--	(26,000)	(65,000)	(66,000)	(62,000)	(18,000)	(11,000)
Net loss.....	<u>\$(1,268,000)</u>	<u>\$(2,847,000)</u>	<u>\$(6,140,000)</u>	<u>\$(5,717,000)</u>	<u>\$(9,917,000)</u>	<u>\$(1,299,000)</u>	<u>\$(3,273,000)</u>
Pro forma net loss per share(1).....	<u>\$ (.32)</u>	<u>\$ (.49)</u>	<u>\$ (.82)</u>	<u>\$ (.66)</u>	<u>\$ (.98)</u>	<u>\$ (.13)</u>	<u>\$ (.32)</u>
Pro forma weighted average number of shares outstanding(1).....	<u>3,919,000</u>	<u>5,840,000</u>	<u>7,461,000</u>	<u>8,644,000</u>	<u>10,103,000</u>	<u>10,094,000</u>	<u>10,107,000</u>

	JUNE 30,					SEPTEMBER 30,
	1992	1993	1994	1995	1996	1996
<b>BALANCE SHEET DATA:</b>						
Cash, cash equivalents and short-term investments.....	\$5,640,000	\$3,085,000	\$ 6,730,000	\$11,068,000	\$10,967,000	\$ 7,108,000
Working capital.....	5,399,000	2,744,000	6,187,000	10,319,000	9,851,000	6,540,000
Total assets.....	6,414,000	4,156,000	8,227,000	12,551,000	12,673,000	8,931,000
Deficit accumulated during the development stage....	(2,404,000)	(5,251,000)	(11,391,000)	(17,108,000)	(27,025,000)	(30,298,000)
Total shareholders' equity.....	6,104,000	3,268,000	6,985,000	11,186,000	10,850,000	7,618,000

(1) See Note 1 of Notes to Financial Statements for information concerning the computation of pro forma net loss per share and shares used in computing pro forma net loss per share.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF  
FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

Since inception, the Company has been in the development stage and engaged in research and product development, conducted both on its own behalf and in connection with various collaborative research and development agreements with other entities. The Company expects that its revenue sources for at least the next several years will continue to be limited to grant revenues and research funding, milestone payments and licensing fees from potential future corporate collaborators. The timing and amount of such future revenues, if any, will be subject to significant fluctuations, based in part on the success of the Company's research activities and the timing of the achievement of certain milestones. Substantially all of the Company's revenues from product sales, if any, will be subject to royalty payments ranging from 2% to 5%. Further, under the Company's Distribution Agreement with Cobe, Cobe will perform marketing and distribution activities and in exchange will receive from 38% to 42% of the Company's product sales in the area of stem cell therapy, subject to negotiated discounts and volume-based adjustments. Research and development expenses may fluctuate due to the timing of expenditures for the varying stages of the Company's research and clinical development programs. Research and development expenses will increase as product development programs and applications of the Company's products progress through research and development stages. Under the Company's License Agreement with Immunex, annual renewal fees of \$1,000,000 are payable in each of the next four years. Under the Company's Distribution Agreement with Cobe, regulatory approval activities for the Company's products for stem cell therapies outside of the United States will be conducted, and paid for, by Cobe. As a result of these factors, the Company's results of operations have, and are expected to continue to, fluctuate significantly from year to year and from quarter to quarter and therefore may not be comparable to or indicative of the results of operations for other periods.

Over the past several years, the Company's net loss has primarily increased, consistent with the growth in the Company's scope and size of operations. In the near term, the Company plans additional moderate growth in employee headcount necessary to address increasing requirements in the areas of product development, research, clinical and regulatory affairs and administration. Assuming capital is available to finance such growth, the Company's operating expenses will continue to increase as a result. At least until such time as the Company enters into arrangements providing research and development funding, the net loss will continue to increase as well. The Company has been unprofitable since its inception and does not anticipate having net income for several years. Through September 30, 1996, the Company had an accumulated deficit of \$30,298,000. There can be no assurance that the Company will be able to achieve profitability on a sustained basis, if at all.

This Prospectus contains, in addition to historical information, forward-looking statements that involve risks and uncertainties. The Company's actual results could differ materially from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences include those discussed under this caption, as well as those discussed under the caption "Risk Factors" and elsewhere in this Prospectus.

RESULTS OF OPERATIONS

THREE MONTHS ENDED SEPTEMBER 30, 1996 AND 1995

Total revenues were \$224,000 for the three months ended September 30, 1996 compared to \$211,000 for the same period in 1995. These revenues consist primarily of research and development revenue under the Company's research collaboration with RPR, which was terminated in September 1996. See "Certain Transactions."

Total costs and expenses were \$3,612,000 for the three months ended September 30, 1996 compared to \$1,641,000 for the same period in 1995. The increase in costs and expenses in 1996 is primarily the result of an increase in research and development expenses to \$3,160,000 in 1996 from \$1,195,000 in 1995 and to a lesser extent by general and administrative expenses, which increased to \$452,000 for the three months ended September 30, 1996 from \$446,000 for the same period in 1995.

Interest income was \$126,000 for the three months ended September 30, 1996 compared to \$149,000 for the same period in 1995 and reflects a decrease in the levels of cash, cash equivalents and short-term investments in 1996.

The Company's net loss increased to \$3,273,000 for the three months ended September 30, 1996 from \$1,299,000 for the same period in 1995, primarily as a result of increased costs and expenses in 1996.

#### YEARS ENDED JUNE 30, 1996, 1995 AND 1994

Total revenues were \$1,609,000 in 1996, \$517,000 in 1995, and \$872,000 in 1994. Grant revenues increased to \$267,000 in 1996 from \$121,000 in 1995, which had decreased from \$823,000 in 1994, reflecting the timing of grant awards and related research activities and funding under the grants. Grant revenues accounted for 17%, 23% and 94% of total revenues for the years ended June 30, 1996, 1995 and 1994, respectively. Revenues from research and development agreements totaled \$1,342,000 in 1996, \$396,000 in 1995 and \$49,000 in 1994, reflecting research funding received by the Company under its collaboration with RPR which commenced in September 1995. Revenues from RPR accounted for 83% and 48% of such revenue in 1996 and 1995, respectively. In September 1996, the Company's research collaboration with RPR terminated.

Total costs and expenses were \$12,142,000 in 1996, \$6,447,000 in 1995, and \$7,192,000 in 1994. The increase in 1996 costs and expenses, compared with 1995, is primarily the result of an increase in research and development expense to \$10,075,000 in 1996 from \$4,889,000 in 1995. The increase in research and development expense reflects an increase in research, clinical development and product development activities. The decrease in costs and expenses in 1995, compared with 1994, is primarily the result of a decrease in research and development expense to \$4,889,000 in 1995 from \$5,627,000 in 1994. General and administrative expenses were \$2,067,000 in 1996, \$1,558,000 in 1995 and \$1,565,000 in 1994. The increase in general and administrative expenses in 1996 is the result of increasing finance, legal and other administrative and marketing expenses which are expected to continue to increase in support of the Company's increasing product development and research activities. The decrease in general and administrative expense in 1995 is reflective of generally lower spending in 1995 as compared to 1994.

Interest income was \$678,000 in 1996, \$279,000 in 1995, and \$245,000 in 1994. The increases in interest income in 1996 and 1995 are due primarily to corresponding increases in the levels of cash, cash equivalents and short-term investments for such periods. Interest expense was \$62,000 in 1996, \$66,000 in 1995, and \$65,000 in 1994, reflecting varying amounts outstanding under capital leases during the periods.

The Company's net loss was \$9,917,000 in 1996, \$5,717,000 in 1995, and \$6,140,000 in 1994. The Company expects to report substantial net losses for at least the next several years.

The Company has not generated any net income to date and therefore has not paid any federal income taxes since inception. At June 30, 1996, the Company had deferred tax assets totaling \$9,650,000 consisting primarily of net operating loss and research tax credits that begin to expire from 2004 through 2011, if not utilized. A full valuation allowance for deferred tax assets has been provided. Utilization of federal income tax carryforwards is subject to certain limitations under Section 382 of the Internal Revenue Code of 1986, as amended. The completion of this offering is likely to limit the Company's ability to utilize federal income tax carryforwards under Section 382. The annual limitation could result in expiration of net operating losses and research and development credits before their complete utilization.

#### LIQUIDITY AND CAPITAL RESOURCES

The Company has financed its operations since inception primarily through private placements of Preferred Stock and other equity investments, which from inception, have totaled approximately \$37,916,000, and to a lesser degree, through grant funding, payments received under research agreements and collaborations, interest



earned on cash, cash equivalents, and short-term investments, and funding under equipment leasing agreements. These financing sources have historically allowed the Company to maintain adequate levels of cash and other liquid investments.

The Company's combined cash, cash equivalents and short-term investments totaled \$10,967,000 at June 30, 1996, a decrease of \$101,000 from June 30, 1995. The primary uses of cash, cash equivalents and short-term investments during the year ended June 30, 1996 included \$8,967,000 to finance the Company's operations and working capital requirements, \$445,000 in capital equipment additions and \$270,000 in scheduled debt payments. During the year ended June 30, 1996, the Company received \$3,500,000 in equity payments from RPR and \$5,965,000 in net proceeds from the sale of Series E Convertible Preferred Stock. The Company plans to continue its policy of investing excess funds in short-term, investment-grade, interest-bearing instruments.

The Company's combined cash, cash equivalents and short-term investments totaled \$7,108,000 as of September 30, 1996 compared to \$10,967,000 at June 30, 1996. The decrease was primarily attributable to the use of \$3,614,000 to fund operations and working capital requirements during the period and to a lesser degree by \$173,000 in capital equipment purchases and \$73,000 in scheduled debt payments.

In October 1996, the Company executed a financing commitment to provide the Company with up to \$5,000,000 in additional equity funding from Cobe and \$5,000,000 under a convertible loan agreement with another current investor. In connection with the convertible loan agreement, the Company has issued warrants to purchase 69,444 shares of Common Stock for securing the commitment. The warrants expire on October 15, 2000 if not exercised, and may be exercised, in whole or in part, at a price equal to the lesser of (a) \$9.00 per share, which price increases by \$3.00 per share on each anniversary of the closing of the offering being made hereby; or (b) 85% of the fair market value of the Company's Common Stock at the time of exercise. As of the date of this Prospectus, the Company has not obtained any financing under these commitments. These funding commitments expire upon the closing of this offering.

The Company's future cash requirements will depend on many factors, including continued scientific progress in its research and development programs, the scope and results of clinical trials, the time and costs involved in obtaining regulatory approvals, the costs involved in filing, prosecuting and enforcing patents, competing technological and market developments and the cost of product commercialization. The Company does not expect to generate a positive cash flow from operations for several years, if at all, due to the expected increase in spending for research and development programs and the expected cost of commercializing its product candidates. The Company may seek additional funding through research and development agreements with suitable corporate collaborators and through public or private financing transactions. The Company anticipates that the net proceeds of this offering, together with the Company's available cash and expected interest income thereon, will be sufficient to finance its research and development and other working capital requirements for 18 months or less. This estimate is based on certain assumptions which could be negatively impacted by the matters discussed under this heading and elsewhere under the caption "Risk Factors." The Company expects that its primary sources of capital for the foreseeable future will be through collaborative arrangements and through the public or private sale of its equity securities. There can be no assurance that such collaboration arrangements, or any public or private financing transaction, will be available on acceptable terms, if at all, or can be sustained on a long-term basis. If adequate funds are not available, the Company may be required to delay, reduce the scope of, or eliminate one or more of its research and development programs, which may have a material adverse effect on the Company's business. See "Risk Factors--Future Capital Needs; Uncertainty of Additional Funding" and Notes to Financial Statements.

#### RECENT PRONOUNCEMENTS

During October 1995, the Financial Accounting Standards Board issued Statement No. 123, "Accounting for Stock-Based Compensation," which establishes a fair value based method of accounting for stock-based compensation and incentive plans and requires additional disclosures for those companies that elect not to adopt

the new method of accounting. Adoption of the new accounting pronouncement is required for the Company's fiscal year beginning July 1, 1996 and the Company intends to provide the additional disclosures required by the pronouncement in its financial statements for the year ended June 30, 1997.

During March 1995, the Financial Accounting Standards Board issued Statement No. 121, ("SFAS 121") "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of," which requires the Company to review for impairment of long-lived assets, certain identifiable intangibles, and goodwill related to those assets whenever events or changes in circumstances indicate that the carrying amount of an asset might not be recoverable. In certain situations, an impairment loss would be recognized. SFAS 121 will become effective for the Company's fiscal year beginning July 1, 1996. Management has studied the effect of implementing SFAS 121 and, based upon its initial evaluation, does not expect it to have a significant impact on the Company's financial condition or results of operations.

## BUSINESS

### OVERVIEW

Astrom is developing proprietary process technologies and devices for a range of cell therapy applications, including stem cell therapies and gene therapy. The Company's lead product under development, the Astrom Cell Production System (the "Astrom CPS"), consists of a clinical cell culture system with disposable cassettes and reagents for use in the rapidly growing stem cell therapy market. The Company believes that the Astrom CPS method will be less costly, less invasive and less time consuming than currently available stem cell collection methods. The Astrom CPS is designed as a platform product which implements the Company's pioneering stem cell replication technology and which the Company believes can be modified to produce a wide variety of cell types for emerging therapies. The Astrom CPS is currently in a pre-pivotal clinical trial under an IDE for autologous stem cell therapy. The Company has entered into a strategic collaboration for the development of the Astrom CPS in stem cell therapy with Cobe BCT, Inc., a subsidiary of Gambro AB and a leading provider of blood cell processing products. Additionally, Astrom is developing products and processes for the delivery of ex vivo gene therapy that are designed to address the production of gene-modified cells.

### CELL THERAPY

Cell therapy is the use of human cells to treat a medical disorder. The most common types of cell therapy, blood and platelet transfusions, have been widely used for many decades. More recently, bone marrow-derived cells have been used to restore the bone marrow and the blood and immune system cells which are damaged by chemotherapy and radiation therapy during the treatment of many cancers. Transplantation of these cells is known as stem cell therapy. Other cell therapies have recently been used for generating skin and cartilage tissue and additional cell therapies are being developed by various companies and researchers to restore immune system cells as well as bone, kidney, liver, vascular and neuronal tissues.

Cell therapies require the collection of cells, either from the patient or a suitably matched donor. These cells are typically processed and stored for administration to the patient. Although cell therapy is being developed for use in an increasing number of diseases, widespread application of new cell therapies remains limited by the difficulties and expense associated with current cell collection and processing procedures. The problems of current cell collection techniques are exemplified in the area of stem cell therapy where the patient or donor undergoes invasive, time-consuming and costly procedures to collect the large volume of cells currently required for effective treatment. The Company believes an alternative to collecting the required therapeutic dose of cells is to grow these cells ex vivo from a small starting volume. However, ex vivo cell expansion, when biologically possible, has typically required costly techniques, facilities and operations to comply with FDA good manufacturing practices ("GMP"), which are not generally available in hospitals. As a result, cells needed for such therapies often require specialized cell production facilities which use labor-intensive, manual cell culture techniques.

There are numerous forms of cell therapy at an early stage of development. One such example is ex vivo gene therapy, in which genes are introduced into target cells in order to selectively correct or modulate disease conditions, or to modify cells for production of a therapeutic protein. The Company believes that the successful practice of ex vivo gene therapy will require the development of processes and products for the reliable, high-efficiency transfer of genes into cells and a means to produce the necessary dose of the genetically modified cells under GMP conditions.

### STEM CELL THERAPY

Stem cell therapy is used to treat cancer patients who undergo chemotherapy or radiation therapy at dose levels that are toxic to the hematopoietic system, which is comprised of the bone marrow and cells of the blood and immune systems. The objective of stem cell therapy is to restore the hematopoietic system via the infusion and subsequent engraftment of healthy cells to replace bone marrow and result in the rapid recovery of neutrophils and platelets that have been destroyed by chemotherapy and radiation therapy. Stem cell therapy

reduces the risk of life-threatening infections and bleeding episodes following cancer treatments. In order to treat many cancers, high intensity chemotherapy or radiation is often required, which may severely destroy ("myeloablation") or partially destroy ("myelosuppression") the patient's hematopoietic system.

Cells required for effective stem cell therapy include stem cells, to replenish depleted bone marrow and provide a long-term ongoing source of the multilineage progenitor cells of the blood and immune systems, and early and late stage hematopoietic progenitor cells, to provide for rapid neutrophil and platelet recoveries. Stromal accessory cells are believed to further augment the growth of bone marrow. In the adult, all of these cell types originate in the bone marrow. These cells are currently collected from the donor or patient directly through multiple syringe aspirations under anesthesia, known as bone marrow collection, or through blood apheresis following treatment with drugs which cause cells to be released or mobilized from the bone marrow into the blood. This latter technique is known as a peripheral blood progenitor cell ("PBPC") collection. See "--Current Stem Cell Collection Methods." Recently, it has been demonstrated that the blood cells found in the umbilical cord of newborn infants include cells effective for stem cell therapy. This source of cells is being explored by physicians as a major new direction in stem cell therapy, but is currently limited by difficulties in obtaining sufficient quantities of these cells.

Once collected, the stem cell mixture is infused intravenously and the stem and stromal accessory cells migrate into the bone cavity where they engraft to form a new marrow. The hematopoietic progenitor cell components of the cell mixture provide early restoration of circulating white blood cells and platelets. The replenished bone marrow will normally provide long-term hematopoietic function, but complete restoration of bone marrow may take years following myeloablative cancer therapy. When the patient's hematopoietic system is malignant, such as in the case of leukemia, cells from a suitable donor are generally required in order to avoid reintroducing the disease during cell infusion. Such donor derived transplants are termed "allogeneic" transplants. Procedures using cells derived from the patient are termed "autologous" transplants.

#### STEM CELL THERAPY MARKET OPPORTUNITY

The benefits of stem cell therapy in the treatment of cancer patients have been well established over the past two decades. Stem cell therapy, in the form of bone marrow transplantation, was originally used in patients who had received treatment for blood and bone marrow cancers such as leukemia, and genetic diseases of the blood. However, because stem cell therapy has been shown to promote the rapid recovery of hematopoietic function, it is now being increasingly used to enable patients with other forms of cancer to receive high dose or multicycle chemotherapy and radiation treatments. These high-intensity therapies have a greater probability of eradicating dose-sensitive cancers but, because of their hematopoietic toxicity, cannot generally be given without stem cell therapy. As a result, some patients are treated with lower and less effective doses, and fewer cycles, of therapy than might otherwise be used.

The Company estimates that over 35,000 stem cell therapy procedures were completed worldwide in 1995, and that the number of such procedures has been growing at a compound annual rate of over 20%. This growth has been driven by encouraging clinical results in the treatment of dose-sensitive solid tumors, such as breast and ovarian cancers. The Company expects that stem cell therapy procedures will continue to grow due to increased incidence and prevalence of cancer, continued clinical demand for myelotoxic cancer treatment, and the increased cost effectiveness of stem cell therapy treatments.

Stem cell therapy may also enhance the effectiveness of blood cell growth factors. The timing and extent of additional cycles of chemotherapy is often limited by the recovery of a patient's white blood cells and platelets because a delayed recovery of these cells can leave the patient susceptible to life-threatening infection and bleeding episodes, and this limitation may allow for the regrowth of residual tumor cells. Many cancer patients are routinely treated with growth factors including G-CSF, such as Neupogen and GM-CSF, such as Leukine, which enhance the development of mature circulating white blood cells and platelets from the early progenitor bone-marrow derived cells, thereby decreasing the time between cycles of therapy and the probability of infection. However, during high dose or multicycle therapy, the stem and progenitor cells on which these growth

factors act are often depleted. Without these cells, growth factors have a limited or negligible effect. Stem cell therapy generally enhances the effectiveness of growth factors by introducing target stem and progenitor cells for growth factors to act upon such that patients generally exhibit a more rapid and consistent hematopoietic recovery.

#### CURRENT STEM CELL COLLECTION METHODS

Currently, the bone marrow-derived cells required for stem cell therapy are collected primarily either through the bone marrow harvest method or the PBPC collection method.

##### Bone Marrow Harvest

A traditional bone marrow harvest is a costly and invasive surgical procedure in which a physician removes approximately one liter of bone marrow from a patient or donor. This volume of bone marrow is removed using needles inserted into the cavity of the hip bone. The bone marrow harvest procedure typically requires between two to four hours of operating room time, with the physician often making more than 90 separate puncture sites in the hip bone to collect the necessary amount of bone marrow. Due to the length of the procedure and the trauma to the patient, general surgical anesthesia is administered and the patient is often hospitalized for a day. Frequently, the patient suffers pain from the procedure for several days after being discharged from the hospital. Furthermore, complications resulting from the general anesthesia or invasive nature of the procedure occur in a small percentage of patients. Bone marrow harvest provides a reliable source of stem and stromal accessory cells and has been the preferred source of cells in allogeneic transplants.

##### PBPC Mobilization and Collection

PBPC mobilization is a newer technique in which bone marrow-derived cells are harvested from a patient's or donor's circulating blood, rather than from bone marrow. In a PBPC mobilization procedure, the patient receives multiple injections of growth factors or cytotoxic drugs, or both, over the course of a week or more, which cause stem and progenitor cells resident in the bone marrow to mobilize into the circulating blood. The mobilized cells are then collected by connecting the patient to a blood apheresis device, which draws and returns large volumes of the patient's or donor's blood in order to selectively remove the therapeutic volume of stem and progenitor cells. Each collection procedure typically lasts for two to six hours and is typically repeated on two to eight consecutive days. Specialized laboratory testing over the period of mobilization and cell harvesting is necessary to determine that a sufficient quantity of desired cells has been collected, adding to the cost of the procedure. The PBPC process has become the predominant procedure in autologous stem cell therapy.

##### Procedure Considerations

Although stem cell therapy is being utilized to treat more patients for a broader range of diseases, its availability continues to be limited by the high costs of procuring cells, the invasive nature of traditional cell procurement techniques, and by the technical difficulties related to those collection procedures. The Company believes that current charges for bone marrow harvest, processing and infusion are approximately \$10,000 to \$15,000 per procedure, with considerable variability between institutions. The Company believes that current charges for PBPC collection, including mobilization and infusion, are approximately \$12,000 to \$20,000 for a two to three cycle procedure, with considerable variability between institutions depending on the mobilization regimen and the total volume, time and number of aphereses required.

Overall costs of stem cell therapy include the costs of the cell collection and infusion procedures, and the costs associated with supporting the patient during post-transplant recovery. Post-transplant costs include hospitalization time, antibiotic support, management of adverse reactions to the large volume cell infusions, and infusions of platelets and red blood cells. Any new stem cell therapy process will generally need to provide similar recovery endpoints to be competitive with the current procedures. In this regard, PBPC procedures have gained popularity compared with bone marrow harvests because the number of platelet transfusions is reduced for some patients.

Recently, products to implement a cell isolation method known as CD34 selection have been developed by other companies in conjunction with bone marrow harvest and PBPC collections. CD34 selection is a process designed to isolate specific types of cells in order to decrease storage and infusion problems associated with the large volume of fluids collected in bone marrow or multiple apheresis procedures. CD34 selection is used after the initial collection of stem and progenitor cells and, therefore, does not address the difficulties or costs associated with the basic cell collection procedures. To date, the CD34 selection procedure has demonstrated limited therapeutic benefit to the patient, but substantially increases the costs of the procedure. A future objective of CD34 selection is to assist in depleting tumor cells from the transplant cells collected, thereby expanding the availability of stem cell therapy to new patient populations.

#### UMBILICAL CORD BLOOD

Umbilical cord blood ("UCB"), which is collected directly from the umbilical cord after delivery, without pain or risk to the infant or the mother, is emerging as a new source of cells for stem cell therapy. UCB has been reported to have stem cell concentrations that are much higher than that typically obtained from traditional bone marrow and PBPC collection methods. After collection, UCB is typically frozen for later use in a stem cell therapy procedure. Storage of UCB samples involves small volumes of cells, compared to typical bone marrow or PBPC storage. Accordingly, the costs of collection and storage of UCB cells are comparatively low. This source of cells is also "tumor-free," such that UCB would be preferred for many current stem cell therapy procedures in metastatic cancer patients. Before UCB can become a major supply source for stem cell therapy, a coordinated UCB banking system must emerge. In this regard, several organized UCB banking institutions have been established to date, and the group is growing in both number and size.

One current disadvantage of UCB is the relatively low number of available cells. Unlike bone marrow or PBPC harvest, where the collection of more cells to meet a particular treatment is typically achievable, the number of cells available from a UCB donor is limited. This problem is exacerbated by the required cryopreservation of the cells, which causes significant cell loss. The resultant low cell number is believed to be responsible for the longer hematopoietic recovery times observed with UCB transplants, as compared with bone marrow or PBPC transplants. Further, because of the low cell number, UCB transplants are typically restricted to small patients. Therefore, increasing the number of therapeutic cells from a UCB sample would facilitate the more widespread use of UCB transplants. Aastrom believes that providing the transplant site with the capability to carry out the UCB cell expansion will be a major factor in the increased use of UCB for stem cell therapy and a significant business opportunity.

#### AASTROM TECHNOLOGY

Aastrom is developing proprietary process technologies that are pioneering the ex vivo production of human stem and progenitor cells. The Company has also developed a proprietary cell culture device that mimics the biological and physical environment necessary for the growth of certain human cells and tissues, including bone marrow. The Company's initial product candidate, the Aastrom CPS, utilizes the Company's process technology and is designed to enable the ex vivo production of human stem and progenitor cells as an alternative to the bone marrow harvest and PBPC mobilization methods and as an enhancement to the UCB collection method. The Company believes that the Aastrom CPS may be used for other cell production processes which are being developed by third parties and, in combination with the Company's proprietary gene transfer process, may have application in the developing field of ex vivo gene therapy.

#### CORE TECHNOLOGY

##### Stem Cell Growth Process

Aastrom has developed proprietary process technologies for ex vivo production of therapeutic stem and progenitor cells as well as other key cells found in human bone marrow. The Company's proprietary process entails the placement of a stem cell mixture in a culture environment that mimics the biology and physiology of

natural bone marrow. This process enables the stem and early and late-stage progenitor cells needed for an effective stem cell therapy procedure to be concurrently expanded. Growth factors can be added to stimulate specific cell lineages to grow or to increase cell growth to meet a particular therapeutic objective. The stem cell growth process can best be completed with little or no additional stem cell selection or purification procedures. This stem cell replication process can also enable or augment the genetic modification of cells by providing the cell division step needed for new genes to integrate into the stem cell DNA. Currently available cell culture methods tend to result in a loss of stem cells, either through death or through differentiation into mature cells. The Company has exclusive licenses to two U.S. patents and additional applications that cover these processes. See "--Additional Stem Cell and Other Cell Therapies."

#### Astrom Cell Culture Chamber

Astrom has developed a proprietary cell culture chamber to implement the Company's process technology. The culture chamber produces cells on a clinical scale, and allow for simple, sterile recovery of the cells for therapeutic use. The Company believes that the Astrom cell culture chamber may also be used for growing other human therapeutic cells, such as T-Cells used for lymphocyte therapies, chondrocytes for cartilage replacement, and mesenchymal tissues for bone and cartilage replacement. The Company holds exclusive licenses to two U.S. patents and additional applications for its cell culture chamber device technology. See "--Additional Stem Cell and Other Cell Therapies."

#### Efficient Gene Transfer

Astrom has developed proprietary processes and device technology that enables increased efficiency of vector-mediated gene transfer into cells as compared to conventional procedures. This directed-motion gene transfer or gene loading technology is intended to have applications for most cell and tissue types and most vector technologies. The Company intends to develop products based upon its gene loading technology that it believes will facilitate the advancement of numerous gene therapy protocols into the clinic and ultimately the market. The Company is the exclusive licensee of a U.S. Patent, and has additional applications pending, for this technology. See "Astrom Product Candidates For Ex Vivo Gene Therapy."

#### THE AASTROM CPS

The Astrom CPS is the Company's lead product under development for multiple cell therapy applications, including stem cell therapy. The Astrom CPS is a proprietary system that the Company believes will enable the large scale ex vivo production of a variety of therapeutic cells at health care facilities, independent laboratories, transplant centers and blood banks, and has been designed to implement Astrom's stem cell growth process as well as processes for the production of other cell types.

The Astrom CPS is comprised of several components, including single-use disposable cassettes and reagents and microprocessor-controlled instruments, which are at various stages of development. The Cell Cassette is a single-use disposable cartridge which contains the Astrom cell culture chamber and the related media supply waste reservoirs and harvest bag. The microprocessor-controlled instruments include the Incubator which controls the culture conditions for the operation of the Cell Cassette, and the Processor which automates the priming and harvesting of the cells from the Cell Cassette. The System Manager is a user interface computer that is being developed to simultaneously track and monitor the cell production process in over thirty CPS Incubators and record relevant process variables and operator actions. Prototype components of the Astrom CPS are currently being used in a clinical trial and ongoing development activities are directed at completing other production level components of the Astrom CPS.

The Astrom CPS is designed to be operated with minimal operator activity by a medical or laboratory technician and can implement clinical scale cell production at the patient care site. The end product of the Astrom process is a blood-bag container with the cell product. The control and documentation features of the Astrom CPS have been designed to meet GMP requirements for the therapeutic production of cells.

AASTROM CPS FOR STEM CELL THERAPY

The Company's initial application for the Aastrom CPS is expected to be in the growing field of stem cell therapy, where the Company believes that the Aastrom CPS may address many of the limitations of existing procedures. The Aastrom CPS is based on a comparatively simple process in which a small volume of bone marrow cells are collected from the patient or donor using a needle aspiration procedure typically under a local anesthetic or sedative. This cell mixture is quantified, and an appropriate volume of cells is then inoculated into one or more Cell Cassettes with the necessary growth media. Therapeutic growth-factor-stimulated cells are produced using the Aastrom CPS in approximately 12 to 13 days, with no further patient involvement. Depending upon the cell quantity necessary for a therapeutic application, single or multiple Cell Cassettes may be required, with a different volume requirement of starting cells. The Aastrom CPS has been designed to minimize operator involvement during the cell production process, and the steps required before and after the Aastrom CPS are standard laboratory procedures.

Advantages of Aastrom CPS

The Company believes that the Aastrom CPS, if approved for commercial sale by the FDA and foreign regulatory agencies, will provide improvements and efficiencies over traditional cell collection and infusion processes. The following table, which sets forth the Company's estimates based on a 1996 survey of 11 U.S. transplant institutions, illustrates some potential advantages of the Aastrom CPS compared to estimated patient care episodes, procedure time and needle sticks in connection with currently established cell collection and infusion techniques:

CELL SOURCE -----	CARE EPISODES(1)	PROCEDURE TIME (HOURS)(1)	NEEDLE STICKS(2) -----
Bone Marrow Harvest(3).....	8	16	103
PBPC Mobilization and Collec- tion(4).....	21	39	22
Aastrom CPS(5).....	2	1-3	4-10

- (1) Includes all outpatient, inpatient, and home care episodes.
- (2) Includes bone marrow aspirates, blood samples, catheter placements and other venous access, and subcutaneous injections.
- (3) Includes operating room procedure and all preparatory and recovery procedures.
- (4) Based on an average of three rounds of apheresis following cell mobilization injections.
- (5) Based on data accumulated during the Company's clinical trials.

**Reduced Cost.** The Company believes the Aastrom CPS has the potential to replace more costly, labor intensive and invasive cell collection and infusion procedures currently employed for stem cell therapy and to reduce physician, staff and patient time requirements.

**Reduced Patient and Physician Burden.** Cell production with the Aastrom CPS is expected to require the collection of a small volume of starting material compared to current collection procedures, eliminating the requirement for general surgical anesthesia, multiple drug injections and blood apheresis. Patient benefits are expected to include fewer needle sticks than with current cell collection and infusion methods and a reduction in overall patient procedure time. Additionally, Aastrom's process for cell expansion is expected to minimize the time requirement for physicians compared with bone marrow harvest.

**Enhanced Multicycle High-Dose Chemotherapy.** The long restoration period for the hematopoietic system following myeloablative therapy effectively limits patients to one opportunity for cell collection prior to cancer therapy. The Aastrom CPS may enhance the practice of multicycle, high-dose chemotherapy by providing the ability to produce a therapeutic dose of cells from a small starting volume. The initial cell collection can be divided into multiple samples and stored frozen until expansion at a later time is required.

**Reduced Quantity of Lymphocytes.** The Company believes its approach to stem cell therapy may provide an additional benefit over current methods by depleting potentially harmful cells such as T-cells and B-cells. These cells are believed to be primarily responsible for graft-versus-host disease, a common manifestation of allogeneic transplants in which the grafted donor's cells attack the host's tissues and organs.



Tumor Cell Purging. Cancer patients with tumor metastases, in which the cancer has spread to the blood and bone marrow, have not traditionally been candidates for autologous stem cell transplants because transplant may reintroduce cancer cells into the patient. Additionally, patients may have undetected tumor cells in their marrow or PBPC transplant, which can reestablish the cancer in the patient following transplant. The Aastrom CPS process may offer benefits for these groups of patients. The Company and other investigators have shown that some primary human tumor cells die or do not grow during hematopoietic cell culture. Further, the smaller volume of starting cells used for the Aastrom CPS compared with bone marrow harvest or PBPC transplants may provide approximately 10 to 70 fold less tumor cells in a transplant. This combination of passive depletion during culture with the lower starting volume of tumor cells may result in a tumor-free or tumor-reduced cell product for transplant. The benefit of such tumor depletion, if any, will vary depending upon the type of cancer and state of disease.

#### CLINICAL DEVELOPMENT

The Company's clinical development plan is initially to obtain regulatory approval in the United States to market the Aastrom CPS for autologous stem cell therapy and in Europe for more general cell therapy applications. The Company also intends to pursue approval of the Aastrom CPS for additional clinical indications.

The Company believes that the Aastrom CPS for stem cell therapy will be regulated as a medical device and that the Company will be required to submit a PMA application to, and obtain approval from, the FDA to allow it to market this product in the United States. In order to obtain PMA approval, the Company will be required to complete clinical trials under an IDE. See "-- Government Regulation--Devices."

In a dose-ranging study conducted by the University of Michigan (the "University") in 1993, ex vivo produced cells utilizing the Company's proprietary cell production technology were infused into seven patients with non-Hodgkin's lymphoma after they received myeloablative chemotherapy. These patients also received cells obtained from either an autologous bone marrow harvest or PBPC procedure. No safety issues attributable to the infused cells were observed in this trial and the patients exhibited recovery profiles consistent with traditional transplantation techniques.

Aastrom completed the first feasibility trial of its cell production system technology under an IDE at the MD Anderson Cancer Center in October 1995. In this trial, ten breast cancer patients, who were subjected to myeloablative chemotherapy, were treated with cells obtained from a bone marrow harvest and with cells produced from a sample of such cells with a predecessor of the Aastrom CPS. The patients exhibited standard clinical recoveries, providing evidence of the clinical safety of cells obtained from the Company's cell production process and of the feasibility of cell production with a predecessor of the Aastrom CPS by clinical personnel at an investigational site.

Aastrom is currently conducting a pre-pivotal stem cell therapy clinical trial under an IDE reviewed with the FDA. This clinical trial is designed to demonstrate that cells produced using the Aastrom CPS can provide hematopoietic recovery in accordance with trial endpoints in breast cancer patients who have received myeloablative chemotherapy. Bone marrow obtained from the patient by traditional methods will be available for precautionary reasons at defined clinical stages. The results from the five patients accrued at the first trial site have provided evidence of the clinical safety of the Aastrom CPS-produced cells in patients and that the hematopoietic recovery endpoints specified for the trial are achievable. The patients at this trial site were Stage IV breast cancer patients who had received significant prior cytotoxic therapies for their cancer. Four of these five patients received the precautionary back-up marrow pursuant to the trial protocol. Preliminary results from the first trial site were reviewed with the FDA, and the IDE was amended to expand the trial to a second site. The amended IDE provided for the enrollment of Stage II, III and IV patients, and a delayed use of the precautionary back-up bone marrow. As of the date of this Prospectus, patient accrual is ongoing and patient data from this site provides further evidence that the hematopoietic recovery endpoints specified for the trial are achievable.

The objective of the current and anticipated future trials is to establish the protocol for the pivotal trial of the Aastrom CPS in autologous stem cell therapy. Provided that these pre-pivotal trials provide evidence of feasibility and safety of the cells produced in the Aastrom CPS, the Company anticipates initiating a pivotal clinical trial at multiple sites, with the patient enrollment typical to support a PMA filing. See "Risk Factors--Uncertainties Related to Preclinical and Clinical Testing."

Aastrom, in partnership with Cobe, intends to initiate a clinical trial in France in early 1997 to evaluate the use of Aastrom CPS cells to promote hematopoietic recovery in breast cancer patients undergoing aggressive myelosuppressive chemotherapy. The Company intends to seek approval to market the Aastrom CPS in Europe through CE Mark Registration. See "--Government Regulation--Regulatory Process in Europe."

The preliminary results of the Company's pre-pivotal trial may not be predictive of results that will be obtained from subsequent patients in the trial or from more extensive trials. Further, there can be no assurance that the Company's pre-pivotal or pivotal trial will be successful, or that PMA approval or required foreign regulatory approvals for the Aastrom CPS will be obtained in a timely fashion, or at all.

#### BUSINESS STRATEGY

Aastrom's objective is to build a leadership position in cell therapy process technology. The primary elements of the Company's business strategy are as follows:

**Establish Consumable Based Business Model.** Aastrom's strategy is to sell the Aastrom CPS to institutions, hospitals, and other clinical care or commercial cell production facilities that are administering cell therapy. The Company plans to obtain ongoing revenue from the sale of single-use disposable Cell Cassettes and related cell culture media and reagents, which are utilized in individual cell therapy applications. After cells are cultured in the Cell Cassette, the cassette is discarded and a new cassette is utilized for a subsequent patient. Along with ongoing revenue from the sale of instruments and disposables for cell therapy applications, the Company believes it will be able to obtain license revenue from its stem cell therapy applications for its proprietary stem cell processes.

**Focus Initially on Established and Reimbursed Therapies.** Aastrom will seek to establish the use of the Aastrom CPS in the field of stem cell therapy for the treatment of toxicity resulting from many cancer therapies, including those for breast cancer, lymphoma, ovarian cancer, germ cell cancers, leukemias and aplastic anemias. Stem cell therapy is a well-established and growing treatment modality in cancer therapy, and current cell collection procedures are widely reimbursed by third party payors.

**Leverage Platform Technology Across Multiple Market Opportunities.** In addition to stem cell therapy applications, the Company believes that the Aastrom CPS may serve as a platform product that can be used to produce a variety of other cells for multiple therapeutic applications, such as T-cells for use in lymphocyte therapies, chondrocytes for cartilage replacement, and mesenchymal cells for use in certain solid tissue therapies. The Company believes that if the Aastrom CPS is well established as a method for cell production for use in stem cell therapy, the system will be positioned for commercialization of new cell and ex vivo gene therapies that are under development.

**Market Through Collaborative Relationships.** The Company plans to reach end-user markets through collaborative relationships with companies that have established positions in those markets. In 1993, the Company formed a strategic partnership with Cobe, a leading provider of blood cell processing equipment and disposables. Cobe is the Company's exclusive, worldwide distributor of the Aastrom CPS for stem cell therapy applications, not including stem cell gene therapy. The Company will seek to establish additional collaborations for other cell therapies as those therapies and the Company's product lines develop. See "Business--Strategic Relationships."

## ADDITIONAL STEM CELL AND OTHER CELL THERAPIES

The Company believes that the Aastrom CPS hardware and disposables may be developed to serve as platform products for application in a variety of other cell therapies in addition to stem cell therapy. The Company believes that the Aastrom CPS has the potential to supplant current manual cell culture methods to produce therapeutic quantities of cell types such as T-cells, chondrocytes, mesenchymal cells, keratinocytes, neuronal cells and dendritic cells. Currently such cells are often produced in specialized facilities generally using manual cell culture techniques which limit the effective commercialization of these cell types for therapy. Potential advantages of the Aastrom CPS in these therapies may include: (i) reducing labor and capital costs; (ii) enhancing process reliability; (iii) automating quality assurance; and (iv) reducing the need for environmentally controlled facilities.

Modification of such processes and application of the Company's products to the expansion of other cell types may require substantial additional development of specialized culture environments and which may need to be incorporated within the Company's existing cell cassettes. There can be no assurance that the Company will be able to successfully modify or develop existing or future products to enable such additional cell production processes. Furthermore, other than a limited application of chondrocyte therapy, novel cell therapies are still in early stages of development by third parties. The Company's business opportunity is dependent upon successful development and regulatory approval of these novel cell therapies. No assurance can be given that such novel therapies will be developed or approved or that the Company's processes or product candidates will find successful application in such therapies. See "--Business Strategy" and "--Clinical Development" and "Use of Proceeds."

### Immunotherapies

Immunotherapy involves using cells of the immune system to eradicate a disease target. T-cell lymphocytes and dendritic cells are being actively investigated by other companies for this purpose, and these procedures require ex vivo cell production.

T-cells, a class of lymphocyte white blood cells, play a critical role in the human immune system and are responsible for the human immune response in a broad spectrum of diseases, including cancers and infectious diseases. Cytotoxic T-lymphocytes ("CTLs") is a new process that involves collecting T-cells from a patient and culturing them in an environment resulting in T-cells with specificity for a particular disease target. Clinical trials by third parties have been initiated to demonstrate CTL effectiveness. The ex vivo production of these cells under conditions for use in medical treatment represents a critical step in the advancement of this therapy.

Dendritic cells (the potent antigen presenting cells) are believed to play an important role in the function of the immune system. Researchers believe that cultured dendritic cells could augment the natural ability of a patient to present antigens from the infectious agents to the immune system and aid in the generation of a cytotoxic T-cell response to the infectious agent. The Company intends to explore application of its products and processes for the expansion of dendritic cells.

### Solid Tissue Cell Therapies

One of the newest areas of cell therapy involves the production of chondrocytes for the restoration of cartilage. Chondrocyte therapy involves the surgical removal of a small amount of tissue from the patient's knee and a therapeutic quantity of chondrocytes is produced from this surgical biopsy. The cells are then implanted into the patient's knee. Published reports indicate that such cells then reestablish mature articular cartilage. Currently, this cell production process is completed in highly specialized laboratory facilities using trained scientists and manual laboratory procedures. The Company believes that the Aastrom CPS has the potential to reduce costs associated with the cell production procedure and may eventually facilitate the transfer of the cell production capability away from specialized facilities directly to the clinical care sites.

## Other Stem Cell Therapies

Autoimmune Diseases. Stem cell therapy is under clinical investigation for the treatment of other diseases. Clinical studies have suggested a potential role for stem cell therapy in treatment of autoimmune diseases such as rheumatoid arthritis, multiple sclerosis and lupus erythematosus. The generic cause of these diseases is a malfunctioning immune system, including T-lymphocytes. Clinical trials in which the patient receives treatment resulting in immune ablation (usually involving myelotoxic cancer drugs or radiation), followed by stem cell therapy to restore the bone marrow and cells of the blood and immune system, have demonstrated remission of the autoimmune disease in some patients.

Organ Transplantation. Recently, a number of academic and corporate researchers and companies have identified the potential use of stem cell therapy to facilitate successful solid organ and tissue transplants between human donors and recipients, as well as using organs from non-human species for transplantation into humans. These proposed applications are based on the observation that donor-specific bone marrow, infused concurrent with or prior to the organ transplant, can provide for reduction of the normal immune rejection response by the transplant recipient (e.g. heart, lung, liver or kidney transplants).

A major limitation to the use of stem cell therapy in solid organ transplant is the limited availability of sufficient amounts of bone marrow to obtain a desired therapeutic response of immune tolerization. This limitation is particularly problematic when cadaveric donor organs are available, which has traditionally been the source of cells for these procedures. Bone marrow is also often available from the cadaveric donor, but only in a limited amount. Normally this amount may be sufficient for one transplant, but a donor might provide multiple organs for transplant into multiple recipients. Aastrom believes that the ability to expand the available bone marrow ex vivo will enhance the use of stem cell therapy for such transplant procedures.

## AASTROM PRODUCT CANDIDATES FOR EX VIVO GENE THERAPY

A novel form of cell therapy is ex vivo gene therapy. For this type of cell therapy, cells procured from the patient or a donor are genetically modified prior to their infusion into the patient. Analogous to other cell therapies, the ability to produce a therapeutic dose of these gene-modified cells is a major limitation to the commercialization of these cell therapies. This limitation is further exacerbated by the additional requirement that the cells be genetically modified under conditions that are sterile and comply with GMP.

Gene therapy is a therapeutic modality that holds the potential to significantly impact the delivery of healthcare and the delivery of therapeutically useful protein-based drugs within the body. Gene therapies are generally targeted at the introduction of a missing normal gene into otherwise defective human tissue, or the introduction of novel biologic capability into the body via the introduction of a gene not ordinarily present (for example, genes providing for the enhanced recognition and destruction or inhibition of the HIV-1 virus). The major developmental focus of the ex vivo gene therapy industry has been to identify the therapeutic gene of interest, insert it into a suitable vector that can be used to transport and integrate the gene into the DNA of the target cell, and then cause the gene to become expressed. The Company believes that for ex vivo gene therapy to progress to clinical applications, a process to produce a sufficient quantity of therapeutic cells is required as is an efficient means to insert the gene vector into target cells. Gene therapy is still in an early stage of development by third parties. The Company's business opportunity is dependent upon the successful development and regulatory approval of individual gene therapy applications. No assurance can be given that such applications will be developed or approved or that the Company's processes or product candidates will find successful applications in such therapies.

## THE AASTROM CPS FOR GENE THERAPY (GT-CPS)

The Aastrom CPS has been designed to produce cells for therapy and the Company believes that the Aastrom CPS may be useful in many potential ex vivo gene therapy applications. Further, the Company

anticipates that its proprietary stem cell production process technology implemented by the Aastrom CPS will provide the conditions for clinical scale stem cell division, and enable or enhance the introduction of therapeutic genes into stem cell DNA. The Company believes that its technology may also enable expansion of more mature progeny of these stem cells to create a gene therapy cell product with potential short and long term therapeutic effect.

The Company has two principal objectives for the development of Aastrom GT-CPS: (i) the enablement of stem cell gene therapies for a variety of hematologic and other disorders, based on the GT-CPS's ability to enable large scale stem cell division ex vivo; and (ii) the enablement of gene transfer and therapeutic cell production by local and regional primary patient care facilities and ancillary service laboratories.

#### THE AASTROM GENE LOADER

The Aastrom Gene Loader product technology, which is under development, is being designed to transfer new therapeutic genes, which are carried by vectors into the target cell. This process, which is typically inefficient in many human cells, has represented a major hurdle preventing many ex vivo gene therapies from moving forward in the clinic. The Aastrom Gene Loader will incorporate the Company's proprietary directed motion gene transfer technology and is expected to incorporate single-use sterile disposables, operated by dedicated instrumentation.

A major product objective of the Aastrom Gene Loader is the enhancement of gene transfer efficiencies and reliability. Improving gene vector efficiencies may enable a wide spectrum of gene therapies currently unable to realize clinical application.

The Company believes that these issues represent a general bottleneck for other companies pursuing ex vivo gene therapy clinical applications. The Company's technology may favorably influence these gene therapy applications, the development of which are impeded due to low transduction efficiencies and the resultant need for use of extreme quantities of gene vectors and/or target "delivery" tissues.

#### STRATEGIC RELATIONSHIPS

On October 22, 1993, the Company entered into a Distribution Agreement (the "Distribution Agreement") with Cobe for Cobe to be the Company's exclusive, worldwide distributor of the Aastrom CPS for stem cell therapy applications (the "Stem Cell Therapy Applications"). The Company has retained the right to market the Aastrom CPS for uses outside the Stem Cell Therapy Applications, such as for all gene therapy applications and for production of other cells and tissues. The initial term of the Distribution Agreement expires on October 22, 2003, and Cobe has the option to extend the term for an additional ten-year period. The Company is responsible for the expenses to obtain FDA and other regulatory approval in the United States, while Cobe is responsible for the expenses to obtain regulatory approval in foreign countries to allow for worldwide marketing of the Aastrom CPS for Stem Cell Therapy Applications. See "Risk Factors--Consequences of Cobe Relationship."

Under the terms of the Distribution Agreement, the Company will realize approximately 60% and 58% of the net sales price at which Cobe ultimately sells the Aastrom CPS in the United States and Europe, respectively, for Stem Cell Therapy Applications, subject to certain negotiated discounts and volume-based adjustments. The Company is also entitled to a premium on United States sales in any year in which worldwide sales exceed specified levels.

The Distribution Agreement may be terminated by Cobe upon twelve (12) months prior notice to the Company in the event that any person or entity other than Cobe beneficially owns more than 50% of the Company's outstanding Common Stock or voting securities. The Distribution Agreement may also be terminated by Cobe at any time after December 31, 1997 if Cobe determines that commercialization of the Aastrom CPS for stem cell therapy on or prior to December 31, 1998 is unlikely.

In conjunction with the Distribution Agreement, the Company also entered into a Stock Purchase Agreement with Cobe (the "Cobe Stock Agreement"), whereby Cobe acquired certain option, registration, preemptive and other rights pertaining to shares of the Company's stock. Pursuant to such preemptive rights, Cobe has elected to purchase \$5,000,000 of Common Stock in this offering at the initial public offering price per share. See "Description of Capital Stock--Rights of Cobe" and "Certain Transactions."

#### MANUFACTURING

The Company has no current intention of internally manufacturing its product candidates and, accordingly, is developing relationships with third party manufacturers which are FDA registered as suppliers for the manufacture of medical products.

On May 10, 1994, the Company entered into a Collaborative Product Development Agreement with SeaMED Corporation, ("SeaMED"). Pursuant to this agreement, the Company and SeaMED will collaborate on the further design of certain instrument components in the Aastrom CPS, and enable SeaMED to manufacture pre-production units of the instrument components for laboratory and clinical evaluation. The Company is paying SeaMED for its design and pre-production work on a "time and materials" basis, utilizing SeaMED's customary hourly billing rates and actual costs for materials. Subject to certain conditions, the Company has committed to enter into a manufacturing agreement with SeaMED for commercial manufacture of the instrument components for three years after shipment by SeaMED of the first commercial unit pursuant to a pricing formula set forth in the agreement. The Company retains all proprietary rights to its intellectual property which is utilized by SeaMED pursuant to this agreement.

On November 8, 1994, the Company entered into a Collaborative Product Development Agreement with Ethox Corporation ("Ethox"). Pursuant to this Agreement, the Company and Ethox will collaborate on the further design of certain bioreactor assembly and custom tubing kit components of the Aastrom CPS, and enable Ethox to manufacture pre-production units of such components for laboratory and clinical evaluation. The Company is paying Ethox for its design and production work on a "time and materials" basis, utilizing Ethox's customary hourly billing rates and actual costs for materials. The Company retains all proprietary rights to its intellectual property which are utilized by Ethox pursuant to this Agreement.

In April 1996, the Company entered into a five-year License and Supply Agreement with Immunex to purchase and resell certain cytokines and ancillary materials for use in conjunction with the Aastrom CPS. The agreement required the Company to pay Immunex an initial up-front fee of \$1,500,000 to be followed by subsequent annual fee payments equal to \$1,000,000 per year during the term of the agreement in addition to payment for supplies purchased by the Company. The agreement may be terminated by the Company at any time subject to the payment to Immunex of a specified amount for liquidated damages. Immunex may terminate the agreement in the event that the Company fails to purchase a minimum amount of its forecasted annual needs.

There can be no assurance that the Company will be able to continue its present arrangements with its suppliers, supplement existing relationships or establish new relationships or that the Company will be able to identify and obtain the ancillary materials that are necessary to develop its product candidates in the future. The Company's dependence upon third parties for the supply and manufacture of such items could adversely affect the Company's ability to develop and deliver commercially feasible products on a timely and competitive basis. See "Risk Factors--Manufacturing and Supply Uncertainties; Dependence on Third Parties."

#### PATENTS AND PROPRIETARY RIGHTS

The Company's success depends in part on its ability, and the ability of its licensors, to obtain patent protection for its products and processes. The Company and its licensors are seeking patent protection for technologies related to (i) human stem and progenitor cell production processes; (ii) bioreactors and systems for stem and progenitor cell production and production of other cells; and (iii) gene transfer devices and processes. The Company has exclusive license rights to five issued United States patents that present claims to (i) certain methods for ex vivo stem cell division as well as ex vivo human hematopoietic stem cell stable genetic

transformation and expanding and harvesting a human hematopoietic stem cell pool; (ii) certain apparatus for cell culturing, including a bioreactor suitable for culturing human stem cells or human hematopoietic cells; and (iii) certain methods of infecting or transfecting target cells with vectors. Patents equivalent to two of these United States patents have also been issued in other jurisdictions: one in Australia and another in Canada and under the European Patent Convention. These eight issued patents are due to expire beginning in 2006, through 2013. In addition, the Company and its exclusive licensors have filed applications for patents in the United States and equivalent applications in certain other countries claiming other aspects of the Company's products and processes, including five United States patent applications and corresponding applications in other countries related to various components of the Aastrom CPS. Of these pending patent applications, the Company has received notices of allowance for certain claims in a United States application relating to methods for obtaining ex vivo stem cell division, and claims in a European Patent Convention application and in a United States application relating to methods for efficient proliferation of hematopoietic cells in culture.

The validity and breadth of claims in medical technology patents involve complex legal and factual questions and, therefore, may be highly uncertain. No assurance can be given that any patents based on pending patent applications or any future patent applications of the Company or its licensors will be issued, that the scope of any patent protection will exclude competitors or provide competitive advantages to the Company, that any of the patents that have been or may be issued to the Company or its licensors will be held valid if subsequently challenged or that others will not claim rights in or ownership of the patents and other proprietary rights held or licensed by the Company. Furthermore, there can be no assurance that others have not developed or will not develop similar products, duplicate any of the Company's products or design around any patents that have been or may be issued to the Company or its licensors. Since patent applications in the United States are maintained in secrecy until patents issue, the Company also cannot be certain that others did not first file applications for inventions covered by the Company's and its licensors' pending patent applications, nor can the Company be certain that it will not infringe any patents that may issue to others on such applications.

The Company relies on certain licenses granted by the University of Michigan and Dr. Cremonese for the majority of its patent rights. If the Company breaches such agreements or otherwise fails to comply with such agreements, or if such agreements expire or are otherwise terminated, the Company may lose its rights under the patents held by the University of Michigan and Dr. Cremonese, which would have a material adverse effect on the Company's business, financial condition and results of operations. See "--University of Michigan Research Agreement and License Agreement" and "---License Agreement with J.G. Cremonese."

The Company also relies on trade secrets and unpatentable know-how which it seeks to protect, in part, by confidentiality agreements. It is the Company's policy to require its employees, consultants, contractors, manufacturers, outside scientific collaborators and sponsored researchers, and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with the Company. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with the Company is to be kept confidential and not disclosed to third parties except in specific limited circumstances. The Company also requires signed confidentiality or material transfer agreements from any company that is to receive its confidential data. In the case of employees, consultants and contractors, the agreements generally provide that all inventions conceived by the individual while rendering services to the Company shall be assigned to the Company as the exclusive property of the Company. There can be no assurance, however, that these agreements will not be breached, that the Company would have adequate remedies for any breach, or that the Company's trade secrets or unpatentable know-how will not otherwise become known or be independently developed by competitors.

The Company's success will also depend in part on its ability to develop commercially viable products without infringing the proprietary rights of others. The Company has not conducted freedom of use patent searches and no assurance can be given that patents do not exist or could not be filed which would have an adverse effect on the Company's ability to market its products or maintain its competitive position with respect to its products. If the Company's technology components, devices, designs, products, processes or other subject matter are claimed under other existing United States or foreign patents or are otherwise protected by third party

proprietary rights, the Company may be subject to infringement actions. In such event, the Company may challenge the validity of such patents or other proprietary rights or be required to obtain licenses from such companies in order to develop, manufacture or market its products. There can be no assurances that the Company would be able to obtain such licenses or that such licenses, if available, could be obtained on commercially reasonable terms. Furthermore, the failure to either develop a commercially viable alternative or obtain such licenses could result in delays in marketing the Company's proposed products or the inability to proceed with the development, manufacture or sale of products requiring such licenses, which could have a material adverse effect on the Company's business, financial condition and results of operations. If the Company is required to defend itself against charges of patent infringement or to protect its own proprietary rights against third parties, substantial costs will be incurred regardless of whether the Company is successful. Such proceedings are typically protracted with no certainty of success. An adverse outcome could subject the Company to significant liabilities to third parties and force the Company to curtail or cease its development and sale of its products and processes.

Certain of the Company's and its licensors' research has been or is being funded in part by the Department of Commerce and by a Small Business Innovation Research Grant obtained from the Department of Health and Human Services. As a result of such funding, the United States Government has certain rights in the technology developed with the funding. These rights include a non-exclusive, paid-up, worldwide license under such inventions for any governmental purpose. In addition, the government has the right to require the Company to grant an exclusive license under any of such inventions to a third party if the government determines that (i) adequate steps have not been taken to commercialize such inventions, (ii) such action is necessary to meet public health or safety needs or (iii) such action is necessary to meet requirements for public use under federal regulations. Additionally, under the federal Bayh Dole Act, a party which acquires an exclusive license for an invention that was partially funded by a federal research grant is subject to the following government rights: (i) products using the invention which are sold in the U.S. are to be manufactured substantially in the U.S., unless a waiver is obtained; (ii) if the licensee does not pursue reasonable commercialization of a needed product using the invention, the government may force the granting of a license to a third party who will make and sell the needed product; and (iii) the U.S. government may use the invention for its own needs.

#### UNIVERSITY OF MICHIGAN RESEARCH AGREEMENT AND LICENSE AGREEMENT

In August 1989, the Company entered into a Research Agreement (the "Research Agreement") with the University, pursuant to which the Company funded a research project at the University under the direction of Stephen G. Emerson, M.D., Ph.D., as the principal inventor, together with Michael F. Clarke, M.D., and Bernhard O. Palsson, Ph.D., as co-inventors. Pursuant to the Research Agreement, the Company was granted the right to acquire an exclusive, worldwide license to utilize all inventions, know-how and technology derived from the research project. By Extension Agreements, the Company and the University extended the scope and term of the Research Agreement through December 1994.

On March 13, 1992, the Company and the University entered into the License Agreement, as contemplated by the Research Agreement. There have been clarifying amendments to the License Agreement, dated March 13, 1992, October 8, 1993 and June 21, 1995. Pursuant to this License Agreement, (i) the Company acquired exclusive worldwide license rights to the patents and know-how for the production of blood cells and bone marrow cells as described in the University's research project or which resulted from certain further research conducted through December 31, 1994, and (ii) the Company is obligated to pay to the University a royalty equal to 2% of the net sales of products which are covered by the University's patents. Unless it is terminated earlier at the Company's option or due to a material breach by the Company, the License Agreement will continue in effect until the latest expiration date of the patents to which the License Agreement applies.

#### LICENSE AGREEMENT WITH J. G. CREMONESE

In July 1992, the Company entered into a License Agreement with Joseph G. Cremonese pursuant to which the Company obtained exclusive worldwide license rights for all fields of use, to utilize U.S. Patent No. 4,839,292, entitled "Cell Culture Flask Utilizing a Membrane Barrier," which patent was issued to



Dr. Cremonese on June 13, 1989, and to utilize any other related patents that might be issued to Dr. Cremonese. Pursuant to the License Agreement, the Company has reimbursed Dr. Cremonese for \$25,000 of his patent costs. Under the terms of the License Agreement, the Company is to pay to Dr. Cremonese a royalty of 3% of net sales of the products which are covered by said patent, subject to specified minimum royalty payments ranging from \$20,000 to \$50,000 per year, commencing in calendar year 1997. Unless it is terminated earlier at the Company's option or due to default by the Company, the License Agreement will continue in effect until the latest expiration date of the patents to which the License Agreement applies.

#### GOVERNMENT REGULATION

The Company's research and development activities and the manufacturing and marketing of the Company's products are subject to the laws and regulations of governmental authorities in the United States and other countries in which its products will be marketed. Specifically, in the United States the FDA, among other activities, regulates new product approvals to establish safety and efficacy of these products. Governments in other countries have similar requirements for testing and marketing. In the U.S., in addition to meeting FDA regulations, the Company is also subject to other federal laws, such as the Occupational Safety and Health Act and the Environmental Protection Act, as well as certain state laws.

#### REGULATORY PROCESS IN THE UNITED STATES

To the Company's knowledge, it is the first to develop a culture system for ex vivo human cell production to be sold for therapeutic applications. Therefore, to a certain degree, the manner in which the FDA will regulate the Company's products is uncertain.

The Company's products are potentially subject to regulation as medical devices under the Federal Food, Drug, and Cosmetic Act, and as biological products under the Public Health Service Act, or both. Different regulatory requirements may apply to the Company's products depending on how they are categorized by the FDA under these laws. To date, the FDA has indicated that it intends to regulate the Aastrom CPS product for stem cell therapy as a Class III medical device through the Center for Biologics Evaluation and Research. However, there can be no assurance that FDA will ultimately regulate the Aastrom CPS as a medical device.

Further, it is unclear whether the FDA will separately regulate the cell therapies derived from the Aastrom CPS. The FDA is still in the process of developing its requirements with respect to somatic cell therapy and gene cell therapy products and has recently issued a draft document concerning the regulation of umbilical cord blood stem cell products. If the FDA adopts the regulatory approach set forth in the draft document, the FDA may require separate regulatory approval for such cells in some cases. The FDA also recently proposed a new type of license, called a biologic license application ("BLA"), for autologous cells manipulated ex vivo and intended for structural repair or reconstruction. This proposal may indicate that the FDA will extend a similar approval requirement to other types of autologous cellular therapies, such as autologous cells for stem cell therapy. Any such additional regulatory or approval requirements could significantly delay the introduction of the Company's product candidates to the market, and have a material adverse impact on the Company.

Approval of new medical devices and biological products is a lengthy procedure leading from development of a new product through preclinical and clinical testing. This process takes a number of years and the expenditure of significant resources. There can be no assurance that the Company's product candidates will ultimately receive regulatory approval.

Regardless of how the Company's product candidates are regulated, the Federal Food, Drug, and Cosmetic Act and other Federal statutes and regulations govern or influence the research, testing, manufacture, safety, labeling, storage, recordkeeping, approval, distribution, use, reporting, advertising and promotion of such products. Noncompliance with applicable requirements can result in civil penalties, recall, injunction or seizure of products, refusal of the government to approve or clear product approval applications or to allow the Company to enter into government supply contracts, withdrawal of previously approved applications and criminal prosecution.

## DEVICES

In order to obtain FDA approval of a new medical device sponsors must generally submit proof of safety and efficacy. In some cases, such proof entails extensive clinical and preclinical laboratory tests. The testing, preparation of necessary applications and processing of those applications by the FDA is expensive and may take several years to complete. There can be no assurance that the FDA will act favorably or in a timely manner in reviewing submitted applications, and the Company may encounter significant difficulties or costs in its efforts to obtain FDA approvals which could delay or preclude the Company from marketing any products it may develop. The FDA may also require postmarketing testing and surveillance of approved products, or place other conditions on the approvals. These requirements could cause it to be more difficult or expensive to sell the products, and could therefore restrict the commercial applications of such products. Product approvals may be withdrawn if compliance with regulatory standards is not maintained or if problems occur following initial marketing. For patented technologies, delays imposed by the governmental approval process may materially reduce the period during which the Company will have the exclusive right to exploit such technologies.

If human clinical trials of a proposed device are required and the device presents significant risk, the manufacturer or distributor of the device will have to file an IDE application with the FDA prior to commencing human clinical trials. The IDE application must be supported by data, typically including the results of pre-clinical and laboratory testing. If the IDE application is approved, human clinical trials may commence at a specified number of investigational sites with the number of patients approved by the FDA.

The FDA categorizes devices into three regulatory classifications subject to varying degrees of regulatory control. In general, Class I devices require compliance with labeling and recordkeeping regulations, GMPs, 510(k) pre-market notification, and are subject to other general controls. Class II devices may be subject to additional regulatory controls, including performance standards and other special controls, such as postmarket surveillance. Class III devices, which are either invasive or life-sustaining products, or new products never before marketed (for example, non-"substantially equivalent" devices), require clinical testing to demonstrate safety and effectiveness and FDA approval prior to marketing and distribution. The FDA also has the authority to require clinical testing of Class I and Class II devices.

If a manufacturer or distributor of medical devices cannot establish that a proposed device is substantially equivalent, the manufacturer or distributor must submit a PMA application to the FDA. A PMA application must be supported by extensive data, including preclinical and human clinical trial data, to prove the safety and efficacy of the device. Upon receipt, the FDA conducts a preliminary review of the PMA application. If sufficiently complete, the submission is declared filed by the FDA. By regulation, the FDA has 180 days to review a PMA application once it is filed, although PMA application reviews more often occur over a significantly protracted time period, and may take approximately one year or more from the date of filing to complete.

Some of the Company's products may be classified as Class II or Class III medical devices. The Company has submitted several IDEs for the Aastrom CPS, and is currently conducting a pre-pivotal clinical study under one of these IDEs. The Company believes that the Aastrom CPS product will be regulated by the FDA as a Class III device, although there can be no assurance that the FDA will not choose to regulate this product in a different manner.

The Company and any contract manufacturer are required to be registered as a medical device manufacturer with the FDA. As such, they will be inspected on a routine basis by the FDA for compliance with the FDA's GMP regulations. These regulations will require that the Company and any contract manufacturer manufacture products and maintain documents in a prescribed manner with respect to manufacturing, testing, distribution, storage, design control and service activities, and that adequate design and service controls are implemented. The Medical Device Reporting regulation requires that the Company provide information to the FDA on deaths or serious injuries alleged to be associated with the use of its devices, as well as product malfunctions that are

likely to cause or contribute to death or serious injury if the malfunction were to recur. In addition, the FDA prohibits a company from promoting an approved device for unapproved applications and reviews company labeling for accuracy.

#### BIOLOGICAL PRODUCTS

For certain of the Company's new products which may be regulated as biologics, the FDA requires (i) preclinical laboratory and animal testing, (ii) submission to the FDA of an investigational new drug ("IND") application which must be effective prior to the initiation of human clinical studies, (iii) adequate and well-controlled clinical trials to establish safety and efficacy of the product for its intended use, (iv) submission to the FDA of a product license application ("PLA") and establishment license application ("ELA") and (v) review and approval of the PLA and ELA as well as inspections of the manufacturing facility by the FDA prior to commercial marketing of the product.

Preclinical testing covers laboratory evaluation of product chemistry and formulation as well as animal studies to assess the safety and efficacy of the product. The results of these tests are submitted to the FDA as part of the IND. Following the submission of an IND, the FDA has 30 days to review the application and raise safety and other clinical trial issues. If the Company is not notified of objections within that period, clinical trials may be initiated. Clinical trials are typically conducted in three sequential phases. Phase I represents the initial administration of the drug or biologic to a small group of humans, either healthy volunteers or patients, to test for safety and other relevant factors. Phase II involves studies in a small number of patients to assess the efficacy of the product, to ascertain dose tolerance and the optimal dose range and to gather additional data relating to safety and potential adverse effects. Once an investigational drug is found to have some efficacy and an acceptable safety profile in the targeted patient population, multi-center Phase III studies are initiated to establish safety and efficacy in an expanded patient population and multiple clinical study sites. The FDA reviews both the clinical plans and the results of the trials and may request the Company to discontinue the trials at any time if there are significant safety issues.

The results of the preclinical tests and clinical trials are submitted to the FDA in the form of a PLA for marketing approval. The testing and approval process is likely to require substantial time and effort and there can be no assurance that any approval will be granted on a timely basis, if at all. Additional animal studies or clinical trials may be requested during the FDA review period that may delay marketing approval. After FDA approval for the initial indications, further clinical trials may be necessary to gain approval for the use of the product for additional indications. The FDA requires that adverse effects be reported to the FDA and may also require post-marketing testing to monitor for adverse effects, which can involve significant expense.

Under current requirements, facilities manufacturing biological products must be licensed. To accomplish this, an ELA must be filed with the FDA. The ELA describes the facilities, equipment and personnel involved in the manufacturing process. An establishment license is granted on the basis of inspections of the applicant's facilities in which the primary focus is on compliance with GMP and the ability to consistently manufacture the product in the facility in accordance with the PLA. If the FDA finds the inspection unsatisfactory, it may decline to approve the ELA, resulting in a delay in production of products. Although reviewed separately, approval of both the PLA and ELA must be received prior to commercial marketing of a cellular biologic.

As part of the approval process for human biological products, each manufacturing facility must be registered and inspected by FDA prior to marketing approval. In addition, state agency inspections and approvals may also be required for a biological product to be shipped out of state.

#### REGULATORY PROCESS IN EUROPE

The Company believes that the Aastrom CPS will be regulated in Europe as a Class IIb medical device, under the authority of the new Medical Device Directives ("MDD") being implemented by European Union ("EU") member countries. This classification applies to medical laboratory equipment and supplies including,

among other products, many devices that are used for the collection and processing of blood for patient therapy. Certain ancillary products (e.g., biological reagents) used with the Aastrom CPS may be considered Class III medical devices.

The MDD regulations vest the authority to permit affixing of the "CE Mark" with various "Notified Bodies." These are private and state organizations which operate under license from the EU to certify that appropriate quality assurance standards and compliance procedures are followed by developers and manufacturers of medical device products or, alternatively, that a manufactured medical product meets a more limited set of requirements. Notified Bodies are also charged with responsibility for determination of the appropriate standards to apply to a medical product. Receipt of permission to affix the CE Mark enables a company to sell a medical device in all EU member countries. Other registration requirements may also need to be satisfied in certain countries, although there is a general trend among EU member countries not to impose additional requirements beyond those specified for CE Mark certification.

#### COMPETITION

The biotechnology and medical device industries are characterized by rapidly evolving technology and intense competition. The Company's competitors include major pharmaceutical, medical device, medical products, chemical and specialized biotechnology companies, many of which have financial, technical and marketing resources significantly greater than those of the Company. In addition, many biotechnology companies have formed collaborations with large, established companies to support research, development and commercialization of products that may be competitive with those of the Company. Academic institutions, governmental agencies and other public and private research organizations are also conducting research activities and seeking patent protection and may commercialize products on their own or through joint ventures. The Company's product development efforts are primarily directed toward obtaining regulatory approval to market the Aastrom CPS for stem cell therapy. That market is currently dominated by the bone marrow harvest and PBPC collection methods. The Company's clinical data, although early, is inconclusive as to whether or not cells expanded in the Aastrom CPS will enable hematopoietic recovery within the time frames currently achieved by the bone marrow harvest and PBPC collection methods. In addition, the bone marrow harvest and PBPC collection methods have been widely practiced for a number of years and, recently, the patient costs associated with these procedures have begun to decline. There can be no assurance that the Aastrom CPS method, if approved for marketing, will prove to be competitive with these established collection methods on the basis of hematopoietic recovery time, cost or otherwise. The Company is aware of certain other products manufactured or under development by competitors that are used for the prevention or treatment of certain diseases and health conditions which the Company has targeted for product development. In particular, the Company is aware that competitors such as Amgen, Inc., CellPro, Incorporated, Systemix, Inc., Baxter Healthcare Corp. and RPR are in advanced stages of development of technologies and products for use in stem cell therapy and other market applications currently being pursued by the Company. In addition, Cobe, a significant shareholder of the Company, is a market leader in the blood cell processing products industry and, accordingly, a potential competitor of the Company. There can be no assurance that developments by others will not render the Company's product candidates or technologies obsolete or noncompetitive, that the Company will be able to keep pace with new technological developments or that the Company's product candidates will be able to supplant established products and methodologies in the therapeutic areas that are targeted by the Company. The foregoing factors could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company's products under development are expected to address a broad range of existing and new markets. The Company believes that its stem cell therapy products will, in large part, face competition by existing procedures rather than novel new products. The Company's competition will be determined in part by the potential indications for which the Company's products are developed and ultimately approved by regulatory authorities. In addition, the first product to reach the market in a therapeutic or preventive area is often at a significant competitive advantage relative to later entrants to the market. Accordingly, the relative speed with

which the Company or its corporate partners can develop products, complete the clinical trials and approval processes and supply commercial quantities of the products to the market are expected to be important competitive factors. The Company's competitive position will also depend on its ability to attract and retain qualified scientific and other personnel, develop effective proprietary products, develop and implement production and marketing plans, obtain and maintain patent protection and secure adequate capital resources. The Company expects its products, if approved for sale, to compete primarily on the basis of product efficacy, safety, patient convenience, reliability, value and patent position.

#### FACILITIES

The Company leases approximately 20,000 square feet of office and research and development space in Ann Arbor, Michigan under a lease agreement expiring in May 1998. The lease is renewable at the option of the Company for up to an additional five-year term. The Company believes that its facilities will be adequate for its currently anticipated needs. Contract manufacturing or additional facilities will be required in the future to support expansion of research and development and to manufacture products.

#### EMPLOYEES

As of September 30, 1996, the Company employed approximately 61 individuals full-time. A significant number of the Company's management and professional employees have had prior experience with pharmaceutical, biotechnology or medical product companies. None of the Company's employees are covered by collective bargaining agreements, and management considers relations with its employees to be good.

#### LEGAL PROCEEDINGS

The Company is not party to any material legal proceedings, although from time to time it may become involved in disputes in connection with the operation of its business.

MANAGEMENT

DIRECTORS AND EXECUTIVE OFFICERS

The following table provides information concerning directors and executive officers of the Company as of October 31, 1996:

NAME ----	AGE ---	POSITION -----
Robert J. Kunze(2)(3).....	61	Chairman of the Board; Director
R. Douglas Armstrong, Ph.D.(3)...	43	President and Chief Executive Officer; Director
James Maluta.....	49	Vice President, Product Development
Todd E. Simpson.....	35	Vice President, Finance & Administration; Chief Financial Officer; Secretary; and Treasurer
Walter C. Ogier.....	40	Vice President, Marketing
Thomas E. Muller, Ph.D.....	61	Vice President, Regulatory Affairs
Alan K. Smith, Ph.D.....	41	Vice President, Research
Stephen G. Emerson, M.D., Ph.D...	43	Director; Scientific Advisor
Albert B. Deisseroth, M.D., Ph.D.(2).....	55	Director; Scientific Advisor
G. Bradford Jones(1)(3).....	41	Director
Horst R. Witzel, Dr.-Ing.....	69	Director
Edward C. Wood, Jr.(1)(3).....	51	Director

- - - - -
- (1) Member of Audit Committee.
  - (2) Member of Compensation Committee.
  - (3) Member of Executive Committee.

All directors hold office until the next annual meeting of shareholders and until their successors have been duly elected and qualified. The Company's Bylaws provide that the Board of Directors will consist of between five and nine members, and the number of directors is currently set at seven members. The Bylaws also provide that the Board of Directors will serve staggered three-year terms, or until their successors are elected and qualified. The terms of office of the Company's current directors expire as follows: Mr. Jones, Dr. Deisseroth and Mr. Wood, 1999; Mr. Kunze and Dr. Emerson, 1998; and Dr. Armstrong and Dr. Witzel, 1997. Officers are elected by and serve at the discretion of the Board of Directors. There are no family relationships among the directors or officers of the Company.

Robert J. Kunze a director of the Company since its inception in 1989, is a founder of the Company and served as its President and Chief Executive Officer through May 1991. Since 1987, he has been a General Partner of H&Q Life Science Venture Partners, a venture capital fund specializing in medical products and biotechnology investments. Previous to that, Mr. Kunze was Managing Partner of Hambrecht & Quist Venture Partners. Prior to that he served as a senior executive with W.R. Grace & Co. and General Electric. Mr. Kunze also serves on the Board of Directors of Escalon Medical Corporation.

R. Douglas Armstrong, Ph.D. joined the Company in June 1991 as a director and as its President and Chief Executive Officer. From 1987 to 1991, Dr. Armstrong served in different capacities, including as Executive Vice President and a Trustee of the La Jolla Cancer Research Foundation ("LJCRF"), a 250-employee scientific research institute located in San Diego, California. Dr. Armstrong received his doctorate in Pharmacology and Toxicology from the Medical College of Virginia, and has held faculty and staff positions at Yale University, University of California, San Francisco, LJCRF and University of Michigan. Dr. Armstrong also serves on the Board of Directors of Nephros Therapeutics, Inc.

James Maluta joined the Company in August 1992 as Vice President, Product Development. Mr. Maluta has a broad background in the development and manufacturing of medical devices, with 25 years of experience in the industry, principally with OHMEDA and with Cobe BCT, Inc. While with Cobe BCT, Inc., Mr. Maluta was Program Manager for the Cobe Spectra Apheresis System, a device for blood cell processing and apheresis. Mr. Maluta held other engineering management positions and also was director of Quality Assurance for Cobe BCT. Mr. Maluta received his degree in electrical engineering from the University of Wisconsin.

Todd E. Simpson joined the Company in January 1996 as Vice President, Finance and Administration and Chief Financial Officer and is also the Company's Secretary and Treasurer. Prior to that, Mr. Simpson was Treasurer of Integra LifeSciences Corporation ("Integra"), a biotechnology company, which acquired Telios Pharmaceuticals, Inc. ("Telios") in August 1995 in connection with the reorganization of Telios under Chapter 11 of the U.S. Bankruptcy Code. Mr. Simpson served as Vice President of Finance and Chief Financial Officer of Telios up until its acquisition by Integra and held various other financial positions at Telios after joining that company in February 1992. Telios was a publicly-held company engaged in the development of pharmaceutical products for the treatment of dermal and ophthalmic wounds, fibrotic disease, vascular disease, and osteoporosis. From August 1983 through February 1992, Mr. Simpson practiced public accounting with the firm of Ernst & Young, LLP. Mr. Simpson is a Certified Public Accountant and received his B.S. degree in Accounting and Computer Science from Oregon State University.

Walter C. Ogier joined the Company in March 1994 as Director of Marketing and was promoted to Vice President, Marketing during 1995. Prior to that, Mr. Ogier was at Baxter Healthcare Corporation's Immunotherapy Division, where he served as Director, Business Development from 1992 to 1994 and as Manager, Marketing and Business Development in charge of the company's cell therapy product lines from 1990 to 1992. Mr. Ogier previously held positions with Ibbottson Associates and with the Business Intelligence Center at SRI International (formerly Stanford Research Institute). Mr. Ogier received his B.A. degree in Chemistry from Williams College in 1979 and his Masters of Management degree from the Yale School of Management in 1987.

Thomas E. Muller, Ph.D. joined the Company in May 1994 as Vice President, Regulatory Affairs. Prior to that, Dr. Muller was Director, Biomedical Systems with W.R. Grace & Company in Lexington, Massachusetts. Prior to this, Dr. Muller was Vice President, Engineering and Director of Research and Development with the Renal Division of Baxter Healthcare in Deerfield, Illinois. Dr. Muller has also served as Adjunct Professor at Columbia University and as Visiting Professor at the University of Gent, Belgium. Dr. Muller graduated from the Technical University in Budapest, Hungary, in 1956 with a B.S. in Chemical Engineering. Dr. Muller received his M.S. degree in 1959 and was awarded a Ph.D. in 1964, both in Polymer Chemistry, from McGill University.

Alan K. Smith, Ph.D. joined the Company in November 1995 as Vice President, Research. Previously, Dr. Smith was Vice President of Research and Development at Genec Sciences, Inc., a developmental stage bone marrow transplantation company. Prior to that, Dr. Smith held the position of Director, Cell Separations Research and Development of the Immunotherapy Division of Baxter Healthcare Corporation. In this capacity, he was responsible for the research and development activities for a stem cell concentration system approved for clinical use in Europe and currently in pivotal clinical trials in the United States. Dr. Smith has also held positions as Research and Development Manager at BioSpecific Technologies, as Director of Biochemistry at HyClone Laboratories and as a member of the Board of Directors of Dallas Biomedical. Dr. Smith received his B.S. degree in Chemistry from Southern Utah State College in 1976 and a Ph.D. in Biochemistry from Utah State University in 1983.

Stephen G. Emerson, M.D., Ph.D. a director since the inception of the Company in 1989, is a scientific founder of the Company and has been an active advisor of the Company since that time. Dr. Emerson has been a Professor of Medicine at the University of Pennsylvania since 1994 where he serves as head of Hematology and Oncology. From 1991 to 1994, Dr. Emerson was an Associate Professor of Medicine at the University of Michigan. Dr. Emerson received his doctorate degrees in Medicine and Cell Biology/Immunology from Yale University. He completed his internship and residency at Massachusetts General Hospital and his clinical and research fellowship in hematology at the Brigham and Women's Hospital, the Dana-Farber Cancer Institute and Children's Hospital Medical Center.

Albert B. Deisseroth, M.D., Ph.D. a director since August 1991, currently serves as an Ensign Professor of Medicine and the Chief, Section of Medical Oncology at Yale University and is a professor at both the University of Texas Graduate School of Biomedical Sciences and the University of Texas Health Science Center Medical

School in Houston, Texas. Prior to that, Dr. Deisseroth had been Chairman of the Department of Hematology and a Professor of Medicine and Cancer Treatment and Research at the University of Texas, M.D. Anderson Cancer Center in Houston, Texas. Previous to this, Dr. Deisseroth served as Professor of Medicine at the University of California, San Francisco, and Chief, Hematology/Oncology at the San Francisco Veteran's Administration Medical Center. Dr. Deisseroth received his doctorate degrees in Medicine and Biochemistry from the University of Rochester. Dr. Deisseroth is currently a member of the Scientific Advisory Boards of Ingenex, Inc., Genvec, Inc. and Incell.

G. Bradford Jones a director since April 1992, is a general partner of Brentwood V Ventures, L.P., the general partner of Brentwood Associates V, L.P. Brentwood Associates V, L.P. is a partnership organized by the firm Brentwood Venture Capital, which Mr. Jones joined in 1981. Mr. Jones was elected to the Board of Directors of the Company pursuant to the terms of the Series B Preferred Stock Purchase Agreement dated April 7, 1992 with the Company, of which Brentwood Associates V, L.P. is a party. Mr. Jones received a B.A. degree in Chemistry and an M.A. degree in Physics from Harvard University and M.B.A. and J.D. degrees from Stanford University. Mr. Jones also serves on the Board of Directors of Interpore International, ISOCOR, Onyx Acceptance Corporation, Plasma & Materials Technologies, and several privately-held companies.

Horst R. Witzel, Dr.-Ing. a director since June 1994, served as Chairman of the Board of Executive Directors of Schering AG in Berlin, Germany from 1986 until his retirement in 1989, whereupon he became a member of the Supervisory Board of Schering AG until 1994. Prior to that, Dr. Witzel held various leadership positions in research and development with Schering AG where he was responsible for worldwide production and technical services. Dr. Witzel received his doctorate in chemistry from the Technical University of West Berlin. Dr. Witzel also serves on the Board of Directors of The Liposome Company, Inc. and Cephalon, Inc. and is a member of the Supervisory Board of Brau and Brunnen AG.

Edward C. Wood, Jr. a director since August 1994, has served as president of Cobe BCT, Inc., a division of Cobe Laboratories, Inc., since 1991. Cobe is a subsidiary of Gambro AB, a Swedish company, and is a leading provider of blood cell processing products. Prior to that, Mr. Wood held various positions in manufacturing, research and development, and marketing with Cobe. Mr. Wood received degrees in chemistry from Harvey Mudd College and in management from the University of Colorado.

#### LIMITATION OF LIABILITY AND INDEMNIFICATION MATTERS

The Company has adopted provisions in its Restated Articles of Incorporation that limit the liability of its directors for monetary damages arising from a breach of their fiduciary duty as directors, except under certain circumstances which include breach of the director's duty of loyalty to the Company or its shareholders, acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of the law.

The Company's Bylaws provide that the Company shall indemnify its directors to the fullest extent authorized or permitted by the Michigan Business Corporation Act. Additionally, the Company has entered into an Indemnification Agreement, originally dated as of December 14, 1993 (the "Indemnification Agreement"), with certain of its directors, officers and other key personnel, which may, in certain cases, be broader than the specific indemnification provisions contained under applicable law. The Indemnification Agreement may require the Company, among other things, to indemnify such officers, directors and key personnel against certain liabilities that may arise by reason of their status or service as directors, officers or employees of the Company, to advance the expenses incurred by such parties as a result of any threatened claims or proceedings brought against them as to which they could be indemnified, and to cover such officers, directors and key employees under the Company's directors' and officers' liability insurance policies to the maximum extent that insurance coverage is maintained.

At present, there is no pending litigation or proceeding involving a director, officer, employee or agent of the Company where indemnification by the Company will be required or permitted. The Company is not aware of any threatened litigation or proceeding which may result in a claim for such indemnification.



EXECUTIVE COMPENSATION

The following table summarizes the compensation paid to or earned by the Company's Chief Executive Officer and all other executive officers of the Company whose salary and bonus for services rendered in all capacities to the Company during the fiscal year ended June 30, 1996 exceeded \$100,000 (the "named executive officers"):

SUMMARY COMPENSATION TABLE

NAME AND 1996 PRINCIPAL POSITION	YEAR	ANNUAL COMPENSATION			ALL OTHER COMPENSATION (\$)
		SALARY (\$)	BONUS (\$)	OTHER ANNUAL COMPENSATION (\$)	
R. Douglas Armstrong, Ph.D..... President and Chief Executive Officer	1996	\$156,962	\$55,000	--	\$8,885(1)
James Maluta..... Vice President, Product Development	1996	\$118,942	\$10,000	--	--
Thomas E. Muller, Ph.D.. Vice President, Regulatory Affairs	1996	\$118,560	--	--	--
Walter C. Ogier..... Vice President, Marketing	1996	\$106,250	\$ 7,500	--	--

(1) Consists of vacation pay to Dr. Armstrong in 1996.

1996 Option Grants

The following table contains information about the stock option grants to the named executive officers in 1996:

OPTION GRANTS IN LAST FISCAL YEAR

NAME	INDIVIDUAL GRANTS				POTENTIAL REALIZED VALUE AT ASSUMED ANNUAL RATES OF STOCK PRICE APPRECIATION FOR OPTION TERM(1)	
	NUMBER OF SECURITIES UNDERLYING OPTIONS GRANTED (#)	% OF TOTAL OPTIONS GRANTED TO EMPLOYEES IN FISCAL YEAR	EXERCISE OR BASE PRICE (\$/SH)	EXPIRATION DATE	5% (\$)	10% (\$)
R. Douglas Armstrong, Ph.D. ....	--	--	--	--	--	--
James Maluta.....	--	--	--	--	--	--
Thomas E. Muller, Ph.D.. Walter C. Ogier.....	6,667 6,667	4.3% 4.3%	1.20 1.20	02/14/06 02/14/06	5,000 5,000	12,734 12,734

(1) The 5% and the 10% assumed rates of appreciation are established by the rules of the Securities and Exchange Commission and do not represent the Company's estimate or projection of the future Common Stock price. If the Common Stock price of \$1.20 on the date of grant for the options granted in 1996 were to appreciate at the rates indicated, it would be \$1.95 per share (at a 5% compounded appreciation) and \$3.11 per share (at a 10% compounded appreciation) on the date of expiration of those options.

Option Exercises and Year-End Values

The following table provides information about the number of shares issued upon option exercise by the named executive officers during 1996, and the value realized by the named executive officers. The table also provides information about the number and value of options held by the named executive officers at June 30, 1996:

AGGREGATED OPTION EXERCISES IN LAST FISCAL YEAR  
AND FY-END OPTION VALUES

NAME	SHARES		NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT FY-END (#)		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT FY-END (\$)(1)	
	ACQUIRED ON EXERCISE (#)	VALUE REALIZED(\$)	EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
R. Douglas Armstrong, Ph.D.....	--	--	--	--	--	--
James Maluta.....	29,999	86,847	16,668	--	\$48,254	--
Thomas E. Muller, Ph.D..	--	--	15,000	18,334	29,925	\$36,576
Walter C. Ogier.....	5,000	9,975	13,750	21,250	27,431	42,394

(1) The option value represents fair market value of the underlying securities on the exercise date minus the aggregate exercise price of such options, multiplied by the number of shares of Common Stock subject to the option. For purposes of this calculation, a fair market value of \$3.20 per share was used, the fair market value of the securities as determined by the Board of Directors on June 30, 1996.

No compensation intended to serve as incentive for performance to occur over a period longer than one fiscal year was paid pursuant to a long-term incentive plan during the last fiscal year to any of the persons named in the Summary Compensation Table. The Company does not have any defined benefit or actuarial plan with any of the persons named in the Summary Compensation Table under which benefits are determined primarily by final compensation or average final compensation and years of service.

EMPLOYMENT AGREEMENTS

The Company has a policy of entering into employment agreements with all of its employees, and has entered into such agreements with all of its executive officers other than Dr. Armstrong. Such employment agreements generally establish salary levels (which are subject to periodic review) and provide for customary fringe benefits such as vacation leave, sick leave and health insurance. The agreements also generally provide for the protection of confidential information and the assignment to the Company of inventions conceived by the employee during his or her employment and permit the termination of the employment relationship by either party upon fourteen days prior written notice. The following is a summary of the employment agreements between the Company and its executive officers.

The Company entered into employment agreements with no defined terms with James Maluta, Walter C. Ogier, Thomas E. Muller, Ph.D., Alan K. Smith, Ph.D. and Todd E. Simpson in June 1992, February 1994, April 1994, October 1995 and December 1995, respectively. Pursuant to these agreements, the Company agreed to pay Messrs. Maluta, Ogier, Muller, Smith and Simpson annual base salaries of \$90,000, \$87,500, \$110,000, \$122,500 and \$122,500, respectively, certain of which base salaries have been increased by the Board of Directors and are subject to annual review and adjustment. Pursuant to the terms of the foregoing employment agreements, either party may generally terminate the employment relationship without cause at any time upon 14 days prior written notice to the other party or immediately with cause upon notice.

## STOCK OPTION AND EMPLOYEE BENEFIT PLANS

### 1989 STOCK OPTION PLAN

In 1989, the Company established the 1989 Stock Option Plan. As of September 30, 1996, options to purchase an aggregate of 932,266 shares of Common Stock have been exercised at \$0.15 per share. Options to purchase 13,127 shares of Common Stock at \$0.15 per share were cancelled unexercised. No additional shares remain available for grant under the 1989 Stock Option Plan.

### ANCILLARY PLAN

In 1991, the Company established an Ancillary Plan to grant options to individuals who were not eligible to receive options under the 1989 Stock Option Plan. Options to purchase an aggregate of 7,498 shares of the Company's Common Stock were granted under the Ancillary Plan, of which options to purchase 4,328 shares have been exercised at \$0.15 per share and the remaining options to purchase 3,170 shares have been cancelled. No additional shares remain available for grant under the Ancillary Plan.

### AMENDED AND RESTATED 1992 INCENTIVE AND NON-QUALIFIED STOCK OPTION PLAN

In 1992, the Company adopted the 1992 Incentive and Non-Qualified Stock Option Plan (the "1992 Plan"), providing for the grant of options to purchase 666,667 shares of Common Stock. The Company allocated an additional 100,000 shares of Common Stock during 1992, an additional 333,333 shares of Common Stock in 1994 and an additional 800,000 shares of Common Stock in 1996 to the 1992 Plan, resulting in a total share reserve of 1,900,000 shares. The 1992 Plan was amended and restated to its current form in 1996. Options under the 1992 Plan for a total of 462,840 shares have been exercised as of September 30, 1996. As of September 30, 1996, options to purchase 336,254 shares of Common Stock were outstanding with a weighted average exercise price of \$1.27 per share.

The 1992 Plan provides for grants to employees and officers of "incentive stock options" within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended, provided that such employee or officer is an employee on the date of grant. The 1992 Plan also provides for grants to employees, officers, consultants or service providers of nonqualified stock options. The 1992 Plan previously has been administered by the Board of Directors, but is currently administered by the Compensation Committee of the Board of Directors (the "Committee"). Each option granted pursuant to the 1992 Plan is authorized by the Committee and evidenced by a notice in such form as the Committee may from time to time determine.

The exercise price of each incentive stock option granted under the 1992 Plan must be at least equal to the fair market value of a share of Common Stock on the date of grant, except for incentive stock options granted to individuals who, at the time of grant, own stock possessing more than 10% of the total combined voting power of the Company, which options must have an exercise price of at least 110% of the fair market value of a share of Common Stock on the date of grant and must expire five years from the date of grant. The exercise price of each nonqualified stock option granted under the 1992 Plan must be at least 85% of the fair market value of the shares on the date of grant. No option shall be treated as an incentive stock option to the extent that such option would cause the aggregate fair market value (determined as of the date of grant of such option) of the shares with respect to which incentive stock options are exercisable by such optionee for the first time during any calendar year to exceed \$100,000. The terms of all incentive stock options and nonqualified stock options granted under the 1992 Plan may not exceed ten years. The exercise price may be paid in cash or, at the Committee's discretion, by delivery of previously owned shares of the Company's Common Stock, by a combination of cash and shares, or any other form of legal consideration acceptable to the Committee. Options under the 1992 Plan generally may not be granted after April 2006.

The 1992 Plan provides that if the Company is a party to any merger in which the Company is not the surviving entity, any consolidation or dissolution (other than the merger or consolidation of the Company with one or more of its wholly-owned subsidiaries), the Company must cause any successor corporation to assume the options or substitute similar options for outstanding options or continue such options in effect. In the event that any successor to the Company in a merger, consolidation or dissolution will not assume the options or substitute similar options, then with respect to options held by optionees performing services for the Company, the time for exercising such options will be accelerated and such options will be terminated if not exercised prior to such merger, consolidation or dissolution.

#### 1996 OUTSIDE DIRECTORS STOCK OPTION PLAN

A total of 150,000 shares of Common Stock have been reserved for issuance under the Company's 1996 Outside Directors Stock Option Plan (the "Directors Plan"). As of the date of this Prospectus, no options have been granted under the Directors Plan. The Directors Plan provides for the automatic granting of non-qualified stock options to directors of the Company who are not employees of the Company ("Outside Directors"). Under the Directors Plan, each Outside Director serving on the effective date of this Offering or elected after the date of this offering will automatically be granted an option to purchase 5,000 shares of Common Stock on the effective date of this offering or on the date of his or her election or appointment. In addition, each serving Outside Director will thereafter automatically be granted an option to purchase 5,000 shares of Common Stock following each annual meeting of shareholders after their election, provided that the Outside Director continues to serve in such capacity and that the Outside Director has served continuously as a director for at least six months. The exercise price of the options in all cases will be equal to the fair market value of the Common Stock on the date of grant. Options granted under the Directors Plan generally vest over a one-year period in equal monthly installments and must be exercised within ten years from the date of grant.

#### 1996 EMPLOYEE STOCK PURCHASE PLAN

A total of 250,000 shares of the Company's Common Stock have been reserved for issuance under the Company's 1996 Employee Stock Purchase Plan (the "Purchase Plan"), none of which have been issued. The Purchase Plan permits eligible employees to purchase Common Stock at a discount through payroll deductions, during sequential 24-month offering periods. Each offering period is divided into four consecutive six-month purchase periods. Unless otherwise provided by the Board of Directors prior to the commencement of an offering period, the price at which stock is purchased under the Purchase Plan for such offering period is equal to 85% of the lesser of the fair market value of the Common Stock on the first day of such offering period or the last day of the purchase period of such offering period. The initial offering period will commence on the effective date of this offering.

#### SECTION 401(K) PLAN

Effective January 1, 1994, the Company adopted the Aastrom Biosciences, Inc. 401(k) Plan (the "Plan"). The Plan is intended to be a qualified retirement plan under the Internal Revenue Code. Employees of the Company are eligible to participate in the Plan upon the completion of three consecutive months of employment. Participants may make salary deferral contributions to the Plan of up to 15% of compensation, subject to the limitations imposed under the Internal Revenue Code. The Company may, but is not required to, make matching contributions to the Plan based on the participants' salary-defined contributions. Employer contributions are subject to a graduated vesting schedule based upon an employee's years of service with the Company. It is not anticipated that the Company will make any contributions to the Plan for the 1997 Plan Year. All contributions to the Plan are held in a trust which is intended to be exempt from income tax under Section 501(a) of the Internal Revenue Code. The Plan's trustees are R. Douglas Armstrong and Todd E. Simpson. Participants may direct the investment of their contributions among specified Merrill Lynch investment funds. The Plan may be amended or terminated by the Company at any time, subject to certain restrictions imposed by the Internal Revenue Code and the Employee Retirement Income Security Act of 1974.

#### COMPENSATION OF DIRECTORS

Directors of the Company do not receive cash for services provided as a director, however, directors who are not employees of the Company will receive annual grants of options to purchase Common Stock in accordance with the Directors Plan. No stock options or any other form of non-cash compensation were granted to directors of the Company during the Company's fiscal year ending June 30, 1996. See "Stock Option and Employee Benefit Plans--1996 Outside Directors Stock Option Plan."

#### COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION IN COMPENSATION DECISIONS

During the fiscal year ended June 30, 1996, Robert J. Kunze, formerly an officer of the Company until 1991, R. Douglas Armstrong, President and Chief Executive Officer of the Company, and G. Bradford Jones were the members of the Compensation Committee of the Board of Directors. Dr. Armstrong resigned from the Compensation Committee and was replaced by Albert B. Deisseroth, M.D., Ph.D. on April 30, 1996, however, Mr. Kunze continues to be a member of this committee.

## CERTAIN TRANSACTIONS

During the last three fiscal years, the Company sold Preferred Stock to certain holders of more than 5% of the outstanding shares of the Company, or to their affiliates, as described below.

In April 1995, the Company sold 775,001 shares of Series D Preferred Stock at a price per share of \$4.00 to the following investors: (i) H&Q Life Science Technology Fund I purchased 167,001 shares for a purchase price of \$668,004, (ii) H&Q London Ventures purchased 100,000 shares for a purchase price of \$400,000, (iii) Brentwood Associates V, L.P. ("Brentwood") purchased 231,250 shares for a purchase price of \$925,000, (iv) Windpoint Partners II, L.P. purchased 89,250 shares for a purchase price of \$357,000, and (v) the State Treasurer of the State of Michigan ("Michigan") purchased 187,500 shares for a purchase price of \$750,000. In May 1995, Cobe purchased 1,250,000 shares of Series D Preferred Stock for a purchase price of \$5,000,000. Upon the closing of this offering, each outstanding share of Series D Preferred Stock will be converted into two-thirds of a share of Common Stock.

In April 1995, Dr. Armstrong and Dr. Emerson agreed to grant to Brentwood an option to purchase up to 28,000 shares and 14,667 shares of Common Stock, respectively, and, together with two other shareholders of the Company, an aggregate of up to 66,667 shares of Common Stock at a purchase price of \$100,000. Brentwood exercised this option in April, 1996 purchasing an aggregate of 66,667 shares of Common Stock at a purchase price of \$100,000 from such shareholders.

In September 1995, the Company and RPR entered into a collaborative relationship for use of the Aastrom CPS as a component of its lymphoid cell therapy program. On September 6, 1996, RPR notified the Company that it would not exercise its option to continue the collaboration. As a result, \$3,500,000 of option payments previously paid to the Company by RPR were converted into 205,882 shares of the Company's Series E Preferred Stock.

In October 1995, the Company repurchased 62,500 shares of Series D Preferred Stock from Brentwood at the original purchase price of \$250,000 and in December 1995 resold these shares to Northwest Ohio Venture Fund, a shareholder of the Company, for a total purchase price of \$250,000.

In January 1996, the Company sold 1,411,765 shares of Series E Preferred Stock at a price per share of \$4.25 to the following investors: (i) Michigan purchased 470,588 shares for a total purchase price of \$1,999,999, and (ii) SBIC Partners, L.P. purchased 941,777 shares for a total purchase price of \$4,000,002. Upon the closing of this offering, each share of Series E Preferred Stock will be converted into two-thirds of a share of Common Stock.

On November 18, 1993, in connection with the purchase of Common Stock upon exercise of stock options granted to R. Douglas Armstrong under the 1989 Stock Option Plan, the Company loaned to Dr. Armstrong \$120,000 at an interest rate of 4% per annum pursuant to a full recourse promissory note. Interest on the note is payable on an annual basis and principal and accrued but unpaid interest is due on June 30, 1997. Dr. Armstrong is the President and Chief Executive Officer and is a director of the Company.

On October 20, 1993, in connection with the purchase of Common Stock upon exercise of stock options granted to Stephen G. Emerson under the 1989 Stock Option Plan, the Company loaned to Dr. Emerson \$47,303 at an interest rate of 6% per annum pursuant to a full recourse promissory note. Interest on the note is payable on an annual basis and principal and accrued but unpaid interest is due June 30, 1997. The loan is secured by 258,687 shares of Common Stock held by Dr. Emerson. Dr. Emerson is a director of the Company.

In October 1996, the Company executed a financing commitment with Cobe to provide the Company with up to \$5,000,000 (the "Equity Commitment") and up to \$5,000,000 in funding from Michigan under a convertible loan commitment agreement ("Convertible Loan Commitment"). As of the date of this Prospectus, the Company has not obtained any financing under these commitments. Both the Equity Commitment and the Convertible Loan Commitment will terminate upon the consummation of this offering.

Under the terms of the Equity Commitment, the Company has an option to sell up to \$5,000,000 of Series F Preferred Stock at a price of \$6.00 per share to Cobe upon at least ninety days notice, which notice may be given at any time until September 1, 1997. Cobe's obligation to purchase such shares will terminate upon the closing of this offering. Although no shares of Series F Preferred Stock are outstanding as of the date of this Prospectus, any outstanding shares of Series F Preferred Stock would convert upon the closing of this offering into Common Stock based upon a conversion price of 80% of the price of two-thirds of a share of Common Stock sold in this offering. To the extent shares are sold to Cobe under the Equity Commitment, Cobe's preemptive right in the Company's next financing and the Company's Put Option to Cobe would be reduced.

Upon the sale of \$5,000,000 of Series F Preferred Stock under the Equity Commitment, the Company becomes entitled to borrow funds from Michigan under the Convertible Loan Commitment. The Company may borrow such funds upon at least 45 days notice, which notice may be given during a period commencing on October 15, 1996 and ending on November 1, 1997. Upon the completion by the Company of a Qualifying Financing (as defined in the Convertible Loan Commitment), the Company has the option to repay outstanding principal and interest under the Convertible Loan Commitment in cash or to convert such borrowings into convertible Preferred Stock at a conversion price equivalent to 90% of the price per share in such financing. Under certain circumstances, the Convertible Loan Commitment converts or is convertible into Series G Preferred Stock. Interest accrues at an annual rate of 10% under the Convertible Loan Commitment, and the Company may repay such principal and interest at any time without penalty.

The Company has issued warrants to Michigan to purchase 69,444 shares of Common Stock as consideration for securing the Convertible Loan Commitment and has agreed to issue additional warrants to purchase 8,333 shares of Common Stock for each \$1,000,000 borrowed under the Convertible Loan Commitment, as adjusted to the level of borrowing. The warrants become exercisable 90 days after the closing of this offering. The warrants expire on October 15, 2000 if not exercised, and may be exercised, in whole or in part, at a price equal to the lesser of (a) \$9.00 per share, which price increases by \$3.00 per share upon each anniversary of the closing of the offering made hereby; and (b) 85% of the fair market value of the Company's Common Stock at the time of exercise.

Pursuant to its letter dated November 11, 1996, Cobe has elected to purchase \$5,000,000 of the Company's Common Stock in this offering at the initial public offering price per share in satisfaction of its preemptive rights under the Cobe Stock Agreement. In addition, the Company has elected not to exercise its put option rights under the Cobe Stock Agreement with respect to this offering. See "Description of Capital Stock--Rights of Cobe."

The Company has entered into employment agreements with certain of its executive officers. See "Management--Employment Agreements." The Company has also entered into an Indemnification Agreement with certain of its directors, officers and other key personnel. See "Management--Limitation of Liability and Indemnification Matters."

PRINCIPAL SHAREHOLDERS

The following table sets forth certain information regarding the beneficial ownership of the shares of the Company's Common Stock as of September 30, 1996, and as adjusted to give effect to the sale of 3,250,000 shares of Common Stock in this offering assuming (a) conversion of all of the Company's outstanding shares of Preferred Stock into Common Stock and (b) no exercise of the Underwriters' over-allotment option, and as adjusted to reflect the sale of shares offered in this offering, (i) by each person the Company knows to be the beneficial owner of 5% or more of the outstanding shares of Common Stock, (ii) each named executive officer listed in the Summary Compensation Table, (iii) each director of the Company, and (iv) all executive officers and directors of the Company as a group.

BENEFICIAL OWNER	SHARES BENEFICIALLY OWNED BEFORE THE OFFERING(1)		SHARES BENEFICIALLY OWNED AFTER THE OFFERING(1)	
	NUMBER	PERCENT	NUMBER	PERCENT
H&Q Life Science(2)..... Technology Fund I One Bush Street, 18th Floor San Francisco, CA 94104	1,061,334	10.6%	1,061,334	8.0%
H&Q London Ventures..... One Bush Street, 18th Floor San Francisco, CA 94104	816,666	8.2%	816,666	6.2%
State Treasurer of the State of Michigan,(3)..... Custodian of certain retirement systems c/o Venture Capital Division 430 West Allegan Lansing, MI 48992	1,338,724	13.4%	1,338,724	10.1%
SBIC Partners, L.P..... 201 Main Street, Suite 2302 Fort Worth, TX 76102	627,451	6.3%	627,451	4.7%
Brentwood Associates V, L.P.(4).. 11150 Santa Monica Blvd., Suite 1200 Los Angeles, CA 90025	745,831	7.5%	745,831	5.6%
Wind Point Partners II, L.P..... 676 N. Michigan Ave., Suite 3300 Chicago, IL 60611	559,500	5.6%	559,500	4.2%
Cobe Laboratories, Inc.(5)..... 1185 Oak Street Lakewood, CO 80215	2,499,999	25.0%	3,055,555	23.1%
R. Douglas Armstrong, Ph.D.(6)... Albert B. Deisseroth, M.D., Ph.D. ....	501,555 25,000	5.0% *	501,555 25,000	3.8% *
Stephen G. Emerson, M.D., Ph.D. .	256,789	2.6%	256,789	1.9%
G. Bradford Jones(7).....	745,831	7.5%	745,831	5.6%
Robert J. Kunze(8).....	1,061,334	10.6%	1,061,334	8.0%
James Maluta(9).....	83,333	*	83,333	*
Thomas E. Muller, Ph.D.(10).....	15,000	*	15,000	*
Walter C. Ogier(11).....	20,833	*	20,833	*
Horst R. Witzel, Dr.-Ing.(12)....	8,237	*	8,237	*
Edward C. Wood, Jr.(13).....	2,499,999	25.0%	3,055,555	23.1%
All officers and directors as a group (12 persons)(14).....	5,237,911	52.1%	5,793,467	43.5%

\* Represents less than 1% of outstanding Common Stock or voting power.



- (1) Shares beneficially owned and percentage of ownership are based on 9,985,734 shares of Common Stock outstanding before this offering and 13,235,734 shares of Common Stock outstanding after the closing of this Offering. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or disposition power with respect to securities.
- (2) Robert J. Kunze, Chairman of the Board of the Company, is a general partner of H&Q Life Science Venture Partners. See footnote 8, below.
- (3) Does not include 69,444 shares issuable upon exercise of warrants held by Michigan that are exercisable 90 days after the closing of this offering.
- (4) G. Bradford Jones, a director of the Company, is a general partner of Brentwood Associates V Ventures, L.P., which is the general partner of Brentwood Associates V, L.P. See footnote 7, below.
- (5) The shares attributed to Cobe in the "Shares Beneficially Owned After the Offering" column include 555,556 shares of Common Stock which Cobe has agreed to purchase in this offering, assuming the closing of this offering at an initial public offering price of \$9.00 per share. In addition, pursuant to the Cobe Stock Agreement, Cobe has an option to purchase from the Company an amount of Common Stock equal to 30% of the Company's fully diluted shares after the exercise of such option, at a purchase price equal to 120% of the public market trading price of the Company's Common Stock for a three-year period following the closing of this offering. Cobe also has a "right of first negotiation" in the event the Company receives any proposal concerning, or otherwise decides to pursue, a merger, consolidation or other transaction in which all or a majority of the Company's equity securities or all or substantially all of the Company's assets, or any material portion of the assets of the Company used by the Company in performing its obligations under the Distribution Agreement would be acquired by a third party outside of the ordinary course of business. Edward C. Wood, Jr., a director of the Company, is the President of Cobe BCT, Inc., an affiliate of Cobe. See footnote 13, below.
- (6) Does not include 333,333 shares issuable upon exercise of options held by Dr. Armstrong that are exercisable upon the effective date of this offering.
- (7) Consists of 745,831 shares held by Brentwood Associates V, L.P. See footnote 4, above. Mr. Jones, as a general partner of Brentwood Associates V Ventures, L.P., which is the general partner of Brentwood Associates V, L.P., may be deemed to beneficially own such shares, but Mr. Jones disclaims beneficial ownership of all such shares except to the extent of his pecuniary interest therein.
- (8) Consists of 1,061,334 shares held by H&Q Life Science Technology Fund I. See footnote 2, above. Mr. Kunze, as a general partner of H&Q Life Science Venture Partners, may be deemed to beneficially own such shares, but Mr. Kunze disclaims beneficial ownership of all such shares except to the extent of his pecuniary interest therein.
- (9) Includes 16,668 shares issuable upon exercise of options held by Mr. Maluta that are exercisable within the 60-day period following September 30, 1996. Also includes 66,665 shares held of record by James Maluta and Deborah Vincent, as Trustees, with shared voting and investment power, of the James Maluta and Deborah Vincent Living Trust dated October 26, 1993.
- (10) Consists of 15,000 shares issuable upon exercise of options held by Dr. Muller that are exercisable within the 60-day period following September 30, 1996.
- (11) Includes 15,833 shares issuable upon exercise of options held by Mr. Ogier that are exercisable within the 60-day period following September 30, 1996.
- (12) Includes 2,237 shares issuable upon exercise of options held by Dr. Witzel that are exercisable within the 60-day period following September 30, 1996.
- (13) The shares attributed to Mr. Wood in the "Shares Beneficially Owned Before the Offering" column consist of 2,499,999 shares held by Cobe and the shares attributed to Mr. Wood in the "Shares Beneficially Owned After the Offering" column consist of such shares and an additional 555,556 shares which Cobe has agreed to purchase in this offering, assuming the closing of this offering at an initial public offering price of \$9.00 per share. See footnote 5, above. Mr. Wood, as the President of Cobe BCT, Inc., an affiliate of Cobe, may be deemed to beneficially own such shares, but Mr. Wood disclaims beneficial ownership of all such shares.
- (14) Includes 69,738 shares issuable upon exercise of options that are exercisable within the 60-day period following September 30, 1996. Does not include 333,333 shares issuable upon exercise of options that are exercisable as of the date of this Prospectus.

## DESCRIPTION OF CAPITAL STOCK

Upon the closing of this offering, the authorized capital stock of the Company will consist of 40,000,000 shares of Common Stock, no par value per share, and 5,000,000 shares of Preferred Stock, no par value per share.

### COMMON STOCK

As of September 30, 1996, without giving effect to the conversion of each share of Preferred Stock into Common Stock upon the closing of this offering, there were 1,887,312 shares of Common Stock outstanding held of record by 32 shareholders.

The holders of Common Stock are entitled to one vote per share on all matters to be voted upon by the shareholders. Subject to preferences that may be applicable to outstanding shares of Preferred Stock, the holders of Common Stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the Board of Directors out of funds legally available therefor. See "Dividend Policy." In the event of liquidation, dissolution or winding up of the Company, the holders of Common Stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior liquidation rights of holders of Preferred Stock then outstanding. The Common Stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the Common Stock. All outstanding shares of Common Stock are fully paid and nonassessable. The rights, preferences and privileges of holders of Common Stock are subject to, and may be adversely affected by, the rights of the holders of any shares of any Preferred Stock which the Company may designate and issue in the future.

### PREFERRED STOCK

As of the closing of this offering, no shares of Preferred Stock will be outstanding. Thereafter, the Board of Directors will be authorized, without further shareholder approval, to issue up to 5,000,000 shares of Preferred Stock in one or more series and to fix the rights, preferences, privileges and restrictions granted or imposed upon any unissued shares of Preferred Stock and to fix the number of shares constituting any series and the designations of such series.

The issuance of Preferred Stock may have the effect of delaying or preventing a change in control of the Company. The issuance of Preferred Stock could decrease the amount of earnings and assets available for distribution to the holders of Common Stock or could adversely affect the rights and powers, including voting rights, of the holders of the Common Stock. In certain circumstances, such issuance could have the effect of decreasing the market price of the Common Stock. The Company currently has no plans to issue any shares of Preferred Stock.

### MICHIGAN LAW AND CERTAIN CHARTER PROVISIONS

The Company is a Michigan corporation and is subject to certain anti-takeover provisions of the Michigan Business Corporation Act (the "MBCA") which could delay or make more difficult a merger or tender offer involving the Company. Chapter 7A of the MBCA prevents, in general, an "interested shareholder" (defined generally as a person owning 10% or more of a corporation's outstanding voting shares) from engaging in a "business combination" (as defined therein) with a Michigan corporation unless: (a) the Board of Directors issues an advisory statement, holders of 90% of the shares of each class of stock entitled to vote approve the transaction, and holders of two-thirds of the "disinterested" shares of each class of stock approve the transaction; or (b) the interested shareholder has been an interested shareholder for at least five years and has not acquired beneficial ownership of any additional shares of the corporation subsequent to the transaction which resulted in such shareholder being classified as an interested shareholder, and meets certain requirements, including, but not limited to, provisions relating to the fairness of the price and the form of consideration paid; or (c) the Board of Directors, by resolution, exempts a particular interested shareholder from these provisions prior to the interested

shareholder becoming an interested shareholder. The MBCA also contains certain other provisions which could have anti-takeover effects, including, but not limited to, Section 368, which pertains to "greenmail."

The Company's Bylaws provide that the Board of Directors is divided into three classes of directors, with each class serving a staggered three-year term. The classification system of electing directors may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of the Company and may maintain the incumbency of the Board of Directors, as it generally makes it more difficult for shareholders to replace a majority of the directors. The Company's Restated Articles of Incorporation eliminate the right of shareholders to act without a meeting and do not provide for cumulative voting in the election of directors. The amendment of any of these provisions would require approval by holders of at least two-thirds of the shares of outstanding Common Stock.

The foregoing and other statutory provisions and provisions of the Company's Restated Articles of Incorporation could have the effect of deterring certain takeovers or delaying or preventing certain changes in control or management of the Company, including transactions in which shareholders might otherwise receive a premium for their shares over then-current market prices.

#### REGISTRATION RIGHTS

Pursuant to the Amended and Restated Investors Rights Agreement, dated as of April 7, 1992, as amended (the "Investors Agreement"), certain holders of outstanding shares of Common Stock, including shares of Common Stock issuable upon conversion of the Preferred Stock (the "Registrable Securities"), are entitled to certain demand and incidental registration rights with respect to such shares, subject to certain customary limitations. Under the Investors Agreement, subject to certain exceptions, the holders of at least 50% of the Registrable Securities may require the Company to use its diligent best efforts to register Registrable Securities for public resale on one occasion (so long as such registration includes at least 20% of the Registrable Securities or a lesser percentage if the anticipated aggregate offering price net of underwriting discounts and commissions would exceed \$2 million). In addition, whenever the Company proposes to register any of its securities under the Act, holders of Registrable Securities are entitled, subject to certain restrictions (including customary underwriters "cut back" limitations), to include their Registrable Securities in such registration. Subject to certain limitations, the holders of Registrable Securities may also require the Company to register such shares on Form S-3 no more than once every twelve months, provided that the anticipated aggregate proceeds would exceed \$500,000. The Company is required to bear all registration and selling expenses (other than underwriter's discounts and commissions and more than a single special counsel to the selling shareholders) in connection with the registration of Registrable Securities in one demand registration and two piggy-back registrations. The participating investors are required to bear all expenses in connection with the registration of Registrable Securities on Form S-3.

Registration rights may be transferred to an assignee or transferee provided that such assignee or transferee acquires at least 66,667 shares of the Registrable Securities held by the transferring holder (13,333 shares in the case of a transfer from the holder of certain stock options). These registration rights may be amended or waived (either generally or in a particular instance) only with the written consent of the Company and the holders of a majority of the Registrable Securities then outstanding.

The registration rights granted under the Investors Agreement shall not be exercisable by a holder during the period in which the holder may sell all of the holder's shares under Rule 144 or Rule 144A during a single 90-day period.

Pursuant to the Cobe Stock Agreement, the Company granted to Cobe certain stock registration rights for any and all of the Company's Common Stock which Cobe acquires by conversion or otherwise. Cobe's stock registration rights commence 30 months following an initial public offering, or earlier in the event of any termination of the Distribution Agreement. Pursuant to Cobe's registration rights, Cobe is entitled to two demand registration rights, and an unlimited number of piggyback registration rights. Cobe's stock registration rights are subject to

customary underwriter's "cut back" requirements. The registration rights granted to Cobe shall not be exercisable during the period in which Cobe has the ability to sell all of its shares pursuant to Rule 144 during a single ninety-day period. Subject to certain conditions, these registration rights may be transferred with the transfer of stock to certain affiliates of the transferor or to a transferee who acquires the greater of 66,667 shares or 20% of the transferor's registrable stock.

#### RIGHTS OF COBE

Pursuant to the Cobe Stock Agreement, Cobe purchased an aggregate of \$10,000,000 of shares of the Company's Series C Preferred Stock. Such shares of Series C Preferred Stock will automatically convert into 1,666,666 shares of Common Stock upon the closing of this offering.

Pursuant to the Cobe Stock Agreement, Cobe also has certain preemptive rights to purchase a portion of any new stock issued by the Company, subject to certain exceptions, so as to enable Cobe to maintain its relative percentage ownership and voting power interests in the Company. Pursuant to such preemptive rights, Cobe has elected to purchase \$5,000,000 of Common Stock in this offering at the initial public offering price per share. Under the terms of the Cobe Stock Agreement, the Company also has the right to require Cobe to purchase stock issued by the Company in certain qualifying offerings, under certain circumstances (the "Put Option"). The Put Option may generally require Cobe to purchase up to 25% of the stock issued by the Company in a qualifying offering upon the same terms and conditions as the underwriters or other purchasers participating in the offering provided that Cobe shall not be required to purchase stock having an aggregate purchase price of more than \$5,000,000. If the Company exercises the Put Option with respect to any such qualifying offering, Cobe has the option to purchase the greater of up to 40% of the number of shares to be offered in the qualifying offering or the number of shares necessary to maintain its percentage ownership interest in the Company. The Company has elected not to exercise the Put Option with respect to this offering.

Additionally, for a three-year period following the Company's completion of its initial public offering of stock, Cobe will have an option to purchase from the Company a quantity of new shares of the Company's Common Stock at a price equal to 120% of the public market trading price for the Company's Common Stock. The quantity of Common Stock to be purchased if Cobe exercises this option shall be equal to 30% of the Company's fully diluted shares after the exercise of this option.

In the Cobe Stock Agreement, the Company also granted to Cobe a "right of first negotiation" in the event the Company receives any proposal concerning, or otherwise decides to pursue, a merger, consolidation or other transaction in which all or a majority of the Company's equity securities or all or substantially all of the Company's assets, or any material portion of the assets of the Company used by the Company in performing its obligations under the Distribution Agreement would be acquired by a third party outside of the ordinary course of business.

Pursuant to the Stock Purchase Commitment Agreement with Cobe, dated October 29, 1996, the Company agreed to use reasonable and good faith efforts to cause a nominee of Cobe, who must be deemed by the Board of Directors to be qualified to be elected to the Board of Directors for as long as Cobe owns at least 15% of the outstanding Common Stock.

## SHARES ELIGIBLE FOR FUTURE SALE

Upon completion of this offering, the Company will have 13,235,734 shares of Common Stock outstanding, assuming no exercise of any outstanding options under any of the Company's option plans after September 30, 1996. Of these shares, the 3,250,000 shares of Common Stock sold in this offering will be freely transferable without restriction under the Securities Act unless they are held by the Company's affiliates as that term is used in Rule 144 under the Securities Act.

The remaining 9,985,734 shares of Common Stock outstanding are "restricted securities" as the term is defined by Rule 144 promulgated under the Securities Act (the "Restricted Shares"). Of the 9,985,734 Restricted Shares, 6,996,920 shares may be sold under Rule 144, subject in some cases to certain volume restrictions and other conditions imposed thereby. An additional 152,056 shares will become eligible for sale 90 days after completion of this offering pursuant to Rule 144 and 701. The remaining 2,836,758 shares will be eligible for sale upon the expiration of their respective holding periods as set forth in Rule 144. The Securities and Exchange Commission has proposed certain amendments to Rule 144 that would reduce by one year the holding periods required for shares subject to Rule 144 to become eligible for resale in the public market. This proposal, if adopted, would permit earlier resale of shares of Common Stock currently subject to holding periods under Rule 144. No assurance can be given concerning whether or when the proposal will be adopted by the Securities and Exchange Commission. Furthermore, 9,947,757 of the Restricted Shares are subject to lock-up agreements expiring 180 days following the date of this Prospectus. Such agreements provide that Cowen & Company may, in its sole discretion and at any time without notice, release all or a portion of the shares subject to these lock-up agreements. Upon the expiration of the lock-up agreements, 7,148,976 of the 9,985,734 Restricted Shares may be sold pursuant to Rule 144 or 701, subject in some cases to certain volume restrictions imposed thereby. Certain existing shareholders have rights to include shares of Common Stock owned by them in future registrations by the Company for the sale of Common Stock or to request that the Company register their shares under the Securities Act. See "Description of Capital Stock--Registration Rights." Following the date of this Prospectus, the Company intends to register on one or more registration statements on Form S-8 approximately 1,837,160 shares of Common Stock issuable under its stock option and stock purchase plan. Of the 1,837,160 shares issuable under the Company's stock option and stock purchase plans, 336,254 shares are subject to outstanding options as of September 30, 1996, all of which shares are subject to lock-up agreements. Shares covered by such registration statements will immediately be eligible for sale in the public market upon the filing of such registration statements. The Company also has issued warrants to purchase 69,444 shares of Common Stock which become exercisable 90 days after the closing of this offering and, upon the effective date of this offering, will grant an immediately exercisable option to purchase 333,333 shares of Common Stock. The shares issuable upon exercise of such warrants and the shares issuable upon exercise of such option will be subject to lock-up agreements. In addition, Cobe has agreed to purchase \$5,000,000 of Common Stock in this offering at the initial public offering price per share, all of which shares will be subject to a lock-up agreement.

In general, under Rule 144, a person (or persons whose shares are aggregated), shareholders, including an affiliate, who has beneficially owned shares for at least two years is entitled to sell in broker transactions, within any three-month period, commencing 90 days after this offering, a number of shares that does not exceed the greater of (i) 1% of the then outstanding Common Stock (approximately 132,357 shares immediately after this offering assuming no exercise of the Underwriters' over-allotment option) or (ii) the average weekly trading volume in the Common Stock during the four calendar weeks preceding the sale, subject to the filing of a Form 144 with respect to the sale and other limitations. In general, shares issued in compliance with Rule 701 may be sold by non-affiliates subject to the manner of sale requirements of Rule 144, but without compliance with the other requirements of Rule 144. Affiliates may sell shares they acquired under Rule 701 in compliance with the provisions of Rule 144, except that there is no required holding period. A person who is not an affiliate, has not been an affiliate within three months prior to sale and has beneficially owned the Restricted Shares for at least three years, is entitled to sell such shares under Rule 144 without regard to any of the limitations described above.

The Company has also agreed not to offer, sell, contract to sell or otherwise dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock or any rights to acquire Common Stock for a period of 180 days after the date of this Prospectus, without the prior written consent of the Underwriters, subject to certain limited exceptions (including exercises of stock options).

Prior to this offering, there has been no public market for the Common Stock of the Company. No prediction can be made regarding the effect, if any, that the sale or availability for sale of shares of additional Common Stock will have on the market price of the Common Stock. Nevertheless, sales of substantial numbers of shares by existing shareholders or by shareholders purchasing in their offering could have a negative effect on the market price of the Common Stock.



UNDERWRITING

Subject to the terms and conditions of the Underwriting Agreement, the Underwriters named below (the "Underwriters"), through their Representatives, Cowen & Company and J.P. Morgan Securities Inc., have severally agreed to purchase from the Company the following respective number of shares of Common Stock at the initial public offering price less the underwriting discounts and commissions set forth on the cover page of this Prospectus:

UNDERWRITER	NUMBER OF SHARES OF COMMON STOCK
Cowen & Company.....	
J.P. Morgan Securities Inc.....	
Total.....	3,250,000
	=====

The Underwriting Agreement provides that the obligations of the Underwriters are subject to certain conditions precedent and that the Underwriters will purchase all of the Common Stock offered hereby if any of such shares are purchased.

The Company has been advised by the Representatives of the Underwriters that the Underwriters propose to offer the shares of Common Stock to the public at the initial public offering price set forth on the cover page of this Prospectus and to certain dealers at such price less a concession not in excess of \$ per share. The Underwriters may allow, and such dealers may reallocate, a concession not in excess of \$ per share to certain other dealers. After the initial public offering, the offering price and other selling terms may be changed by the Representatives of the Underwriters.

The Company has granted to the Underwriters an option, exercisable not later than 30 days after the date of this Prospectus, to purchase up to 487,500 additional shares of Common Stock at the initial public offering price less the underwriting discounts and commissions set forth on the cover page of this Prospectus. To the extent that the Underwriters exercise such option, each of the Underwriters will have a firm commitment to purchase approximately the same percentage thereof that the number of shares of Common Stock to be purchased by it shown in the above table bears to 3,250,000, and the Company will be obligated, pursuant to the option, to sell such shares to the Underwriters. The Underwriters may exercise such option only to cover over-allotments made in connection with the sale of the Common Stock offered hereby. If purchased, the Underwriters will offer such additional shares on the same terms as those on which the 3,250,000 shares are being offered.

As part of this offering, Cobe has agreed with the Company to purchase from the Underwriters \$5,000,000 of Common Stock at the initial public offering price per share.

The Company has agreed to indemnify the several Underwriters against certain liabilities, including liabilities under the Securities Act.

The Company and its directors and officers, and certain of its other shareholders and optionholders, have entered into agreements providing that, for a period of 180 days after the date of this Prospectus, they will not, without the prior written consent of Cowen & Company, offer, sell, contract to sell or otherwise dispose of any shares of Common Stock or any securities convertible into, or exchangeable for, or warrants to purchase, any shares of Common Stock, or grant any option to purchase or right to acquire or acquire any option to dispose of any shares of Common Stock, except in certain limited circumstances. See "Shares Eligible for Future Sale."

The Representatives of the Underwriters have advised the Company that the Underwriters do not intend to confirm sales to any account over which they exercise discretionary authority.

Prior to this offering, there has been no public market for the Common Stock of the Company. Consequently, the initial public offering price for the Common Stock has been determined by negotiations between the Company and the Representatives of the Underwriters. Among the factors considered in such negotiations were prevailing market conditions, the results of operations of the Company in recent periods, the market capitalizations and stages of development of other companies that the Company and the Representatives of the Underwriters believe to be comparable to the Company, estimates of the business potential of the Company, the present state of the Company's development, and other factors deemed relevant.

#### TRANSFER AGENT AND REGISTRAR

The Transfer Agent and Registrar for the Common Stock is Continental Stock Transfer & Trust Company. Its telephone number in New York, New York is (212) 509-4000.

#### LEGAL MATTERS

The validity of the Common Stock offered hereby will be passed upon for the Company by Pepper, Hamilton & Scheetz, Detroit, Michigan. Michael B. Staebler, a partner at Pepper, Hamilton & Scheetz, is the beneficial owner of 3,333 shares of Common Stock. Gray Cary Ware & Freidenrich, A Professional Corporation, San Diego, California, has acted as special counsel to the Company in connection with the offering. Certain legal matters in connection with this offering will be passed upon for the Underwriters by Brobeck, Phleger & Harrison LLP, New York, New York.

#### EXPERTS

The balance sheets of the Company as of June 30, 1995 and 1996, and the statements of operations, shareholders' equity, and cash flows for the years ended June 30, 1994, 1995 and 1996 and the cumulative period from March 24, 1989 (Inception) to June 30, 1996 included in this Prospectus, have been included herein in reliance on the report of Coopers & Lybrand L.L.P., independent accountants, given upon the authority of that firm as experts in accounting and auditing.

The statements in this Prospectus concerning the patents and patent applications either owned or licensed by the Company under the captions "Risk Factors--Uncertainty Regarding Patents and Proprietary Rights" and "Business--Patents and Proprietary Rights" and the other references herein concerning the patents and patent applications either owned or licensed by the Company have been reviewed and approved by Oblon, Spivak, McClelland, Maier & Neustadt, P.C., Arlington, Virginia, patent counsel to the Company, as experts on such matters, and are included herein in reliance upon that review and approval.

#### ADDITIONAL INFORMATION

The Company has filed with the Securities and Exchange Commission, Washington, D.C. 20549, a Registration Statement on Form S-1 under the Securities Act of 1933, as amended, with respect to the Common Stock offered hereby. This Prospectus does not contain all of the information set forth in the Registration Statement and the exhibits and schedules thereto. For further information with respect to the Company and the Common Stock, reference is made to the Registration Statement and the exhibits and schedules filed as a part thereof. Statements contained in this Prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and, in each instance, if such contract or document is filed as an exhibit, 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 to such exhibit. The Registration Statement, including exhibits and schedules thereto, may be inspected without charge at the Commission's principal office in Washington, D.C., and copies of all or any part thereof may be obtained from such office after payment of fees prescribed by the Commission.

The Company intends to furnish to its shareholders annual reports containing financial statements audited by its independent certified public accountants and make available to its shareholders quarterly reports containing unaudited financial data for the first three quarters of each fiscal year.



AASTROM BIOSCIENCES, INC.  
(A DEVELOPMENT STAGE COMPANY)

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors of  
Aastrom Biosciences, Inc.:

We have audited the accompanying balance sheets of Aastrom Biosciences, Inc. (a Michigan corporation in the development stage) as of June 30, 1995 and 1996, and the related statements of operations, stockholders' equity, and cash flows for the years ended June 30, 1994, 1995 and 1996, and the cumulative period from March 24, 1989 (inception) to June 30, 1996. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Aastrom Biosciences, Inc. as of June 30, 1995 and 1996, and the results of its operations and its cash flows for the years ended June 30, 1994, 1995 and 1996, and the cumulative period from March 24, 1989 (inception) to June 30, 1996, in conformity with generally accepted accounting principles.

Detroit, Michigan  
August 9, 1996

To the Board of Directors of  
Aastrom Biosciences, Inc.:

The financial statements herein have been adjusted to give effect to the 2 for 3 reverse stock split of the Company's outstanding Common Shares as described more fully in Note 1 to the financial statements. The above report is in the form that will be signed by Coopers & Lybrand L.L.P. upon the effectiveness of such split assuming that, from October 31, 1996 to the effective date of such split, no other events shall have occurred that would affect the accompanying financial statements or notes thereto.

Coopers & Lybrand L.L.P.

Detroit, Michigan  
October 31, 1996

AASTROM BIOSCIENCES, INC.  
(A DEVELOPMENT STAGE COMPANY)

BALANCE SHEETS

	JUNE 30,		SEPTEMBER 30,	PRO FORMA SHAREHOLDERS' EQUITY AT SEPTEMBER 30,
	1995	1996	1996	1996
	-----		-----	-----
			(UNAUDITED)	(UNAUDITED)
<b>ASSETS</b>				
<b>CURRENT ASSETS:</b>				
Cash and cash equivalents.....	\$ 2,680,000	\$10,967,000	\$ 5,908,000	
Short-term investments.....	8,388,000	--	1,200,000	
Receivables.....	99,000	81,000	220,000	
Prepaid expenses.....	105,000	437,000	378,000	
	-----	-----	-----	
Total current assets.....	11,272,000	11,485,000	7,706,000	
PROPERTY, NET.....	1,279,000	1,188,000	1,225,000	
	-----	-----	-----	
Total assets.....	\$ 12,551,000	\$12,673,000	\$ 8,931,000	
	=====	=====	=====	
<b>LIABILITIES AND SHAREHOLDER'S EQUITY</b>				
<b>CURRENT LIABILITIES:</b>				
Accounts payable and accrued expenses.....	\$ 328,000	\$ 1,192,000	\$ 841,000	
Accrued employee expenses.....	130,000	97,000	80,000	
Current portion of capital lease obligations.....	270,000	223,000	192,000	
Deferred revenue.....	225,000	122,000	53,000	
	-----	-----	-----	
Total current liabilities.....	953,000	1,634,000	1,166,000	
CAPITAL LEASE OBLIGATIONS.....	412,000	189,000	147,000	
COMMITMENTS (Note 7)				
<b>SHAREHOLDERS' EQUITY:</b>				
Preferred Stock, no par value, shares authorized--8,540,000, 9,951,765 and 10,157,647, respectively, issued and outstanding--8,040,001, 9,451,766 and 9,657,648, respectively (none--pro forma), (liquidation preference of \$34,560,000 and \$35,375,000 at June 30, 1996 and September 30, 1996, respectively).....	28,253,000	34,218,000	37,718,000	\$ --
Common Stock, no par value, shares authorized--17,000,000, 18,500,000 and 18,500,000, respectively, issued and outstanding--1,731,463, 1,886,479 and 1,887,312, respectively (9,985,734--pro forma)..	241,000	324,000	365,000	38,083,000
Deficit accumulated during the development stage.....	(17,108,000)	(27,025,000)	(30,298,000)	(30,298,000)
Shareholder notes receivable.....	(198,000)	(167,000)	(167,000)	(167,000)
Stock purchase rights....	--	3,500,000	--	--
Unrealized losses on investments.....	(2,000)	--	--	--
	-----	-----	-----	-----
Total shareholders' equity.....	11,186,000	10,850,000	7,618,000	\$ 7,618,000
	-----	-----	-----	=====
Total liabilities and shareholders' equity.....	\$ 12,551,000	\$12,673,000	\$ 8,931,000	
	=====	=====	=====	

The accompanying notes are an integral part of these financial statements.

AASTROM BIOSCIENCES, INC.  
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF OPERATIONS

	YEAR ENDED JUNE 30,			MARCH 24, 1989 (INCEPTION) TO JUNE 30, 1996	THREE MONTHS ENDED SEPTEMBER 30,		MARCH 24, 1989 (INCEPTION) TO SEPTEMBER 30, 1996
	1994	1995	1996		1995	1996	
					(UNAUDITED)		(UNAUDITED)
<b>REVENUES:</b>							
Research and development agreements.....	\$ 49,000	\$ 396,000	\$ 1,342,000	\$ 1,787,000	\$ 172,000	\$ 195,000	\$ 1,982,000
Grants.....	823,000	121,000	267,000	1,995,000	39,000	29,000	2,024,000
Total revenues.....	872,000	517,000	1,609,000	3,782,000	211,000	224,000	4,006,000
<b>COSTS AND EXPENSES:</b>							
Research and development.....	5,627,000	4,889,000	10,075,000	25,075,000	1,195,000	3,160,000	28,235,000
General and administrative.....	1,565,000	1,558,000	2,067,000	7,089,000	446,000	452,000	7,541,000
Total costs and expenses.....	7,192,000	6,447,000	12,142,000	32,164,000	1,641,000	3,612,000	35,776,000
LOSS BEFORE OTHER INCOME AND EXPENSE.....	(6,320,000)	(5,930,000)	(10,533,000)	(28,382,000)	(1,430,000)	(3,388,000)	(31,770,000)
<b>OTHER INCOME (EXPENSE):</b>							
Interest income.....	245,000	279,000	678,000	1,576,000	149,000	126,000	1,702,000
Interest expense.....	(65,000)	(66,000)	(62,000)	(219,000)	(18,000)	(11,000)	(230,000)
Other income.....	180,000	213,000	616,000	1,357,000	131,000	115,000	1,472,000
NET LOSS.....	\$(6,140,000)	\$(5,717,000)	\$(9,917,000)	\$(27,025,000)	\$(1,299,000)	\$(3,273,000)	\$(30,298,000)
PRO FORMA NET LOSS PER SHARE.....	\$ (.82)	\$ (.66)	\$ (.98)		\$ (.13)	\$ (.32)	
Pro forma weighted average number of common and common equivalent shares outstanding.....	7,461,000	8,644,000	10,103,000		10,094,000	10,107,000	

The accompanying notes are an integral part of these financial statements.



stock options..			39,103	8,000				
Retirement of Common Stock outstanding....			(25,000)	(7,000)				
Unrealized loss on investments.								(2,000)
Net loss.....					(5,717,000)			
-----								
Balance, June 30, 1995.....	8,040,001	28,253,000	1,731,463	241,000	(17,108,000)	(198,000)	--	(2,000)
Issuance of Series E Preferred Stock in January 1996 at \$4.25 per share, net of issuance costs of \$35,000.....	1,411,765	5,965,000						
Exercise of stock options..			130,016	53,000				
Issuance of Common Stock at \$1.20 per share.....			25,000	30,000				
Issuance of Stock Purchase Rights for cash in September 1995 and March 1996.....							3,500,000	
Repurchase of Series D Preferred Stock at \$4.00 per share.....	(62,500)	(250,000)						
Sale of Series D Preferred Stock at \$4.00 per share.....	62,500	250,000						
Principal payment received under shareholder note receivable.....						31,000		
Unrealized gain on investments.								2,000
Net loss.....					(9,917,000)			
-----								
Balance, June 30, 1996.....	9,451,766	34,218,000	1,886,479	324,000	(27,025,000)	(167,000)	3,500,000	--
Unaudited:								
Exercise of stock options..			833	1,000				
Issuance of Series E Preferred Stock to RPR at \$17.00 per share.....	205,882	3,500,000					(3,500,000)	
Compensation expense related to stock options granted.....				40,000				
Net loss.....					(3,273,000)			
-----								
Balance, September 30, 1996 (Unaudited)....	9,657,648	\$37,718,000	1,887,312	\$365,000	\$(30,298,000)	\$(167,000)	\$ --	\$ --
=====								
TOTAL SHAREHOLDERS' EQUITY								
-----								
Balance, March 24, 1989 (Inception)....	\$ --							
Non-cash issuance of Common Stock...		--						
Issuance of Series A Preferred Stock at \$1.00 per share in August 1989.....	1,500,000							

Net loss.....	(500,000)
Balance, June 30, 1990.....	1,000,000
	-----
Issuance of Series A Preferred Stock in March 1991 at \$1.00 per share, net of issuance costs of \$5,000.....	995,000
Net loss.....	(636,000)
	-----
Balance, June 30, 1991.....	1,359,000
Issuance of Series B Preferred Stock in April 1992 at \$2.00 per share, net of issuance costs of \$46,000.....	6,014,000
Net loss.....	(1,268,000)
	-----
Balance, June 30, 1992.....	6,105,000
Issuance of Common Stock for services...	10,000
Exercise of stock option...	1,000
Net loss.....	(2,847,000)
	-----
Balance, June 30, 1993.....	3,269,000
Issuance of Series C Preferred Stock in October 1993 at \$1,000 per share, net of issuance costs of \$175,000....	9,825,000
Exercise of stock options..	31,000
Net loss.....	(6,140,000)
	-----
Balance, June 30, 1994.....	6,985,000
Issuance of Series D Preferred Stock in April and May 1995 at \$4.00 per share, net of issuance costs of \$81,000.....	9,919,000
Exercise of stock options..	8,000
Retirement of Common Stock outstanding....	(7,000)
Unrealized loss on investments.	(2,000)
Net loss.....	(5,717,000)
	-----
Balance, June 30, 1995.....	11,186,000
Issuance of Series E Preferred Stock in January 1996 at \$4.25 per share, net of issuance costs of \$35,000.....	5,965,000
Exercise of stock options..	53,000
Issuance of Common Stock at \$1.20 per share.....	30,000
Issuance of Stock Purchase Rights for cash in September 1995 and March	



1996.....	3,500,000
Repurchase of Series D Preferred Stock at \$4.00 per share.....	(250,000)
Sale of Series D Preferred Stock at \$4.00 per share.....	250,000
Principal payment received under shareholder note receivable.....	31,000
Unrealized gain on investments.	2,000
Net loss.....	(9,917,000)
	-----
Balance, June 30, 1996.....	10,850,000
Unaudited:	
Exercise of stock options..	1,000
Issuance of Series E Preferred Stock to RPR at \$17.00 per share.....	--
Compensation expense related to stock options granted.....	40,000
Net loss.....	(3,273,000)
	-----
Balance, September 30, 1996 (Unaudited)....	\$ 7,618,000 =====

The accompanying notes are an integral part of these financial statements.

AASTROM BIOSCIENCES, INC.  
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF CASH FLOWS

	YEAR ENDED JUNE 30,			MARCH 24, 1989 (INCEPTION) TO JUNE 30, 1996	THREE MONTHS ENDED SEPTEMBER 30,		MARCH 24, 1989 (INCEPTION) TO SEPTEMBER 30, 1996
	1994	1995	1996		1995	1996	
					(UNAUDITED)		(UNAUDITED)
<b>OPERATING ACTIVITIES:</b>							
Net loss.....	\$(6,140,000)	\$(5,717,000)	\$(9,917,000)	\$(27,025,000)	\$(1,299,000)	\$(3,273,000)	\$(30,298,000)
Adjustments to reconcile net loss to net cash used for operating activities:							
Depreciation and amortization.....	248,000	329,000	536,000	1,267,000	91,000	136,000	1,403,000
Loss on property held for resale.....	--	--	--	110,000	--	--	110,000
Amortization of discounts and premiums on investments.....	--	(9,000)	(110,000)	(119,000)	(48,000)	--	(119,000)
Expense related to stock and stock options granted....	--	--	--	10,000	--	40,000	50,000
Changes in assets and liabilities:							
Receivables.....	11,000	132,000	18,000	(81,000)	4,000	(139,000)	(220,000)
Prepaid expenses...	(17,000)	(59,000)	(332,000)	(437,000)	27,000	59,000	(378,000)
Accounts payable and accrued expenses.....	(45,000)	(40,000)	864,000	1,192,000	(35,000)	(351,000)	841,000
Accrued employee expenses.....	53,000	28,000	(33,000)	97,000	(58,000)	(17,000)	80,000
Deferred revenue...	146,000	79,000	(103,000)	122,000	(172,000)	(69,000)	53,000
Net cash used for operating activities..	(5,744,000)	(5,257,000)	(9,077,000)	(24,864,000)	(1,490,000)	(3,614,000)	(28,478,000)
<b>INVESTING ACTIVITIES:</b>							
Organizational costs...	--	--	--	(73,000)	--	--	(73,000)
Purchase of short-term investments.....	(967,000)	(10,981,000)	--	(11,948,000)	--	(1,200,000)	(13,148,000)
Maturities of short- term investments.....	--	3,567,000	8,500,000	12,067,000	2,500,000	--	12,067,000
Capital purchases.....	(320,000)	(118,000)	(445,000)	(1,718,000)	(15,000)	(173,000)	(1,891,000)
Proceeds from sale of property held for resale.....	--	--	--	400,000	--	--	400,000
Net cash provided by (used for) investing activities.....	(1,287,000)	(7,532,000)	8,055,000	(1,272,000)	2,485,000	(1,373,000)	(2,645,000)
<b>FINANCING ACTIVITIES:</b>							
Issuance of Preferred Stock.....	9,825,000	9,919,000	5,965,000	34,218,000	--	--	34,218,000
Issuance of Common Stock.....	31,000	1,000	83,000	116,000	3,000	1,000	117,000
Payments received for stock purchase rights.	--	--	3,500,000	3,500,000	1,500,000	--	3,500,000
Payments received under shareholder notes....	--	--	31,000	31,000	--	--	31,000
Principal payments under capital lease obligations.....	(147,000)	(214,000)	(270,000)	(762,000)	(65,000)	(73,000)	(835,000)
Net cash provided by (used for) financing activities.....	9,709,000	9,706,000	9,309,000	37,103,000	1,438,000	(72,000)	37,031,000
<b>NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS.....</b>							
	2,678,000	(3,083,000)	8,287,000	10,967,000	2,433,000	(5,059,000)	5,908,000
<b>CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD....</b>							
	3,085,000	5,763,000	2,680,000	--	2,680,000	10,967,000	--
<b>CASH AND CASH EQUIVALENTS AT END OF PERIOD.....</b>							
	\$ 5,763,000	\$ 2,680,000	\$10,967,000	\$ 10,967,000	\$ 5,113,000	\$ 5,908,000	\$ 5,908,000

	=====	=====	=====	=====	=====	=====	=====
SUPPLEMENTAL DISCLOSURES							
OF CASH FLOW							
INFORMATION:							
Interest paid.....	\$ 65,000	\$ 66,000	\$ 62,000	\$ 219,000	\$ 18,000	\$ 11,000	\$ 230,000
	=====	=====	=====	=====	=====	=====	=====
SUPPLEMENTAL DISCLOSURES							
OF NON-CASH INVESTING							
AND FINANCING							
ACTIVITIES:							
Additions to capital							
lease obligations.....	\$ 348,000	\$ 270,000	\$ --	\$ 1,174,000	\$ --	\$ --	\$ 1,174,000
	=====	=====	=====	=====	=====	=====	=====

The accompanying notes are an integral part of these financial statements.

AASTROM BIOSCIENCES, INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS

(INFORMATION AS OF SEPTEMBER 30, 1996 AND FOR THE THREE-MONTH PERIODS ENDED SEPTEMBER 30, 1995 AND 1996 IS UNAUDITED)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Overview--Aastron Biosciences, Inc. (the "Company") was incorporated in March 1989 ("Inception") under the name Ann Arbor Stromal, Inc. The Company changed its name in 1991 concurrent with the commencement of employee-based operations. The Company is in the development stage with its principal business activities being research and product development, conducted both on its own behalf and in connection with various collaborative research and development agreements with other companies, involving the development of processes and instrumentation for the ex-vivo production of human stem cells and their progeny, and hematopoietic and other tissues. Successful future operations are subject to several technical and business risks, including satisfactory product development and obtaining regulatory approval and market acceptance for its products.

Significant Revenue Relationships--Two companies accounted for 77% of total revenues for the year ended June 30, 1995 and one company accounted for 83% of total revenues for the year ended June 30, 1996. These two companies have accounted for 47% of total revenues for the period from Inception to June 30, 1996. One company accounted for 82% and 87% of total revenues for the three months ended September 30, 1995 and 1996, respectively, and two companies accounted for 49% of total revenues for the period from Inception to September 30, 1996. Grant revenues consist of grants sponsored by the U.S. government.

Cash and Cash Equivalents--Cash and cash equivalents include cash and short-term investments with original maturities of three months or less.

Short-Term Investments--Short-term investments consist of U.S. government securities and commercial paper with original maturities of over three months but less than one year. Short-term investments are classified as available-for-sale, and are carried at market value, in accordance with Financial Accounting Standards Board Statement No. 115, "Accounting for Certain Investments in Debt and Equity Securities," which was adopted July 1, 1994. Application of this pronouncement results in the inclusion of unrealized gains and losses on investments in shareholders' equity. Application of this accounting treatment in prior periods would not have materially changed the amounts as presented.

Diversity of Credit Risk--The Company invests its excess cash in U.S. government securities and commercial paper, maintained in U.S. financial institutions, and has established guidelines relative to diversification and maturities in an effort to maintain safety and liquidity. The Company plans to continue to invest its excess funds in short-term, investment grade, interest-bearing instruments. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. The Company has not experienced any significant losses on its cash equivalents or short-term investments.

Property--Property is recorded at cost and depreciated or amortized using the straight-line method over the estimated useful life of the asset (primarily five years) or the remaining lease term, if shorter, with respect to leasehold improvements and certain capital lease assets.

Revenue Recognition--Revenue from grants and research agreements is recognized on a cost reimbursement basis consistent with the performance requirements of the related agreement. Funding received in advance of costs incurred is presented as deferred revenue in the accompanying financial statements.

Research and Development Costs--Research and development costs are expensed as incurred. Such costs and expenses related to programs under collaborative agreements with other companies totaled \$49,000, \$146,000 and \$1,294,000 for the years ended June 30, 1994, 1995 and 1996, respectively, and \$1,489,000 for the period from Inception to June 30, 1996 and \$158,000, \$117,000 and \$1,606,000 for the three months ended September 30, 1995 and 1996 and for the period from Inception to September 30, 1996, respectively.

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NOTES TO FINANCIAL STATEMENTS--(CONTINUED)

(INFORMATION AS OF SEPTEMBER 30, 1996 AND FOR THE THREE-MONTH PERIODS ENDED SEPTEMBER 30, 1995 AND 1996 IS UNAUDITED)

Restatement of Common Stock Information--The Company's Board of Directors authorized a two-for-three reverse stock split of the Company's Common Stock ("Reverse Stock Split") to be effected prior to the closing of the proposed IPO. Accordingly, all references in the accompanying financial statements to common share or per common share information have been restated to reflect the Reverse Stock Split.

Pro Forma Information (Unaudited)--Pro forma net loss per share is computed using the weighted average number of common and common equivalent shares outstanding during the period. Common equivalent shares are not included in the per-share calculation where the effect of their inclusion would be anti-dilutive, except that common and common equivalent shares issued during the 12 month period preceding the filing of the registration statement for the proposed initial public offering ("IPO"), contemplated in the Prospectus in which these financial statements are included, at a price below \$8.00 per share (the lowest expected selling price in the proposed IPO) are considered to be cheap stock and have been included in the calculation as if they were outstanding for all periods using the treasury stock method, if applicable, even though their inclusion is anti-dilutive. Upon the completion of the Company's proposed IPO, all 9,657,648 shares of the Company's outstanding Preferred Stock will automatically convert into 8,098,422 shares of Common Stock. As a result, all outstanding shares of Preferred Stock are assumed to have been converted to Common Stock at the time of issuance, except for those shares considered to be cheap stock which are treated as outstanding for all periods presented. The pro forma effect of these conversions has been reflected in the accompanying balance sheet assuming the conversion had occurred on September 30, 1996.

Historical net loss per share information is not considered meaningful due to the significant changes in the Company's capital structure which will occur upon the closing of the proposed IPO; accordingly, such per-share data information is not presented.

Use of Estimates--The preparation of financial statements in accordance with generally accepted accounting principles requires management to make estimates that affect the amounts reported in the financial statements and disclosures made in the accompanying notes to financial statements. Actual results could differ from those estimates.

Financial Instruments--Management evaluates the fair value of those assets and liabilities identified as financial instruments under Statement of Financial Accounting Standards No. 107 and estimates that the fair value of such financial instruments generally approximates the carrying value in the accompanying financial statements. Fair values have been determined through information obtained from market sources and management estimates.

Recent Pronouncements--During October 1995, the Financial Accounting Standards Board issued Statement No. 123, "Accounting for Stock-Based Compensation," which establishes a fair value based method of accounting for stock-based compensation and incentive plans and requires additional disclosures for those companies that elect not to adopt the new method of accounting. Adoption of this pronouncement is required for the Company's fiscal year beginning July 1, 1996 and the Company intends to provide the additional disclosures required by the pronouncement in its financial statements for the year ended June 30, 1997.

During March 1995, the Financial Accounting Standards Board issued Statement No. 121 (SFAS 121), "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of," which requires the Company to review for impairment of long-lived assets, certain identifiable intangibles, and goodwill related to those assets whenever events or changes in circumstances indicate that the carrying amount of an asset

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NOTES TO FINANCIAL STATEMENTS--(CONTINUED)

(INFORMATION AS OF SEPTEMBER 30, 1996 AND FOR THE THREE-MONTH PERIODS ENDED SEPTEMBER 30, 1995 AND 1996 IS UNAUDITED)

might not be recoverable. In certain situations, an impairment loss would be recognized. SFAS 121 will become effective for the Company's fiscal year beginning July 1, 1996. Management has studied the effect of implementing SFAS 121 and, based upon its initial evaluation, does not expect it to have a significant impact on the Company's financial condition or results of operations.

Unaudited Financial Information--The financial information as of September 30, 1996, and for the three-month periods ended September 30, 1995 and 1996, and for the period from Inception to September 30, 1996, is unaudited. In the opinion of management, such information contains all adjustments, consisting only of normal recurring accruals, necessary for a fair statement of the results of operations for the interim periods. The results of operations for the three months ended September 30, 1996, are not necessarily indicative of the results to be expected for the full year or for any other period.

2. SHORT-TERM INVESTMENTS

All short-term investments are available-for-sale, and have maturities of one year or less and are summarized as follows:

	COST	GROSS UNREALIZED GAINS	GROSS UNREALIZED LOSSES	ESTIMATED FAIR VALUE
	-----	-----	-----	-----
June 30, 1995:				
U.S. Government Securities....	\$4,890,000	\$ --	\$ (2,000)	\$4,888,000
Commercial Paper.....	3,500,000	--	--	3,500,000
	-----	-----	-----	-----
	\$8,390,000	\$ --	\$ (2,000)	\$8,388,000
	=====	=====	=====	=====
	COST	GROSS UNREALIZED GAINS	GROSS UNREALIZED LOSSES	ESTIMATED FAIR VALUE
	-----	-----	-----	-----
September 30, 1996 (Unaudited):				
U.S. Government Securities....	\$1,200,000	\$ --	\$ --	\$1,200,000
	=====	=====	=====	=====

3. PROPERTY

Property consists of the following:

	JUNE 30,		SEPTEMBER 30,
	1995	1996	1996
	-----	-----	-----
			(UNAUDITED)
Machinery and equipment.....	\$1,140,000	\$1,337,000	\$1,341,000
Office equipment.....	405,000	482,000	604,000
Leasehold improvements.....	380,000	520,000	567,000
	-----	-----	-----
	1,925,000	2,339,000	2,512,000
Less accumulated depreciation and amortization.....	(646,000)	(1,151,000)	(1,287,000)
	-----	-----	-----
	\$1,279,000	\$1,188,000	\$1,225,000
	=====	=====	=====

Equipment under capital leases totaled \$1,162,000, \$1,131,000 and \$1,131,000 at June 30, 1995 and 1996 and September 30, 1996, respectively, with related accumulated amortization of \$407,000, \$622,000 and \$679,000, respectively (Note 7).

AASTROM BIOSCIENCES, INC.  
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NOTES TO FINANCIAL STATEMENTS--(CONTINUED)

(INFORMATION AS OF SEPTEMBER 30, 1996 AND FOR THE THREE-MONTH PERIODS ENDED SEPTEMBER 30, 1995 AND 1996 IS UNAUDITED)

4. SHAREHOLDERS' EQUITY:

Preferred Stock--The Company has the following outstanding Preferred Stock:

	SHARES	SHARES ISSUED AND OUTSTANDING			LIQUIDATION PREFERENCE AT	
	AUTHORIZED					
	SEPTEMBER 30,	JUNE 30,	JUNE 30,	SEPTEMBER 30,	JUNE 30,	SEPTEMBER 30,
	1996	1995	1996	1996	1996	1996
	(Unaudited)			(Unaudited)		(Unaudited)
Series A.....	2,500,000	2,500,000	2,500,000	2,500,000	\$ 2,500,000	\$ 2,500,000
Series B.....	3,030,000	3,030,000	3,030,000	3,030,000	6,060,000	6,000,000
Series C.....	10,000	10,000	10,000	10,000	10,000,000	10,000,000
Series D.....	3,000,000	2,500,001	2,500,001	2,500,001	10,000,000	10,000,000
Series E.....	1,617,647	--	1,411,765	1,617,647	6,000,000	6,875,000
	10,157,647	8,040,001	9,451,766	9,657,648	\$34,560,000	\$35,375,000
	=====	=====	=====	=====	=====	=====

All preferred shares have voting rights equal to the equivalent number of common shares into which they are convertible. Conversion rights on all outstanding classes of preferred stock are on a two-for-three basis to give effect for the Reverse Stock Split, except for the Series C Preferred Stock, each share of which is convertible into approximately 250 shares of Common Stock. Conversion rights on certain classes of preferred stock are subject to anti-dilution adjustments. Dividends accrue annually at 8% on all series of Preferred Stock, but do not accumulate. No cash dividends have been declared or paid through September 30, 1996. Dividends and liquidation preferences on the Series B, Series C and Series D Preferred Stock are senior to those of the Series A Preferred Stock. Dividends and liquidation preferences on the Series E Preferred Stock are senior to those of all other outstanding series of preferred stock. Conversion of preferred stock is automatic in the event of the closing of an underwritten public stock offering meeting certain minimum requirements such as the offering contemplated by the Prospectus in which these financial statements are included.

Cobe Laboratories, Inc. Stock Purchase Rights--In connection with the purchase of the Series C Preferred Stock by Cobe Laboratories, Inc. ("Cobe") in October 1993, Cobe received a preemptive right to purchase a pro-rata portion of any newly issued shares of stock by the Company in order to maintain its then current percentage ownership interest. Any such purchase of newly issued shares shall be at the net price to the Company after deducting underwriters' discounts and commissions, if any. Cobe has waived its right to such discount on its intended purchase of shares in the proposed IPO. The Company has an option ("Put Option") to require Cobe to purchase the lesser of 20%, or \$5,000,000, in an offering of equity securities meeting certain minimum requirements. In the event that the Company exercises the Put Option, Cobe then has the option to purchase up to 40% of that offering.

During the three-year period following the completion of an initial public offering of Common Stock by the Company, Cobe has an option to purchase additional shares from the Company equal to 30% of the total number of shares outstanding assuming exercise of the option. Such option, if exercised, must be exercised in full with the purchase price of the shares being established at 120% of the public market trading price as determined by the 30-day average market price preceding the date of exercise of the option.

The Company has granted Cobe a right of first negotiation in the event the Company receives any proposal concerning, or otherwise decides to pursue, a merger, consolidation or other transaction in which all or a majority

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NOTES TO FINANCIAL STATEMENTS--(CONTINUED)

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of the Company's equity securities or all or substantially all of the Company's assets, or any material portion of the assets of the Company used by the Company in performing its obligations under the Distribution Agreement (Note 6) would be acquired by a third party outside of the ordinary course of business.

Stock Option Plans--The Company has various stock option plans which provide for the issuance of nonqualified and incentive stock options to acquire up to 2,836,594 shares of Common Stock. Such options may be granted by the Company's Board of Directors to certain of the Company's founders, employees, directors and consultants. The exercise price of incentive stock options shall not be less than the fair market value of the shares on the date of grant. In the case of individuals who are also holders of 10% or more of the outstanding shares of Common Stock, the exercise price of incentive stock options shall not be less than 110% of the fair market value of the shares on the date of grant. The exercise price of non-qualified stock options shall not be less than 85% of the fair market value on the date of grant. Options granted under these plans expire no later than ten years from the date of grant and generally become exercisable ratably over a four-year period following the date of grant.

For certain options granted, the Company recognizes compensation expense for the difference between the deemed value for accounting purposes and the option exercise price on the date of grant. During the three-month period ended September 30, 1996, compensation expense totaling approximately \$40,000 has been charged with respect to these options. Additional future compensation expense with respect to the issuance of such options totals approximately \$130,000 and will be recognized through October 2000.



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The following table summarizes option activity under the Company's stock option plans:

	OPTIONS OUTSTANDING	OPTIONS AVAILABLE FOR GRANT	EXERCISE PRICE PER SHARE
	-----	-----	-----
March 24, 1989(Inception)			
Options authorized.....	--	1,703,261	
Options granted.....	1,528,778	(1,528,778)	\$ .15 - \$ .30
Options exercised.....	(6,873)	--	\$ .15 - \$ .15
Options canceled.....	(13,793)	13,793	\$ .15 - \$ .15
-----	-----	-----	-----
Balance, June 30, 1993.....	1,508,112	188,276	\$ .15 - \$ .30
Options granted.....	198,333	(198,333)	\$ .30 - \$1.20
Options exercised.....	(1,222,609)	--	\$ .15 - \$ .30
Options canceled.....	(90,171)	90,171	\$ .15 - \$1.20
-----	-----	-----	-----
Balance, June 30, 1994.....	393,665	80,114	\$ .15 - \$1.20
Options authorized.....	--	333,333	
Options granted.....	55,333	(55,333)	\$ 1.20 - \$1.20
Options exercised.....	(39,103)	--	\$ .30 - \$ .30
Options canceled.....	(60,230)	60,230	\$ .30 - \$1.20
-----	-----	-----	-----
Balance, June 30, 1995.....	349,665	418,344	\$ .15 - \$1.20
Options authorized.....	--	800,000	
Options granted.....	155,337	(155,337)	\$ 1.20 - \$3.20
Options exercised.....	(130,016)	--	\$ .15 - \$1.20
Options canceled.....	(44,690)	44,690	\$ .30 - \$1.20
-----	-----	-----	-----
Balance, June 30, 1996.....	330,296	1,107,697	\$ .30 - \$3.20
Unaudited:			
Options granted.....	13,334	(13,334)	\$ 3.20 - \$3.20
Options exercised.....	(833)	--	\$ 1.20 - \$1.20
Options canceled.....	(6,543)	6,543	\$ 1.20 - \$1.20
-----	-----	-----	-----
Balance, September 30, 1996 (Unaudited).....	336,254	1,100,906	\$ .30 - \$3.20
=====	=====	=====	=====
Options Exercisable, June 30, 1996.....	101,021		\$ .30 - \$1.20
September 30, 1996 (Unaudited).....	122,612		\$ .30 - \$1.20
=====	=====	=====	=====

Common Shares Reserved--The Company has reserved shares of Common Stock for future issuance as follows:

	JUNE 30, 1996	SEPTEMBER 30, 1996
	-----	-----
		(Unaudited)
Issuance under 1992 Stock Option Plan.....	1,437,993	1,437,160
Conversion of preferred stock.....	7,961,168	8,098,422
-----	-----	-----
	9,399,161	9,535,582
=====	=====	=====

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NOTES TO FINANCIAL STATEMENTS--(CONTINUED)

(INFORMATION AS OF SEPTEMBER 30, 1996 AND FOR THE THREE-MONTH PERIODS ENDED SEPTEMBER 30, 1995 AND 1996 IS UNAUDITED)

5. FEDERAL INCOME TAXES

Deferred tax assets consist of the following:

	JUNE 30,	
	1995	1996
Net operating loss carryforwards.....	\$ 5,280,000	\$ 9,210,000
Tax credits and other.....	360,000	440,000
Gross deferred tax assets.....	5,640,000	9,650,000
Deferred tax assets valuation allowance.....	(5,640,000)	(9,650,000)
	\$ --	\$ --

Due to the historical losses incurred by the Company, a full valuation allowance for deferred tax assets has been provided. If the Company achieves profitability, these deferred tax assets may be available to offset income taxes. The Company's net operating loss and tax credit carryforwards will expire from 2004 through 2011, if not utilized.

The Company's ability to utilize its net operating loss and tax credit carryforwards would be limited in the event of a future change in ownership for tax purposes. Such a change in ownership may likely occur upon the completion of an initial public offering of the Company's Common Stock.

6. LICENSES, ROYALTIES AND COLLABORATIVE AGREEMENTS

University of Michigan--In March 1989, the Company entered into a research agreement with the University of Michigan (the "University") for the development of an adaptable, high-efficiency blood cell factory and to conduct related research. Under the terms of this research agreement, as amended, the Company agreed to reimburse the University for research costs in this regard through the date of its expiration in December 1994. Payments made to the University under the aforementioned agreements totaled \$316,000, \$121,000 and \$2,521,000 for the years ended June 30, 1994, 1995, for the period from Inception to June 30, 1996. As part of this relationship, the Company issued to the University 454,545 shares of Common Stock in August 1989. No value has been assigned to these shares in the accompanying financial statements. In March 1992, the Company entered into a license agreement for the technology developed under the research agreement. The license agreement, as amended, provides for a royalty to be paid to the University equal to 2% of net sales of products containing the licensed technology sold by the Company.

Cobe BCT, Inc.--In connection with the issuance of the Series C Preferred Stock to Cobe in October 1993, the Company and Cobe BCT, Inc. ("Cobe BCT"), an affiliate of Cobe, entered into an agreement which grants to Cobe BCT exclusive worldwide distribution and marketing rights to the Company's Cell Production System ("CPS") for stem cell therapy applications ("Distribution Agreement"). The term of the Distribution Agreement is ten years, with an option, exercisable by Cobe BCT, to extend the term for an additional ten years. Pursuant to the Distribution Agreement, Cobe BCT will perform worldwide marketing and distribution activities of the CPS for use in stem cell therapy and will receive a share of the resulting net sales, as defined, ranging from 38% to 42%, subject to certain negotiated discounts and volume-based adjustments.

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NOTES TO FINANCIAL STATEMENTS--(CONTINUED)

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The agreements establishing this collaboration provided for payments totaling \$5,000,000 to be made by Cobe BCT upon the Company meeting certain development milestones. In May 1995, the Company accepted, as part of the sale of the Series D Preferred Stock, an equity investment of \$5,000,000 from Cobe in lieu of those future milestone payments.

M.D. Anderson Cancer Center--In December 1992, the Company entered into a research agreement with the University of Texas, M.D. Anderson Cancer Center ("M.D. Anderson"). Under this agreement, the Company funded certain research being conducted at M.D. Anderson and issued to M.D. Anderson 33,333 shares of its Common Stock subject to vesting rights over the succeeding four year period. In November 1994, the Company and M.D. Anderson terminated the collaboration and 25,000 shares of Common Stock held by M.D. Anderson were returned to the Company.

License and Royalty Agreements--In July 1992, the Company licensed certain cell culture technology under which it obtained an exclusive worldwide license to the technology in exchange for a royalty of up to 3% of net sales on products utilizing the licensed technology.

In March 1996, the Company executed a license agreement which provides for the use of licensed products in the CPS. Pursuant to this license agreement, the Company recorded a charge to research and development expense of \$1,500,000 representing the license fee payable upon execution of the agreement. The license agreement provides for annual renewal fees of \$1,000,000 over the five year license term and can be extended at the Company's option for an additional five years.

Rhone-Poulenc Rorer Inc.--In September 1995, the Company entered into a research and development collaboration with Rhone-Poulenc Rorer Inc. ("RPR"), granting RPR a right to license the Company's CPS for Lymphoid cell applications. Prior to the establishment of this collaboration, the Company received a option fee of \$250,000 and a development deposit of \$225,000 to initiate the preliminary research and development plan. Pursuant to the agreements establishing this collaboration, RPR was obligated to fund certain costs associated with the development of the CPS for Lymphoid cell applications and was entitled to make equity purchases of up to \$12,500,000 subject to the Company's satisfaction of certain milestones and RPR's decision to exercise certain options. As of June 30, 1996, the Company has received \$3,500,000 in equity payments and recognized \$1,342,000 in research revenue through June 30, 1996 and \$1,537,000 through September 30, 1996. The remaining \$9,000,000 equity payment was to be paid by RPR by October 1996 pending RPR's evaluation of the research efforts for Lymphoid cell applications and its decision to proceed with the collaboration (Note 9).

## 7. COMMITMENTS

The Company leases certain machinery and equipment and office equipment under capital leases. Obligations under these leasing arrangements bear interest at rates ranging from 9.7% to 12.1% and mature at dates ranging from November 1996 to May 1999. Additionally, the Company leases its facilities under an operating lease which expires in May 1998, at which time the Company has the option to renew the lease for an additional period of up to five years.

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Future minimum payments under capital leases and non-cancelable operating leases are as follows:

	CAPITAL LEASES	OPERATING LEASES
	-----	-----
Year Ended June 30,		
1997.....	\$255,000	\$453,000
1998.....	138,000	435,000
1999.....	69,000	--
	-----	-----
Total minimum lease payments.....	462,000	\$888,000
		=====
Less amount representing interest.....	(50,000)	
	-----	
Obligations under capital lease.....	\$412,000	
	-----	
		=====

Certain of the Company's capital lease agreements contain restrictive provisions which require that the Company's total assets exceed its total liabilities by at least \$1,000,000. Should the Company fall out of compliance with this provision, and a waiver cannot be obtained from the lessor, remaining amounts due under the leases become immediately due and payable.

Rent expense for the years ended June 30, 1994, 1995 and 1996, was \$176,000, \$241,000 and \$338,000, respectively, and for the period from Inception to June 30, 1996 was \$822,000. Rent expense for the three months ended September 30, 1995 and 1996, was \$83,000 and \$107,000, respectively, and for the period from Inception to September 30, 1996 was \$929,000.

8. EMPLOYEE SAVINGS PLAN

The Company has a 401(k) plan that became effective in January 1994. The plan allows participating employees to contribute up to 15% of their salary, subject to annual limits and minimum qualifications. The Board may, at its sole discretion, approve Company contributions. Through June 30, 1996, the Company has made no contributions to the plan.

9. SUBSEQUENT EVENTS (UNAUDITED)

In September 1996, RPR notified the Company of its intent to terminate its collaboration with the Company. This notification was made after RPR had determined that for strategic reasons its support for the development of the technologies being pursued under the collaboration would be discontinued. As a result of this termination, no further equity payments or research funding is due from RPR and RPR's license rights to the Company's CPS for Lymphoid cell applications are terminated. Upon termination of the collaboration, RPR became entitled to receive shares of the Company's Series E Preferred Stock at \$17.00 per share for the \$3,500,000 in equity payments made by RPR under the collaboration. Accordingly, the accompanying financial statements as of September 30, 1996 reflect the issuance of 205,882 shares of Series E Preferred Stock issuable to RPR in this regard.

In October 1996, the Company executed a financing commitment for up to \$5,000,000 in additional equity funding from Cobe ("Equity Commitment") and \$5,000,000 in funding under a convertible loan agreement ("Convertible Loan Commitment") with another current investor. Under the terms of the Equity Commitment,

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the Company may sell up to \$5,000,000 of preferred stock at \$6.00 per share during a funding period that extends from January 1997 to December 1997. The conversion rights of such preferred stock will be adjusted to provide for a conversion at 80% of the per share price in the Company's next financing, as adjusted for the Reverse Stock Split, and provided that such financing meets certain minimum requirements ("Qualifying Financing"), such as the proposed IPO in which these financial statements appear. If such a financing is not completed by December 1997, then the conversion rights of this class of preferred stock into Common Stock will be set at \$6.98 per share of Common Stock. To the extent shares are sold to Cobe under the Equity Commitment, its preemptive right in the Company's next Qualifying Financing and the Company's Put Option to Cobe is reduced to the extent of its purchase.

Upon the sale of \$5,000,000 in preferred stock under the Equity Commitment, the Company becomes entitled to borrow funds under the Convertible Loan Commitment. Such funds may be borrowed by the Company during a funding period that extends from January 1997 to September 1997. Upon the completion of a Qualifying Financing by the Company, the Company has the option to repay outstanding borrowings under the Convertible Loan Commitment, in cash, or to convert such borrowings into preferred stock. The conversion rights of such class of preferred stock will be adjusted to provide for a conversion at 90% of the per share price in the Company's next Qualifying Financing, as adjusted for the Reverse Stock Split. If such financing is not completed by December 1997, then the conversion rights of this class of preferred stock will be set at \$6.98 per share of Common Stock. Interest accrues at 10% on amounts borrowed under the Convertible Loan Commitment, which is due at maturity, and may be retired in a manner consistent with principal. The Company may repay borrowed amounts at anytime prior to the maturity date which is established for all amounts borrowed as one year from the date of the first borrowing.

In connection with the Convertible Loan Commitment, the Company has issued warrants to purchase 69,444 shares of Common Stock for securing the commitment. The Company will issue additional warrants to purchase 8,333 shares of Common Stock for each \$1,000,000 borrowed under the Convertible Loan Commitment, with such additional warrants to be prorated to the level of borrowing. The warrants expire on October 15, 2000 if not exercised, and may be exercised, in whole or in part, at a price equal to the lesser of (a) \$9.00 per share, which price increases by \$3.00 per share on each anniversary of the closing of the offering being made in the Prospectus to which these financial statements are included; or (b) 85% of the fair market value of the Company's Common Stock at the time of exercise.

The Equity Commitment and the Convertible Loan Commitment expire upon the closing of an initial public offering by the Company.

Inside back cover page of Prospectus

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[COLOR DIAGRAM OF CELL LINEAGES OF HUMAN BONE MARROW STEM CELLS]

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 No dealer, salesperson or other person has been authorized to give any information or to make any representations other than those contained in this Prospectus, and, if given or made, such information or representation must not be relied upon as having been authorized by the Company or any of the Underwriters or any other person. This Prospectus does not constitute an offer to sell or a solicitation of an offer to buy any security other than the shares of Common Stock offered, nor does it constitute an offer to sell or a solicitation of an offer to buy any of the securities offered to any person in any jurisdiction or in which it is unlawful to make such offer or solicitation to such person. Neither the delivery of this Prospectus nor any sale made hereunder shall under any circumstances create an implication that the information contained herein is correct as of any date subsequent to the date hereof.

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 Until \_\_\_\_\_, 1997 (25 days after the date of this Prospectus), all dealers effecting transactions in the Common Stock offered, whether or not participating in this distribution, may be required to deliver a Prospectus. This is in addition to the obligation of dealers to deliver a Prospectus when acting as Underwriters and with respect to their unsold allotments or subscriptions.

3,250,000 Shares

[LOGO OF AASTROM BIOSCIENCES INC]

Common Stock

-----  
 PROSPECTUS  
 -----

COWEN & COMPANY

J.P. MORGAN & CO.

, 1996  
 -----  
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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

Other expenses in connection with the registration of the securities hereunder, which will be paid by the Company, will be substantially as follows:

ITEM ----	AMOUNT -----
Securities and Exchange Commission registration fee.....	\$ 11,326
NASD filing fee.....	4,238
Nasdaq National Market fee.....	50,000
Blue sky qualification fees and expenses.....	20,000
Accounting fees and expenses.....	85,000
Legal fees and expenses.....	350,000
Printing and engraving expenses.....	115,000
Transfer agent and registrar fees.....	7,500
Officers' and Directors' Insurance.....	200,000
Miscellaneous expenses.....	56,936
	-----
Total.....	\$900,000 =====

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Sections 1561 through 1565 of the Michigan Business Corporation Act (the "MBCA") authorize a corporation to grant or a court to award, indemnity to directors, officers, employees and agents in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933.

The Bylaws of the Company (see Exhibit 3.3), provide that the Company shall, to the fullest extent authorized or permitted by the MBCA, or other applicable law, indemnify a director or officer who was or is a party or is threatened to be made a party to any proceeding by or in the right of the Company to procure a judgment in its favor by reason of the fact that such person is or was a director, officer, employee or agent of the Company, against expenses, including actual and reasonable attorneys' fees, and amounts paid in settlement incurred in connection with the action or suit, if the indemnitee acted in good faith and in a manner the person reasonably believed to be in, or not opposed to, the best interests of the Company or its shareholders. This section also authorizes the Company to advance expenses incurred by any agent of the Company in defending any proceeding prior to the final disposition of such proceeding upon receipt of an undertaking by or on behalf of the agent to repay such amount unless it shall be determined ultimately that the agent is entitled to be indemnified.

The Bylaws also authorize the Company to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Company against any liability asserted against or incurred by such person in such capacity or arising out of such person's status as such, regardless of whether the Company would have the power to indemnify such person against such liability under the provisions of the MBCA.

The Company has entered into an indemnification agreement with certain of its directors, officers and other key personnel, which contains provisions that may in some respects be broader than the specific indemnification provisions contained under applicable law. The indemnification agreement may require the Company, among other things, to indemnify such directors, officers and key personnel against certain liabilities that may arise by reason of their status or service as directors, officers or employees of the Company, to advance the expenses incurred by such parties as a result of any threatened claims or proceedings brought against them as to which



they could be indemnified, and, to the maximum extent that insurance coverage of such directors, officers and key employees under the Company's directors' and officers' liability insurance policies is maintained.

Section 1209 of the MBCA permits a Michigan corporation to include in its Articles of Incorporation a provision eliminating or limiting a director's liability to a corporation or its shareholders for monetary damages for breaches of fiduciary duty. The enabling statute provides, however, that liability for breaches of the duty of loyalty, acts or omissions not in good faith or involving intentional misconduct or knowing violation of the law, or the receipt of improper personal benefits cannot be eliminated or limited in this manner. The Company's Restated Articles of Incorporation include a provision which eliminates, to the fullest extent permitted by the MBCA director liability for monetary damages for breaches of fiduciary duty.

Section 6 of the Underwriting Agreement filed as Exhibit 1.1 hereto sets forth certain provisions with respect to the indemnification of certain controlling persons, directors and officers against certain losses and liabilities, including certain liabilities under the Securities Act.

#### ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

##### (a) ISSUANCES OF COMMON STOCK

Since October 1, 1993, the Company has sold the following shares of Common Stock:

In October 1995, the registrant issued 37,500 shares of Common Stock to Albert B. Deisseroth at a price of \$.80 per share.

##### (b) ISSUANCES OF SHARES OF PREFERRED STOCK

Since October 1, 1993, the Company has sold the following shares of Preferred Stock:

In October 1993, the registrant issued 10,000 shares of Series C Preferred Stock to Cobe at a price of \$1,000 per share.

In April and May 1995, the registrant issued an aggregate of 2,500,001 shares of Series D Preferred Stock to 11 accredited investors at a price of \$4.00 per share.

In December 1995, the registrant issued 62,500 shares of Series D Preferred Stock to Northwest Ohio Venture Fund, L.P. at a purchase price of \$4.00 per share.

In January 1996, the registrant issued an aggregate of 1,411,765 shares of Series E Preferred Stock to SBIC Partners, L.P. and the State Treasurer of the State of Michigan at a purchase price of \$4.25 per share.

Pursuant to a Governance Agreement between the Company and Rhone-Poulenc Rorer Inc. ("RPR"), dated September 15, 1995, RPR terminated its contractual relationship with the Company on September 6, 1996. As a result of such termination, the Company became obligated to issue 205,882 shares of Series E Preferred Stock to RPR at a purchase price of \$17.00 per share.

##### (c) OPTION ISSUANCES TO, AND EXERCISES BY, EMPLOYEES AND DIRECTORS

From January 18, 1990 to the present, the registrant has granted options to purchase a total of 2,945,174 shares of Common Stock at exercise prices ranging from \$.10 to \$2.13 per share to 95 employees and one non-employee director. No consideration was paid to the Registrant by any recipient of any of the foregoing options for the grant of any such options. From October 30, 1992 to the present, the Registrant issued a total of 2,829,735 shares of Common Stock to 26 employees and one non-employee director upon exercise of stock options at exercise prices ranging from \$.10 to \$2.13 per share.

There were no underwriters employed in connection with any of the transactions set forth in Item 15.

The issuances described in Items 15(a) and 15(b) were exempt from registration under the Securities Act in reliance on Section 4(2) of the Securities Act as transactions by an issuer not involving a public offering. The issuances described in Item 15(c) were exempt from registration under the Securities Act in reliance on Rule 701 promulgated thereunder as transactions pursuant to compensatory benefit plans and contracts relating to compensation. The recipients of securities in each such transaction represented their intention to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the share certificates and other instruments issued in such transactions.

#### ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

##### (a) Exhibits

- 1.1\*Form of Underwriting Agreement.
- 3.1\*\*Restated Articles of Incorporation.
- 3.2\* Form of Restated Articles of Incorporation (to be filed with the Secretary of State of the State of Michigan prior to the closing of this offering).
- 3.3\*\* Bylaws, as amended.
- 4.1\* Specimen Common Stock Certificate.
- 4.2\*\* Amended and Restated Investors' Rights Agreement dated April 7, 1992.
- 5.1\* Opinion of Pepper, Hamilton & Scheetz, counsel to the Company, with respect to the legality of the securities being registered, including their consent to being named in the Registration Statement.
- 10.1\*\* Form of Indemnification Agreement.
- 10.2\*\* 1989 Stock Option Plan and form of agreement thereunder.
- 10.3\*\* Ancillary Stock Option Plan and form of agreement thereunder.
- 10.4\*\* 401(k) Plan.
- 10.5\*\* Amended and Restated 1992 Incentive and Non-Qualified Stock Option Plan and forms of agreements thereunder.
- 10.6\*\* 1996 Outside Directors Stock Option Plan and forms of agreements thereunder.
- 10.7\*\* 1996 Employee Stock Purchase Plan and form of agreement thereunder.
- 10.8\*\* Form of Employment Agreement.
- 10.9\*\* Stock Purchase Agreement dated October 22, 1993 between Cobe Laboratories, Inc. and the Company and amendment thereto dated October 29, 1996.
- 10.10\*\*+ Distribution Agreement dated October 22, 1993 between Cobe BCT, Inc. and the Company and amendments thereto dated March 29, 1995, September 11, 1995 and October 29, 1996.
- 10.11\*\* License Agreement dated July 17, 1992 between J.G. Cremonese and the Company and related addenda thereto dated July 14, 1992 and July 7, 1993.
- 10.12\*\*+ Collaborative Product Development Agreement dated May 10, 1994 between SeaMED Corporation and the Company.
- 10.13\*\*+ Collaborative Product Development Agreement dated November 8, 1994 between Ethox Corporation and the Company.
- 10.14\*\*+ License and Supply Agreement dated April 1, 1996 between Immunex Corporation and the Company.

- 10.15\*\* Lease Agreement dated May 18, 1992 between Domino's Farms Holding, L.P. and the Company and amendments thereto dated February 26, 1993, October 3, 1994, November 16, 1994 and July 29, 1996.
- 10.16\*\* Clinical Trial Agreement dated April 19, 1996 between the Company and the University of Texas M.D. Anderson Cancer Center.
- 10.17\*\* License Agreement dated March 13, 1992 between the Company and the University of Michigan and amendments thereto dated March 13, 1992, October 8, 1993 and June 21, 1995.
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- 10.21\*\* Employment Agreement dated February 10, 1994 between the Company and Walter C. Ogier.
- 10.22\*\* Employment Agreement dated April 19, 1994 between the Company and Thomas E. Muller, Ph.D.
- 10.23\*\* Employment Agreement dated October 26, 1995 between the Company and Alan K. Smith, Ph.D.
- 10.24 Promissory Note dated November 18, 1993 for \$120,000 loan by the Company to R. Douglas Armstrong and amendment thereto dated October 30, 1996.
- 10.25\*\* Promissory Note dated October 20, 1993 for \$47,303 loan by the Company to Stephen G. Emerson, M.D., Ph.D and amendment thereto dated October 30, 1996.
- 10.26\*\* Consulting Agreement dated June 1, 1995 between the Company and Stephen G. Emerson, M.D., Ph.D.
- 10.27\*\* Clinical Trial Agreement dated August 28, 1996 between the Company and Loyola University Medical Center Cancer Center.
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- 10.29\*\* Convertible Loan Commitment Agreement dated October 15, 1996 between the State Treasurer of the State of Michigan and the Company.
- 10.30 Form of Subscription Agreement for the purchase of Series D Preferred Stock (Enterprise Development Fund L.P., Enterprise Development Fund II, L.P. and Northwest Ohio Venture Fund Limited Partnership).
- 10.31 Stock Purchase Agreement dated January 8, 1996 among the Company, SBIC Partners, L.P. and the State Treasurer of the State of Michigan.
- 10.32+ Governance Agreement dated September 15, 1995 between the Company and Rhone-Poulenc Rorer Inc.
- 10.33+ License Agreement dated September 15, 1995 between the Company and Rhone-Poulenc Rorer Inc.
- 10.34 Stock Purchase Agreement dated September 15, 1995 between the Company and Rhone-Poulenc Rorer Inc.
- 10.35 Letter Agreement dated November 11, 1996 between the Company and Cobe Laboratories, Inc.
- 10.36 Form of Subscription Agreement for the purchase of Series D Preferred Stock (Brentwood Associates V, L.P., Candice E. Appleton Family Trust, Candis J. Stern, Helmut F. Stern, H&Q Life Science Technology Fund, H&Q London Ventures, State Treasurer of the State of Michigan and Windpoint Partners II, L.P.).

- 10.37 Subscription Agreement dated December 11, 1995 between the Company and Northwest Ohio Venture Fund Limited Partnership.
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- 23.2\* The consent of Pepper, Hamilton & Scheetz is contained in their opinion filed as Exhibit 5.1 of the Registration Statement.
- 23.3 The consent of Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
- 24.1\*\* Power of Attorney.
- 27.1\*\* Financial Data Schedule.
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- 27.5\*\* Financial Data Schedule.
- 27.6\*\* Financial Data Schedule.

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\*To be filed by Amendment.

\*\*Previously filed.

+The Company has applied for confidential treatment with respect to certain portions of these documents.

(b) Financial Statement Schedules

Schedules other than those referred to above have been omitted because they are not applicable or not required under the instructions contained in Regulation S-X or because the information is included elsewhere in the Financial Statements or the notes thereto.

ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant, pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this amendment to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Ann Arbor, State of Michigan, on the 18th day of November, 1996.

AASTROM BIOSCIENCES, INC.

By: /s/ R. Douglas Armstrong  
R. Douglas Armstrong, Ph.D.  
President and Chief Executive  
Officer  
(Principal Executive Officer)

Pursuant to the requirements of the Securities Act of 1933, this amendment to the registration statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE -----	TITLE -----	DATE -----
<u>/s/ R. Douglas Armstrong</u> R. Douglas Armstrong, Ph.D.	President, Chief Executive Officer, and Director (Principal Executive Officer)	November 18, 1996
<u>Todd E. Simpson*</u> Todd E. Simpson	Vice President, Finance & Administration and Chief Financial Officer (Principal Financial and Accounting Officer)	November 18, 1996
<u>Robert J. Kunze*</u> Robert J. Kunze	Chairman of the Board and Director	November 18, 1996
<u>Albert B. Deisseroth*</u> Albert B. Deisseroth, M.D., Ph.D.	Director	November 18, 1996
<u>Stephen G. Emerson*</u> Stephen G. Emerson, M.D., Ph.D.	Director	November 18, 1996
<u>G. Bradford Jones*</u> G. Bradford Jones	Director	November 18, 1996
<u>Horst R. Witzel*</u> Horst R. Witzel, Dr.-Ing.	Director	November 18, 1996
<u>Edward C. Wood*</u> Edward C. Wood, Jr.	Director	November 18, 1996

\*By: /s/ R. Douglas Armstrong  
-----

R. Douglas Armstrong  
Attorney-in-Fact

EXHIBIT INDEX

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\*To be filed by Amendment.

\*\*Previously filed.

+The Company has applied for confidential treatment with respect to certain portions of these documents.



PROMISSORY NOTE

\$120,000

Ann Arbor, Michigan  
November 18, 1993  
11/96

1. As repayment for a cash loan made by Aastrom Biosciences, Inc., a Michigan Corporation ("AASTROM"), to R. Douglas Armstrong ("Maker"), Maker hereby promises to pay to the order of AASTROM, at Ann Arbor, Michigan, or at such other place as AASTROM may direct in writing, the principal amount of \$120,000, together with interest on the outstanding principal balance owing from time to time at the rate of four percent (4%) per annum.

2. Accrued interest shall be payable on each anniversary date of this Note.

3. The principal and all unpaid accrued interest owing on this Note shall mature and be fully due and payable on the third anniversary of the date of this Note. Maker may prepay any or all of the principal and interest owing on this Note at any time without penalty or premium.

4. If any installment of interest owing on this Note is not paid within ten (10) days after Maker receives a written notice of default, then Aastrom may accelerate the maturity date and declare all sums of principal and accrued interest immediately due and payable.

5. If this Note is not paid when due, Maker promises to pay all costs incurred by Aastrom in collecting amounts due on this Note, including reasonable attorney's fees.

6. Payments owing on this note shall be payable (i) in lawful money of the United States of America or, (ii) at the option of Maker, by Maker's surrender of common stock of Aastrom owned by Maker, with said common stock being valued at the public trading price for Aastrom's common stock on the date the stock is surrendered, if Aastrom's common stock is publicly traded; or if Aastrom's common stock is not publicly traded, then the value of the stock shall be the fair market value of the common stock as determined by the Board of Directors of Aastrom, or (iii) at the option of Maker, by Maker's surrender of vested stock options to purchase common stock of Aastrom, with said stock options valued at the "spread" between the then current fair market value of the stock (as determined above) and the option exercise price.

7. This Note has been executed and delivered by Maker in the State of Michigan, and shall be governed by and construed in accordance with the laws of the State of Michigan.

8. Maker acknowledges that Maker has personal liability on this Note, and that this Note is a "full recourse" note.

MAKER:  
  
/s/ R. DOUGLAS ARMSTRONG  
-----  
R. Douglas Armstrong, Ph.D.

FIRST AMENDMENT TO PROMISSORY NOTE

This Amendment (the "Amendment") to the Promissory Note (the "Note") dated November 18, 1993, payable to Aastrom Biosciences, Inc., a Michigan corporation (the "Company"), executed by R. Douglas Armstrong ("Maker"), is dated as of October 30, 1996.

WHEREAS, Section 3 of the Note provides that all principal and accrued but unpaid interest is due and payable on the third anniversary of the date of the Note (i.e. November 18, 1996).

WHEREAS, the Company desires to amend the Note to provide that all principal and accrued but unpaid interest shall be due and payable on June 30, 1997.

NOW, THEREFORE, the Company hereby amends the Note as follows:

1. Section 3 of the Note is hereby amended to read in its entirety as follows:

"The principal and all unpaid accrued interest owing on this Note shall mature and be fully due and payable on June 30, 1997. Maker may prepay any or all of the principal and interest owing on this Note at any time without penalty or premium."

2. All other provisions of the Note shall remain in full force and effect.

IN WITNESS WHEREOF, the undersigned has caused this Amendment to be executed by its duly authorized officer as of the date set forth above.

AASTROM BIOSCIENCES, INC.

By: /s/ ROBERT J. KUNZE

-----  
Robert J. Kunze  
Chairman of the Board

AASTROM BIOSCIENCES, INC.

SUBSCRIPTION AGREEMENT

AASTROM Biosciences, Inc.  
Domino's Farms, Lobby L  
24 Frank Lloyd Wright Drive  
P.O. Box 376  
Ann Arbor, MI 48106  
Attention: R. Douglas Armstrong, Ph.D.

Gentlemen:

1. Subscription. The undersigned (the "undersigned" or the  
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"Purchaser"), hereby agrees and subscribes to purchase from AASTROM Biosciences, Inc., a Michigan corporation (the "Company"), \_\_\_\_\_ shares (the "Shares") of the Series D Preferred Stock of the Company (the "Series D Stock") at a purchase price of \$4.00 per Share, for an aggregate purchase price of \$\_\_\_\_\_ (the "Purchase Price"). This subscription is submitted to you in accordance with and subject to the terms and conditions described in this Subscription Agreement, the Memorandum (as defined in Section 5.c.) and the Articles (as defined in Section 5.c.) relating to the offering (the "Offering") by the Company of up to 2,500,000 shares of Series D Stock.

2. Subscription and Payment. The undersigned is returning to  
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the Company two signed and completed copies of this Subscription Agreement, together with payment of the Purchase Price. Payment of the Purchase Price is being made by delivery to the Company of a check payable to the order of the Company, or by wire transfer of the Purchase Price to the Company. Subject to the satisfaction of the conditions in Section 8, a closing (the "Closing") for the purchase and sale of shares of Series D Stock will be held on April 24, 1995. As soon as practicable after the Closing, the Company shall issue and deliver to the undersigned a stock certificate or certificates, registered in the name of the undersigned, representing the Shares being purchased.

3. Acceptance of Subscription. The undersigned understands and  
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agrees that the Company in its sole discretion reserves the right to accept or reject this subscription for the Shares. The Company shall have no obligation hereunder until the Company shall execute and deliver to the undersigned an executed copy of this Subscription Agreement. This Subscription Agreement shall continue in full force and effect to the extent this subscription was accepted.

4. Stock Registration Rights. The undersigned shall have the  
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stock registration rights as have been granted pursuant to Sections 2.4 through 2.14 of that

certain Amended and Restated Investors' Rights Agreement dated April 7, 1992 by and among the Company and certain investors and shareholders of the Company, attached hereto as Exhibit A.

5. Representations and Warranties of Purchaser. In order to

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induce the Company to sell the Shares to the undersigned, the undersigned hereby acknowledges, represents, warrants and agrees as follows:

a. None of the Shares of Series D Stock are (and the shares of common stock, no par value ("Common Stock") issuable upon conversion thereof ("Conversion Shares") will not be) registered under the Securities Act of 1933 (as amended, the "Securities Act") or any state securities laws. The undersigned understands that the sale of the Shares is intended to be exempt from registration under Section 4(2) of the Securities Act and/or the provisions of Regulation D promulgated thereunder, based, in part, upon the representations, warranties and agreements contained in this Subscription Agreement;

b. Neither the Securities and Exchange Commission nor any state securities commission has approved any of the Shares or passed upon or endorsed the merits of this transaction;

c. Prior to its execution of this Subscription Agreement, the undersigned has received from the Company (i) the Confidential Private Placement Memorandum of the Company dated April 5, 1995 (together with any exhibits thereto, the "Memorandum"), which supersedes in its entirety the draft Memorandum previously delivered to the undersigned, (ii) a copy of the amendment to the Restated Articles of Incorporation of the Company (the "Articles"), for the purpose of creating the Series D Stock, and (iii) the audited financial statements of the Company for the years ended June 30, 1994, 1993 and 1992, the unaudited financial statements of the Company for the month ended January 31, 1995 (the "Most Recent Financial Statements"), and the unaudited balance sheet of the Company at February 28, 1995 (collectively, the "Financial Statements").

d. The undersigned acknowledges that all documents, records and books pertaining to the investment in the Shares, including the Memorandum, have been made available for inspection by the undersigned, or by its attorney, accountant, purchaser representative and/or tax advisor (collectively, the "Advisors") and that the undersigned and/or its Advisors have completed such review as they deem to be necessary to make the decision to purchase the Shares. Notwithstanding the foregoing, the parties acknowledge and agree that the Purchaser is relying solely on the representations and warranties set forth in Section 6 hereof, which reference the documents set forth in Section 5.c;

e. The undersigned has reviewed the merits and risks of an investment in the Shares. The undersigned and the Advisors have had a reasonable opportunity to ask questions of and receive answers from members of management

of the Company concerning the offer and sale of the Shares and all such questions have been answered to the full satisfaction of the undersigned;

f. In evaluating the suitability of an investment in the Company, the undersigned has not relied upon any representation or other information (oral or written) other than as contained in documents or answers to questions so furnished to the undersigned or its Advisors by the Company;

g. No oral or written representations have been made or oral or written information furnished to the undersigned or its Advisors in connection with the Offering which were in any way inconsistent with the information provided to the undersigned or its Advisors, including the Memorandum.

h. The undersigned, together with the Advisors, have such knowledge and experience in financial, tax and business matters so as to enable each of them to utilize the information made available to each of them in connection with the purchase of the Shares to evaluate the merits and risks of an investment in the Shares and to make an informed investment decision with respect thereto;

i. The undersigned is not relying on the Company with respect to the tax and other economic considerations of an investment in the Shares, and the undersigned has relied on the advice, or has consulted with, only its own Advisors concerning tax matters;

j. The undersigned is acquiring the Shares solely for its own account, for investment, and not with a view to or for subdivision, resale or distribution, in whole or in part, and no other person has or will have a direct or indirect beneficial interest in the Shares, other than for any partner or shareholder owners of the undersigned, if any;

k. The undersigned must bear the economic risk of the investment indefinitely because none of the Shares of Series D Stock (or Conversion Shares) may be sold, hypothecated or otherwise disposed of unless (i) subsequently registered under the Securities Act and applicable state securities laws, or (ii) an exemption from registration is available. Legends shall be placed on the Shares (and the Conversion Shares) to the effect that they have not been registered under the Securities Act or applicable state securities laws and appropriate notations thereon will be made in the Company's stock books;

l. The undersigned has adequate means of providing for the undersigned's current financial needs and foreseeable contingencies and the undersigned can accept the fact that an investment in the Shares will not be liquid;

m. The undersigned is aware that an investment in the Shares involves a number of very significant risks and, in particular, acknowledges that the Company is in the development stage. The undersigned understands that the risks

associated with an investment in the Shares could result in, and the undersigned can sustain, a complete loss of its investment;

n. The undersigned is an "accredited investor" as such term is defined in the regulations promulgated under the Securities Act, and has completed and signed the Accredited Investor Certification attached as Exhibit B hereto supporting this conclusion;

o. The undersigned represents that it has full power and authority to execute and deliver this Subscription Agreement and all other related agreements and certificates and to carry out the provisions hereof and thereof and to purchase and hold the Shares, and this Subscription Agreement is a legal, valid and binding obligation of the undersigned. The execution and delivery of this Subscription Agreement will not violate or be in conflict with any order, judgment, injunction, agreement or controlling document to which the undersigned is a party or by which it is bound;

p. The undersigned represents to the Company that the information contained herein is complete and accurate and may be relied upon by the Company in determining the availability of an exemption from registration under federal and state securities laws. The undersigned further represents and warrants that it will notify the Company immediately upon the occurrence of any material change to the information contained herein occurring prior to the Company's issuance of the Shares;

q. The undersigned is unaware of, and in no way relying on, any form of general solicitation or general advertising in connection with the offer and sale of the Shares.

6. REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company represents and warrants to the Purchaser that:

6.01 Organization, Qualifications and Corporate Power.  
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The Company is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Michigan and is duly licensed or qualified to transact business as a foreign corporation and is in good standing in each other jurisdiction in which the nature of the business transacted by it or the character of the properties owned or leased by it requires such licensing or qualification. The Company has the corporate power and authority to own and hold its properties and to carry on its business as now conducted and as proposed to be conducted, to execute, deliver and perform this Subscription Agreement, to issue, sell and deliver the Series D Stock, and to issue and deliver the Conversion Shares as provided in the Articles.

6.02 Authorization of Agreement.

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(a) The execution and delivery by the Company of this Subscription Agreement, the performance by the Company of its obligations hereunder, the issuance, sale and delivery of the Series D Stock and the issuance and delivery of the Conversion Shares have been duly authorized by all requisite corporate action and will not violate any provision of law, any order of any court or other agency of government, the Articles or the Bylaws of the Company (the "Bylaws"), or any provision of any indenture, agreement or other instrument to which the Company or any of its properties or assets is bound, or conflict with, result in a breach of or constitute (with due notice or lapse of time or both) a default under any such indenture, agreement or other instrument, or result in the creation or imposition of any lien, charge, restriction, claim or encumbrance of any nature whatsoever upon any of the properties or assets of the Company.

(b) The Series D Stock has been duly authorized and, when issued in accordance with this Subscription Agreement, will be validly issued, fully paid and nonassessable shares of the Company with no personal liability attaching to the ownership thereof and will be free and clear of all liens, charges, restrictions, claims and encumbrances imposed by or through the Company except as set forth herein. The Conversion Shares have been duly reserved for issuance upon conversion of the Series D Stock and, when so issued, will be duly authorized, validly issued, fully paid and nonassessable shares of Common Stock with no personal liability attaching to the ownership thereof and so long as the Series D Stock tendered for conversion is free and clear of liens or encumbrances, will be free and clear of all liens, charges, restrictions, claims and encumbrances imposed by or through the Company except as set forth herein. Neither the issuance, sale or delivery of the Series D Stock nor the issuance or delivery of the Conversion Shares is subject to any preemptive right of stockholders of the Company or to any right of first refusal or other right in favor of any person which right has not been waived.

6.03 Validity.

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This Subscription Agreement has been duly executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company, enforceable in accordance with its terms.

6.04 Authorized Capital Stock.

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(a) The authorized capital stock of the Company consists of (1) 8,540,000 shares of Preferred Stock, and (2) 17,000,000 shares of Common Stock. Immediately prior to the Closing, 2,592,610 shares of Common Stock and 5,540,000 shares of Preferred Stock will be validly issued and outstanding, fully paid and nonassessable with no personal liability attaching to the ownership thereof. The stockholders of record and holders of subscriptions, warrants, options, convertible securities, and other rights (contingent or other), if any, to purchase or

otherwise acquire equity securities of the Company prior to the Closing Date (the "Original Shareholders") and the number of shares of Common Stock and the number of such subscriptions, warrants, options, convertible securities, and other such rights, if any, held by each, are as set forth in the Memorandum. The designations, powers, preferences, rights, qualifications, limitations and restrictions in respect of each class of authorized capital stock of the Company are as set forth in the Articles, a copy of which has previously been delivered to each Purchaser, and all such designations, powers, preferences, rights, qualifications, limitations and restrictions are valid, binding and enforceable and in accordance with all applicable laws. Except as set forth in the attached Schedule 6.04 or in the Memorandum, (a) no person owns of record or is known to the Company to own beneficially any share of Common Stock, (b) no subscription, warrant, option, convertible security, or other right (contingent or other) to purchase or otherwise acquire equity securities of the Company is authorized or outstanding and (c) there is no commitment by the Company to issue shares, subscriptions, warrants, options, convertible securities, or other such rights or to distribute to holders of any of its equity securities any evidence of indebtedness or asset. Except as provided for in the Articles or as set forth herein, the Company has no obligation (contingent or other) to purchase, redeem or otherwise acquire any of its equity securities or any interest therein or to pay any dividend or make any other distribution in respect thereof. Except as set forth herein or in the Memorandum, there are no voting trusts or agreements, stockholders agreements, pledge agreements, buy-sell agreements, rights of first refusal, preemptive rights or proxies relating to any securities of the Company (whether or not the Company is a party thereto). All of the outstanding securities of the Company were issued in compliance with all applicable Federal and state securities laws.

(b) Upon sale by the Company of shares of Series D Stock having an aggregate purchase price of \$5,000,000, with one or more new investors purchasing at least \$1,000,000 of Series D Stock, if the Company exercises a

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"put option," Cobe Laboratories, Inc. will be legally required to purchase \$5,000,000 of Series D Stock, subject to customary closing conditions.

#### 6.05 Litigation.

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(a) The Company is aware of a possible claim against it by Software Publishers Association, relating to the alleged use of unregistered software on the Company's PCs. The Company is in negotiations with such association and believes the matter can be resolved without material adverse consequence to the Company. Except for such action, there is no (a) action, suit, claim, proceeding or investigation pending or, to the best of the Company's knowledge, threatened against or affecting the Company or its directors, officers, or management, at law or in equity, or before or by any Federal, state, municipal or other governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, (b) arbitration proceeding relating to the Company pending under collective bargaining agreements or otherwise or (c) governmental inquiry pending or, to the best of the Company's knowledge,



threatened against or affecting the Company (including without limitation any inquiry as to the qualification of the Company to hold or receive any license or permit), and, to the best knowledge of the Company, there is no basis for any of the foregoing. Without waiving any applicable attorney-client privilege, the Company has not received any opinion or memorandum or legal advice from legal counsel to the effect that it is exposed, from a legal standpoint, to any liability or disadvantage which may be material to its business, prospects, financial condition, operations, property or affairs. To the best knowledge of the Company, the Company is not in default with respect to any order, writ, injunction or decree known to or served upon the Company of any court or of any Federal, state, municipal or other governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign.

(b) The Company has written letters to a former employee, Richard M. Schwartz, Ph.D. and Dr. Schwartz's new employer, SyStemix, (i) reminding them of Dr. Schwartz's duty to maintain strict confidentiality as to the Company's trade secrets; and (ii) asking if there has been any breach of this confidentiality obligation; and (iii) commenting that a new invention by Systemix's appears to be derived from the Company's trade secrets. Systemix and Dr. Schwartz have denied any use of the Company's trade secrets. The Company has reserved its rights in this matter, but does not presently contemplate pursuing this potential claim in the near future.

6.06 Financial Statements.  
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The Company has furnished to the Purchasers the Financial Statements. Except as disclosed herein or in the Memorandum, the Financial Statements are true and correct in all material respects and have been prepared in accordance with generally accepted accounting principles. The balance sheets included in the respective Financial Statements accurately reflects the financial condition and all assets and liabilities of the Company at the times referred to therein. The statements of income and cash flows accurately reflect the operations of the Company for the periods referred to therein. There are no undisclosed liabilities in the Financial Statements.

6.07 No Convictions.  
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During the past ten (10) years, none of the directors, officers, or management of the Company have been arrested or convicted of any material crime, including any felony (whether material or not), have been indicted, have been bankrupt or an officer or director of a bankrupt company (except for directors designated by venture capital investors), nor have any of them been restricted in any way from bidding on contracts with the government of the United States.

6.08 Brokers.  
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Except for a fee payable to Key Investments, Inc., an affiliate of Society Bank of Michigan, the Company has no knowledge of any brokerage or finders fee due in conjunction with the transactions contemplated by this Subscription Agreement.

6.09 Subsidiaries.  
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The Company has no subsidiaries. The Company does not (i) own of record or beneficially, directly or indirectly: (A) any shares of capital stock or securities convertible into capital stock of any corporation; or (B) any participating interest in any partnership, joint venture or other non-corporate business enterprise; or (ii) control, directly or indirectly, any other entity.

6.10 Directors and Officers.  
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The Memorandum sets forth the names of the directors and officers of the Company, together with the title of each such person.

6.11 No Material Adverse Change.  
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Since the date of the Most Recent Financial Statements, (a) there has been no change in the assets, liabilities or financial condition of the Company from that reflected in the Most Recent Financial Statements, except for changes in the ordinary course of business which in the aggregate have not been materially adverse and (b) none of the business, prospects, financial condition, operations, property or affairs of the Company has been materially adversely affected by any occurrence or development, individually or in the aggregate, whether or not insured against.

6.11 Taxes.  
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The Company has filed all tax returns, Federal, state, county and local, required to be filed by it, and the Company has paid all taxes shown to be due by such returns as well as all other taxes, assessments and governmental charges which have become due or payable, including without limitation all taxes which the Company is obligated to withhold from amounts owing to employees, creditors and third parties. All such taxes with respect to which the Company has become obligated pursuant to elections made by the Company in accordance with generally accepted practice have been paid and adequate reserves have been established for all taxes accrued but not yet payable. The Federal income tax returns of the Company have never been audited by the Internal Revenue Service. No deficiency assessment with respect to or proposed adjustment of the Company's Federal, state, county or local taxes is pending or, to the best of the Company's

knowledge, threatened. There is no tax lien, whether imposed by any Federal, state, county or local taxing authority, outstanding against the assets, properties or business of the Company. Neither the Company nor, to the Company's knowledge, any of its stockholders, has ever filed consent pursuant to Section 341(f) of the Code, relating to collapsible corporations.

6.13 Employee Benefit Plans.  
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To the knowledge of the Company, each of the Company's employee benefit plans (and each related trust or insurance contract) complies in form and in operation in all respects with the applicable requirements of the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code of 1986, as amended. To the knowledge of the Company, all required reports and descriptions have been filed or distributed appropriately with respect to each employee benefit plan. There have been no prohibited transactions with respect to any employee benefit plan. No fiduciary has any liability for breach of fiduciary duty or any other failure to act or comply in connection with the administration or investment of the assets of any employee benefit plans. No charge, complaint, action, suit, proceeding, hearing, investigation, claim, or demand with respect to the administration or the investment of the assets of any employee benefit plan (other than routine claims for benefits) is pending or, to the Company's knowledge, threatened. The Company and its directors and officers (and employees with responsibility for employee benefits matters) have no knowledge of any basis for any such charge, complaint, action, suit, proceeding, hearing, investigation, claim, or demand.

6.14 Title to Properties.  
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The Company has good and marketable title to its properties and assets reflected in the Financial Statements or acquired by its since the date of the Financial Statements (other than properties and assets disposed of in the ordinary course of business since the date of the Financial Statements), and all such properties and assets are free and clear of mortgages, pledges, security interests, liens, charges, claims, restrictions and other encumbrances, except for liens to secure payment of obligations reflected in the Financial Statements and for current taxes not yet due and payable and minor imperfections of title, if any, not material in nature or amount and not materially detracting from the value or impairing the use of the property subject thereto or impairing the operations or proposed operations of the Company.

6.15 Leasehold Interests.  
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Each lease or agreement to which the Company is a party under which it is a lessee of any property, real or personal is a valid and subsisting agreement without any material default of the Company thereunder and, to the best of the Company's knowledge, without any default by the Company of any material

term thereunder; the Company has not been notified of any default and has no reason to believe that it is in default of any term thereunder. To the best of the Company's knowledge, no other party to any such lease or agreement is in default of a material term thereunder. No event has occurred and is continuing which, with due notice or lapse of time or both, would constitute a default or event of default by the Company under any such lease or agreement or, to the best of the Company's knowledge, by any other party thereto. The Company's possession of such property has not been disturbed and, to the best of the Company's knowledge, no claim has been asserted against the Company adverse to its rights in such leasehold interests.

6.16 Insurance.  
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The Company maintains as to its properties and business, with financially sound and reputable insurers, insurance against such casualties and contingencies and of such types and in such amounts as is customary for companies similarly situated.

6.17 Other Agreements.  
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With respect to each material contract to which the Company is a party, the Company and, to the best of the Company's knowledge, each other party thereto, have in all material respects performed all the obligations required to be performed by them to date, have received no notice of default and are not in default (with due notice or lapse of time or both) under any material lease, agreement or contract now in effect to which the Company is a party or by which it or its property may be bound. The Company has no present expectation or intention of not fully performing all its obligations under each such material lease, contract or other agreement and the Company has no knowledge of any breach or anticipated breach by the other party to any contract or commitment to which the Company is a party.

6.18 Patents, Trademarks, Etc.  
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(a) Schedule 6.18, attached hereto, accurately sets forth all material patents, patent rights, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names and copyrights, and all material applications for such which are in the process of being prepared, owned by or registered in the name of the Company, or of which the Company is a licensor or licensee or in which the Company has any right, and in each case a brief description of the nature of such right. The Memorandum contains an accurate and complete description of all material licenses. The Company is in compliance in all material respects with each of such licenses. The Company owns or possesses adequate licenses or other rights to use all patents, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names, copyrights, manufacturing processes, formulae, trade secrets and know how (collectively, "Intellectual Property") necessary to the conduct of its business as

conducted, and no claim is pending or, to the best of the Company's knowledge, threatened to the effect that the operations of the Company infringe upon or conflict with the asserted rights of any other person under any Intellectual Property, and, to the best knowledge of the Company, there is no basis for any such claim (whether or not pending or threatened). No claim is pending or threatened to the effect that any such Intellectual Property owned or licensed by the Company, or which the Company otherwise has the right to use, is invalid or unenforceable by the Company, or that the Company is not in compliance with any term or condition of a license, and there is no basis for any such claim (whether or not pending or threatened). The Company has not granted or assigned to any other person or entity any right to manufacture, have manufactured, assemble or sell the products or proposed products or to provide the services or proposed services of the Company except as set forth in the Memorandum and Schedule 6.18.

(b) The Company has taken reasonable security measures to protect the secrecy, confidentiality, and value of the Company's trade secrets; any of their employees and any other persons who, either alone or in concert with others, developed, invented, discovered, derived, programmed, or designed these secrets, or who have knowledge of or access to information relating to them, have entered into agreements protecting the confidentiality thereof.

#### 6.19 Proprietary Information of Third Parties.

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Except as set forth herein and in Section 6.05, to the best of the Company's knowledge, no third party has claimed or has reason to claim that any person employed by or affiliated with the Company has (a) violated or may be violating any of the terms or conditions of his employment, non-competition or nondisclosure agreement with such third party, (b) disclosed or may be disclosing or utilized or may be utilizing any trade secret or proprietary information or documentation of such third party or (c) interfered or may be interfering in the employment relationship between such third party and any of its present or former employees. No third party has requested information from the Company which suggests that such a claim might be contemplated. To the best of the Company's knowledge, no person employed by or affiliated with the Company has employed or proposes to employ any trade secret or any information or documentation proprietary to any former employer, and to the best of the Company's knowledge, no person employed by or affiliated with the Company has violated any confidential relationship which such person may have had with any third party, in connection with the development, manufacture or sale of any product or proposed product or the development or sale of any service or proposed service of the Company, and the Company has no reason to believe there will be any such employment or violation. To the best of the Company's knowledge, none of the execution or delivery of this Subscription Agreement, or the carrying on of the business of the Company as officers, employees or agents by any officer, director or key employee of the Company, or the conduct or proposed conduct of the business of the Company, will conflict with or result in a breach of the terms, conditions or provisions of or

constitute a default under any contract, covenant or instrument under which any such person is obligated.

6.20 Compliance With Law.  
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The Company has complied with all laws, rules, regulations and orders applicable to its business, operations, properties, assets, products and services, the violation of which would have a material adverse effect upon the Company, and the Company has all necessary permits, licenses and other authorizations required to conduct its business as it is now conducted. There is no existing law, rule, regulation or order, and the Company after due inquiry is not aware of any proposed law, rule, regulation or order, whether Federal or state, which would prohibit or restrict the Company from, or otherwise materially adversely affect the Company in, conducting its business, in which it is now conducting business or in which it proposes to conduct business, other than the customary governmental approvals required for medical products. Without limiting the foregoing in any manner, the Company has complied in all material respects with all applicable laws relating to the employment of labor, including provisions relating to wages, hours, equal opportunity, collective bargaining and the payment of Social Security and other taxes, with the Employee Retirement Income Security Act of 1974, as amended, with the Occupational Health and Safety Act, and with the Americans With Disabilities Act. The Company is in full compliance with the Immigration Reform and Control Act of 1986, as amended, and, to the best of the Company's knowledge, all key employees who are not United States citizens are currently authorized under United States immigration laws to hold United States employment and will continue to have such employment authorization throughout the term of the Series D Stock investment, and are otherwise in compliance with United States immigration laws.

6.21 Loans and Advances.  
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The Company does not have any outstanding loans or advances to any person and is not obligated to make any such loans or advances, except as reflected on the Financial Statements, and except, in each case, for advances to employees of the Company in respect of reimbursable business expenses anticipated to be incurred by them in connection with their performance of services for the Company.

6.22 Assumptions, Guaranties, Etc. of Indebtedness of Other  
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Persons.  
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Except as disclosed in the Financial Statements, the Company has not assumed, guaranteed, endorsed or otherwise become directly or contingently liable on any indebtedness of any other person (including, without limitation, liability by way of agreement, contingent or otherwise, to purchase, to provide funds for payment, to supply funds to or otherwise invest in the debtor, or

otherwise to assure the creditor against loss), except for guaranties by endorsement of negotiable instruments for deposit or collection in the ordinary course of business.

6.23 Governmental Approvals.  
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Subject to the accuracy of the representations and warranties of the Purchaser set forth in Section 5, no registration or filing with, or consent or approval of or other action by, any Federal, state or other governmental agency or instrumentality is or will be necessary for the valid execution, delivery and performance by the Company of this Agreement, the issuance, sale and delivery of the Series D Stock or, upon conversion of the Series D Stock, the issuance and delivery of the Conversion Shares, other than (a) filings pursuant to state securities laws (all of which filings have been or will be made by the Company) in connection with the sale of the Series D Stock and (b) with respect to the Registration Rights as set forth in Exhibit A, the registration of the shares covered thereby with the Commission and filings pursuant to state securities laws.

6.24 Disclosure.  
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The Company's Private Placement Memorandum dated April 5, 1995 with respect to the Series D Stock (the "Memorandum"), contains true and accurate facts and representations. Neither this Subscription Agreement, nor any Schedule or Exhibit to this Agreement, contains an untrue statement of a material fact or omits a material fact necessary to make the statements contained herein or therein not misleading. To the best of the Company's knowledge, none of the statements, documents, certificates or other items prepared or supplied by the Company with respect to the transactions contemplated hereby contains an untrue statement of a material fact or omits a material fact necessary to make the statements contained therein not misleading. As of the date hereof, no facts have come to the attention of the Company which would, in its opinion, require the Company to revise or amplify the Memorandum.

6.25 Offering of Shares.  
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The Offering is being made by the Company pursuant to an exemption from the registration requirements of the Securities Act.

6.26 Transactions With Affiliates.  
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Except as set forth in the Memorandum, no director, officer, employee or stockholder of the Company, or member of the family of any such person, or any corporation, partnership, trust or other entity in which any such person, or any member of the family of any such person, has a substantial interest in or is an officer, director, trustee, partner or holder of more than 5% of the outstanding capital stock thereof, is a party to any transaction with the Company, including any contract, agreement or other arrangement providing for the

employment of, furnishing of services by, rental of real or personal property from or otherwise requiring payments to any such person or firm.

6.27    Obsolescence.  
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To the best of the Company's knowledge, there are no new products, inventions, procedures, or methods of manufacturing or processing that any competitors or other third parties have developed and which reasonably could be expected to supersede or make obsolete any of the Company's products or processes.

7.    Compliance with Regulation D and Applicable State Securities  
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Laws.    The undersigned understands and agrees that the following restrictions  
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and limitations are applicable to its purchase of the Shares and any resales, mortgages, pledges, hypothecations, or other transfers thereof, pursuant to Regulation D under the Securities Act and applicable state securities laws:

a.    The undersigned agrees that the Shares may not be sold, mortgaged, pledged, hypothecated or otherwise transferred unless the Shares are registered under the Securities Act and applicable state securities laws or are exempt from registration thereunder.

b.    A legend in substantially the following form will be placed on the certificate(s) evidencing the Shares:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. THESE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT, AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, MORTGAGED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, OR UNLESS AN EXEMPTION FROM REGISTRATION UNDER SUCH ACT IS AVAILABLE.

c.    FOR CALIFORNIA RESIDENTS ONLY:    THE SALE OF THE  
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SECURITIES THAT IS THE SUBJECT OF THIS SUBSCRIPTION AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION FOR SUCH SECURITIES PRIOR TO SUCH QUALIFICATION IS UNLAWFUL UNLESS AN EXEMPTION FROM SUCH QUALIFICATION IS AVAILABLE. THE RIGHTS OF ALL PARTIES TO THIS SUBSCRIPTION AGREEMENT ARE EXPRESSLY



CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED OR AN EXEMPTION THEREFROM BEING AVAILABLE.

8. Conditions to Obligations of the Purchasers. The Purchasers'

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obligation to purchase the Shares at the Closing is subject to the fulfillment, at or prior to the Closing, of all of the following conditions, any of which may be waived by a majority in interest of the Purchasers:

a. The Restated Articles of Incorporation of the Company, in the form previously delivered to each Purchaser, shall have been filed with the Secretary of State of the State of Michigan;

b. The Company shall have received from Purchasers at least \$5,000,000 in subscriptions, which funds shall be held in escrow by the Company and released at the Closing;

c. The Company shall have delivered to the Purchasers an opinion of counsel, substantially in the form attached hereto as Exhibit C.

9. Board Observer Rights. Purchasers of Series D Preferred

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Stock who were not previously holders of capital stock of the Company ("New Investors") shall have the following rights: a majority in interest of New Investors shall have the right from time to time to designate one representative, who shall be entitled to attend all meetings of the Board of Directors, in a nonvoting observer capacity only. The Company will include such representative in oral reports given by the Board and give such representative copies of all materials that it provides to its directors including but not limited to all materials delivered to directors outside of meetings; provided, however, that such representative shall be reasonably acceptable to the Company and shall enter into a confidentiality agreement acceptable to the Company.

Additionally, the New Investors shall have the rights to information and inspection set forth in Sections 3.1 through 3.3 of the Amended and Restated Investors Rights Agreement dated April 7, 1992 by and among the Company and certain investors and shareholders of the Company.

10. Additional Sales of Series D Preferred Stock. The Company

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hereby agrees that following the completion of the Offering, it will not issue and sell additional shares of Series D Stock at a purchase price per share of less than the applicable conversion price then in effect with respect to the Series D Stock.

11. Irrevocability; Binding Effect. The undersigned hereby

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acknowledges and agrees that the subscription hereunder is irrevocable by the undersigned, except as required by applicable law, and that this Subscription Agreement shall be binding upon and inure to the benefit of the parties and their respective successors, legal representatives, and permitted assigns.

12. Modification. This Subscription Agreement shall not be

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modified or waived except by an instrument in writing signed by the party against whom any such modification or waiver is sought.

13. Notices. A notice or other communication required or

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permitted to be given hereunder shall be in writing and shall be mailed by certified mail, return receipt requested, or delivered against receipt to the party to whom it is to be given (a) if to the Company, at the address set forth above, or (b) if to the undersigned, at the address set forth on the signature page hereof (or, in either case, to such other address as the party shall have furnished in writing in accordance with the provisions of this Section 13). Any notice or other communication shall be deemed given at the time it is received at the party's address.

14. Assignability. This Subscription Agreement and the rights,

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interests and obligations hereunder are not transferable or assignable by the undersigned, except to an affiliate of the undersigned who qualifies as an "accredited investor," and the undersigned further agrees that the transfer or assignment of the Shares shall be made only in accordance with all applicable laws.

15. Applicable Law. This Subscription Agreement shall be governed

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by and construed in accordance with the internal laws of the state of Michigan without regard to its conflicts of laws principles.

16. Blue Sky Qualification. The undersigned's right to purchase

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Shares under this Subscription Agreement is expressly conditioned upon the exemption from qualification of the offer and sale of the Shares from applicable federal and state securities laws. The Company shall not be required to qualify this transaction under the securities laws of any jurisdiction and, should qualification be necessary, the Company shall be released from any and all obligations to maintain its offer, and may rescind any sale contracted, in the jurisdiction.

17. Confidentiality. The undersigned acknowledges and agrees that

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any information or data it has acquired from or about the Company, not otherwise properly in the public domain, was received in confidence. The undersigned agrees not to divulge, communicate or disclose, except as may be required by law or for the performance of this Subscription Agreement, or use to the detriment of the Company or for the benefit of any other person or persons, or misuse in any way, any confidential information of the Company, including any scientific, technical, trade or business secrets of the Company and any scientific, technical, trade or business materials that are treated by the Company as confidential or proprietary, including, but not limited to, ideas, discoveries, inventions, developments and improvements belonging to the Company and confidential information obtained by or given to the Company about or belonging to third parties.

18. Miscellaneous.

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a. This Subscription Agreement, together with the Articles and the attached stock registration rights, constitutes the entire agreement between the undersigned and the Company with respect to the subject matter hereof and supersedes all prior oral or written agreements and understandings, if any, relating to the subject matter hereof. The terms and provisions of this Subscription Agreement may be waived, or consent for the departure therefrom granted, only by a written document executed by the party entitled to the benefits of such terms or provisions.

b. The undersigned's representations and warranties made in this Subscription Agreement shall survive the execution and delivery hereof and of the Shares.

c. Each of the parties hereto shall pay its own fees and expenses (including the fees of any attorneys, accountants, appraisers or others engaged by such party) in connection with this Subscription Agreement and the transactions contemplated hereby whether or not the transactions contemplated hereby are consummated.

d. All pronouns and any variations thereof used herein shall be deemed to be to the masculine, feminine, neuter, singular or plural as the identity of the person or persons referred to may require.

e. This Subscription Agreement may be executed in one or more counterparts each of which shall be deemed an original, but all of which shall together constitute one and the same instrument. Signatures may be transmitted by facsimile.

f. Each provision of this Subscription Agreement shall be considered separable and if for any reason any provision or provisions hereof are determined to be invalid or contrary to applicable law, such invalidity shall not impair the operation of or affect the remaining portions of this Subscription Agreement, so long as the material economic benefits remain enforceable.

g. Paragraph titles are for descriptive purposes only and shall not control or alter the meaning of this Subscription Agreement as set forth in the text.

If the purchaser is an INDIVIDUAL, and if purchased INDIVIDUALLY, as JOINT TENANTS, as TENANTS IN COMMON, or as COMMUNITY PROPERTY:

\_\_\_\_\_  
Print Name(s)

\_\_\_\_\_  
Social Security Number(s)

\_\_\_\_\_  
Signature(s) of Purchaser(s)

\_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Address

\_\_\_\_\_

If the purchaser is a PARTNERSHIP, CORPORATION, or TRUST:

\_\_\_\_\_  
Name of Partnership,  
Corporation or Trust

\_\_\_\_\_  
Federal Taxpayer  
Identification Number

\_\_\_\_\_  
Date

By: \_\_\_\_\_

\_\_\_\_\_  
State of Organization

Name: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_  
Address

\_\_\_\_\_

SUBSCRIPTION ACCEPTED AND AGREED  
this \_\_ day of \_\_\_\_\_, 1995

AASTROM BIOSCIENCES, INC.

By: \_\_\_\_\_  
R. Douglas Armstrong, Ph.D., President  
and Chief Executive Officer

Accredited Investor Certification

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(Check the appropriate box(es))

\_\_\_ i. I am a natural person who had individual income of more than \$200,000 in each of the most recent two years or joint income with my spouse in excess of \$300,000 in each of the most recent two years and reasonably expect to reach that same income level for the current year;

\_\_\_ ii. I am a natural person whose individual net worth, or joint net worth with my spouse, will at the time of purchase of the Shares be in excess of \$1,000,000;

\_\_\_ iii. The undersigned is an institutional investor satisfying the requirements of Section 501(a)(1), (2) or (3) of Regulation D promulgated under the Securities Act;

\_\_\_ iv. The undersigned is a trust, which trust has total assets in excess of \$5,000,000, which is not formed for the specific purpose of acquiring the Shares offered hereby and whose purchase is directed by a sophisticated person as described in Rule 506(b)(2)(ii) of Regulation D and who has such knowledge and experience in financial and business matters that it is capable of evaluating the risks and merits of an investment in the Shares;

\_\_\_ v. The undersigned is an entity (other than a trust) in which all of the equity owners meet the requirements of at least one of the above subparagraphs.

\_\_\_\_\_

By: \_\_\_\_\_

STOCK PURCHASE AGREEMENT  
by and between  
AASTROM BIOSCIENCES, INC.  
and the  
INVESTORS LISTED ON SCHEDULE A

January 8, 1996

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SCHEDULE A - Schedule of Investors  
SCHEDULE B - Schedule of Exceptions

STOCK PURCHASE AGREEMENT

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THIS STOCK PURCHASE AGREEMENT (this "Agreement") is made as of January 8, 1996 by and between AASTROM Biosciences, Inc., a Michigan corporation (the "Company"), and the investors listed on Schedule A hereto, each of which is herein referred to as an "Investor" and all of which are referred to collectively as the "Investors."

In consideration of the mutual covenants contained herein and such other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto hereby agree as follows:

1. Purchase and Sale of Stock.

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1.1 Sale and Issuance of Series E Preferred Stock.

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(a) The Company shall adopt and file with the Secretary of State of the State of Michigan on or before the Closing Date, as defined below, the Restated Articles of Incorporation in the form previously reviewed and approved by the Investors (the "Restated Articles").

(b) Subject to the terms and conditions of this Agreement, on the Closing Date, each Investor agrees to purchase and the Company agrees to sell and issue to each Investor that number of shares of the Company's Series E Preferred Stock (the "Series E Preferred Stock") set forth opposite such Investor's name on Schedule A hereto at the purchase price of \$4.25 per share, for the aggregate consideration set forth on Schedule A hereto.

(c) The Company may sell shares of the Series E Preferred Stock not sold on the Closing Date to the State Treasurer of the State of Michigan (the "State of Michigan") in an amount equal to the number of shares set forth opposite such Investor's name on Schedule A hereto at one additional closing, provided that the closing of any such additional sale of shares must occur on or before January 31, 1996, and provided, further, that the total number of shares of Series E Preferred Stock so sold, together with those shares of Series E Preferred Stock sold on the Closing Date, shall not exceed 1,411,765. Such purchaser shall be deemed to be an Investor for purposes of this Agreement, and the shares so sold shall be deemed to have been acquired on the same terms and conditions as are set forth in this Agreement.

1.2 Closing. The purchase and sale of the Series E Preferred Stock

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(the "Closing") shall take place at the offices of Riordan & McKinzie, 300 South Grand Avenue, 29th Floor, Los Angeles, California 90071, on January 8, 1996, or at such other time and place as the Company and the Investors mutually agree upon (the "Closing Date"). At the Closing the Company shall deliver to each Investor a certificate representing the number of shares of Series E Preferred Stock purchased by such Investor against delivery

to the Company by such Investor of the aggregate purchase price therefor by the wire transfer of immediately available funds to an account designated by the Company at least two (2) days prior to the Closing Date.

2. Representations and Warranties of the Company. The Company hereby

represents and warrants to each Investor that, except as set forth on the Schedule of Exceptions attached hereto as Schedule B, which exceptions shall be deemed to be representations and warranties as if made hereunder, and which exceptions, though referencing specific sections, shall serve to modify each and every section relevant thereto:

2.1 Organization. Good Standing and Qualification. The Company is a

corporation duly organized, validly existing and in good standing under the laws of the State of Michigan and has all requisite corporate power and authority to carry on its business as now conducted and as proposed to be conducted. The Company is duly qualified to transact business and in good standing in each jurisdiction in which the nature of the business conducted by it or its ownership or leasing of property makes such qualification necessary and in which the failure so to qualify would have a material adverse effect on the Company's operations, financial condition, business prospects or properties (a "Material Adverse Effect").

2.2 Subsidiaries. The Company has no subsidiaries, and does not own,

directly or indirectly, (a) any shares of the capital stock, or securities convertible into capital stock, of any corporation or (b) any interest in any partnership, joint venture or similar business enterprise, and the Company does not control any entity.

2.3 Authorization. All corporate action on the part of the Company,

its officers, directors and stockholders necessary for the authorization, execution and delivery of this Agreement, the performance of all obligations of the Company hereunder and the authorization, the issuance (or reservation for issuance) and delivery of the Series E Preferred Stock being sold hereunder and the Common Stock issuable upon conversion of the Series E Preferred Stock has been taken or will be taken on or prior to the Closing Date. This Agreement constitutes a valid and legally binding obligation of the Company, enforceable against the Company in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium and similar laws affecting creditors' rights and remedies generally.

2.4 Capitalization. The authorized capital of the Company consists,

or will consist on the Closing Date, of:

(a) Preferred Stock. 8,540,000 shares of preferred stock, of

which 2,500,000 shares have been designated Series A Preferred Stock (the "Series A Preferred Stock"), all of which are issued and outstanding, 3,030,000 shares have been designated Series B Preferred Stock (the "Series B Preferred Stock"), all of which are issued

and outstanding, 10,000 shares have been designated Series C Preferred Stock (the "Series C Preferred Stock"), all of which are issued and outstanding, 3,000,000 shares have been designated Series D Preferred Stock (the "Series D Preferred Stock"), all of which are issued and outstanding, and 1,411,765 have been designated Series E Preferred Stock, none of which is issued and outstanding. The rights, preferences and privileges of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock and Series E Preferred Stock will be as stated in the Restated Articles, a copy of which was provided to each Investor. Based upon the Company's records the outstanding shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock are held by the persons and in the numbers indicated on the stockholders list made available to the Investors prior to the Closing Date. The Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock and Series E Preferred Stock are sometimes collectively referred to herein as the "Preferred Stock."

(b) Common Stock. 17,000,000 shares of common stock, no par

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value (the "Common Stock"), 2,592,610 shares of which are issued and outstanding and, based upon the Company's records, are owned by the persons and in the numbers indicated on the stockholders list made available to the Investors.

(c) Agreements for Purchase of Shares. Except as set forth on

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the Schedule of Exceptions hereto, there are no outstanding subscriptions, options, warrants, rights (including conversion or preemptive rights) or agreements of any kind or nature whatsoever under which the Company is obligated to issue any shares of its capital stock or any securities of any kind representing an ownership interest in the Company, and no holder of any security of the Company is entitled to preemptive or other similar rights to purchase any securities of the Company that have not been waived in contemplation of the sale and issuance of Series E Preferred Stock pursuant to the terms of this Agreement.

#### 2.5 Valid Issuance of Preferred and Common Stock.

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(a) The Series E Preferred Stock which is being purchased by the Investors hereunder, when issued, sold and delivered in accordance with the terms hereof, for the consideration expressed herein, will be duly and validly issued, fully paid and nonassessable and, based in part upon the representations of the Investors in this Agreement, will be issued in compliance with all applicable federal and state securities laws. The Common Stock issuable upon conversion of the Series E Preferred Stock purchased under this Agreement has been duly and validly reserved for issuance and, upon issuance and in accordance with the terms of the Restated Articles, will be duly and validly issued, fully paid and nonassessable and will be issued in compliance with all applicable federal and state securities laws.

(b) The outstanding shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock and

Common Stock of the Company have been duly and validly authorized, issued and delivered, and are validly outstanding, fully paid and nonassessable. The Common Stock issuable upon conversion of the outstanding shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock has been duly and validly reserved for issuance and, when issued in accordance with the Restated Articles, will be duly and validly issued, fully paid and nonassessable. The outstanding shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock and Common Stock have been issued in compliance with all applicable federal and state securities laws.

2.6 Financial Statements. The Company has delivered to each  
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Investor audited financial statements, which include the Company's balance sheet, statement of operations and statement of cash flows, for itself at and for the fiscal years ended June 30, 1995, 1994 and 1993 and its unaudited balance sheet and income statement at and for the five (5)-month period ended November 30, 1995 (the "Financial Statements"). The Financial Statements are complete and correct in all material respects, subject to normal year-end adjustments and to other adjustments made in the ordinary course of business and relating to grants, licenses and other similar items, and have been prepared in accordance with generally accepted accounting principles applied on a consistent basis throughout the periods indicated and are consistent with each other. The Financial Statements accurately set out and describe the financial condition and operating results of the Company as of the dates, and for the periods, indicated therein, subject, in the case of the unaudited financial statements, to normal year-end audit adjustments. Except as set forth in the Financial Statements, or as approved by the Board of Directors in the ordinary course of business, the Company has no liabilities, contingent or otherwise, other than (a) liabilities incurred in the ordinary course of business subsequent to June 30, 1995, and (b) obligations under contracts and commitments incurred in the ordinary course of business, which, individually or in the aggregate, are not material to the financial condition or operating results of the Company.

2.7 Governmental Consents. To the best knowledge of the Company, no  
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consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state, local or provincial governmental authority on the part of the Company is required in connection with the consummation of the transactions contemplated by this Agreement, except for the filings pursuant to applicable federal and state securities laws.

2.8 Litigation. Except as set forth on the Schedule of Exceptions,  
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there is no action, suit, proceeding or investigation pending or, to the best knowledge of the Company, currently threatened against the Company, its directors or officers that questions the validity of this Agreement or the right of the Company to enter into this Agreement or to consummate the transactions contemplated hereby or which might result, either individually or in the aggregate, in a Material Adverse Effect, or any change in the current equity ownership of the Company, nor is the Company aware that there is any basis for the

foregoing. The foregoing includes, without limitation, actions pending or threatened (or any basis therefor known to the Company) involving the prior employment of any of the Company's employees, their use in connection with the Company's business of any information or techniques allegedly proprietary to any of their former employers, or the obligations of such employees under any agreements with prior employers. The Company is not a party or subject to the provisions of any order, writ, injunction, judgment or decree of any court or government agency or instrumentality. There is no action, suit, proceeding or investigation by the Company currently pending or which the Company presently intends to initiate.

2.9 Patents and Trademarks. The Company has good and exclusive

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ownership of, or an exclusive license or right of use with respect to, those patents, trademarks, service marks, trade names, copyrights, trade secrets, information, proprietary rights and processes that are necessary for its business as now conducted and as proposed to be conducted, and, to the best knowledge of the Company, after reasonable inquiry, the Company's current use or planned use of its patents and other proprietary rights do not and will not conflict with or infringement of the rights of others. Except as set forth in the Schedule of Exceptions hereto, there are no outstanding options, licenses or agreements of any kind relating to the foregoing, nor is the Company bound by or a party to any options, licenses or agreements of any kind with respect to the patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, information, proprietary rights and processes of any other person or entity which would be material to the business of the Company. The Company has not received any communications alleging that the Company has violated or, by conducting its business as proposed, would violate any of the patents, trademarks, service marks, trade names, copyrights or trade secrets or other proprietary rights of any other person or entity. The Company is not aware that any of its employees and consultants is obligated under any contract (including licenses, covenants or commitments of any nature) or other agreement, or subject to any judgment, decree or order of any court or administrative agency, that would interfere with the use of his or her best efforts to promote the interests of the Company or that would conflict with the Company's business as proposed to be conducted. Neither the execution nor delivery of this Agreement, nor the carrying on of the Company's business by the employees and consultants of the Company, nor the conduct of the Company's business as proposed, will, to the Company's knowledge, conflict with or result in a breach of the terms, conditions or provisions of, or constitute a default under, any contract, covenant or instrument under which any of such employees and consultants is now obligated, which conflict or default would have a Material Adverse Effect on the Company.

2.10 Compliance With Other Instruments. To the best knowledge of the

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Company, the Company is not in violation or default of any provisions of the Restated Articles or Bylaws or of any instrument, permit, judgment, order, writ, decree or contract to which it is a party or by which it is bound or of any provision of any federal or state statute, rule or regulation applicable to the Company, which violation or default would have a Material Adverse Effect on the Company. The execution, delivery and performance of this

Agreement and the consummation of the transactions contemplated hereby will not result in any such violation or be in conflict with or constitute, with or without the passage of time and giving of notice, either a default under any such provision, instrument, judgment, order, writ, decree or contract or an event which results in the revocation, impairment or forfeiture of a material permit or license, or the creation of any material lien, charge or encumbrance upon any of the assets of the Company.

2.11 Compliance With Law. To the best knowledge of the Company, the  
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Company has complied with all laws, rules, regulations and orders applicable to its business, operations, properties, assets, products and services, the violation of which would have a Material Adverse Effect upon the Company, and the Company has all necessary permits, licenses and other authorizations required to conduct its business as it is now conducted. There is no existing law, rule, regulation or order, and the Company after due inquiry is not aware of any proposed law, rule, regulation or order, whether federal or state, which would prohibit or restrict the Company from, or otherwise have a Material Adverse Effect on the Company in, conducting its business, other than the customary governmental approvals required for medical products. The current status with respect to the review and approval of the Company's products by the U.S. Food and Drug Administration is set forth on the Schedule of Exceptions. Without limiting the foregoing in any manner, the Company has complied in all material respects with all applicable laws relating to the employment of labor, including provisions relating to wages, hours, equal opportunity, collective bargaining and the payment of Social Security and other taxes, with ERISA, as defined below, with the Occupational Health and Safety Act and with the Americans With Disabilities Act. The Company is in full compliance with the Immigration Reform and Control Act of 1986, as amended, and, to the best of the Company's knowledge, all key employees who are not United States citizens are currently authorized under United States immigration laws to hold United States employment and will continue to have such employment authorization through the foreseeable future and are otherwise in compliance with United States immigration laws.

2.12 Agreements; Action.  
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(a) Except as set forth on the Schedule of Exceptions, there are no agreements, understandings, instruments or contracts to which the Company is a party or by which it is bound which involve (i) obligations of, or payments to, the Company in excess of One Hundred Thousand Dollars (\$100,000), other than obligations with respect to compensation under employment or consulting agreements previously disclosed to each Investor, (ii) the license of any patent, copyright, trade secret or other proprietary right of the Company, (iii) agreements relating to the development, manufacture or distribution of the Company's products, (iv) indemnification by the Company with respect to infringement of proprietary rights or (v) any other material agreement.

(b) The Company has not (i) declared or paid any dividends, or authorized or made any distribution upon or with respect to any class or series of its capital stock, (ii) incurred any indebtedness for money borrowed or incurred any other liabilities individually in excess of One Hundred Thousand Dollars (\$100,000) or in excess of One Hundred Fifty Thousand Dollars (\$150,000) in the aggregate, other than obligations with respect to compensation under employment or consulting agreements, (iii) made any loans or advances to any person, other than ordinary advances for travel expenses, or (iv) sold, exchanged or otherwise disposed of any of its assets or rights, other than the sale of its inventory in the ordinary course of business and other than sales, exchanges or dispositions which would result in a Material Adverse Effect on the Company.

(c) The Company is not a party to or bound by any contract, agreement or instrument, or subject to any restriction under the Restated Articles or Bylaws, which would have a Material Adverse Effect on its business as now conducted or as proposed to be conducted.

(d) The Company has not engaged and is not presently engaged in any discussion (i) with any representative of any corporation or corporations regarding the consolidation or merger of the Company with or into any such corporation or corporations, (ii) with any corporation, partnership, association or other business entity or any individual regarding the sale, conveyance or disposition of all or substantially all of the assets of the Company or a transaction or series of related transactions in which more than twenty-five percent (25%) of the voting power of the Company is disposed of or (iii) regarding any other form of liquidation, dissolution or winding up of the Company.

2.13 Corporate Documents. The Restated Articles and Bylaws of the  
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Company are in the form made available to the Investors.

2.14 Title to Property and Assets. The Company has good and  
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marketable title to its properties and assets reflected in the Financial Statements or acquired by it since the date of the Financial Statements (other than properties and assets disposed of in the ordinary course of business since the date of the Financial Statements), and all such properties and assets are free and clear of mortgages, pledges, security interests, liens, charges, claims, restrictions and other encumbrances, except for liens to secure payment of obligations reflected in the Financial Statements and for current taxes not yet due and payable and minor imperfections of title, if any, not material in nature or amount and not materially detracting from the value or impairing the use of the property subject thereto or impairing the operations or proposed operations of the Company.

2.15 Employee Benefit Plans. To the best knowledge of the Company,  
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each of the Company's employee benefit plans, as such term is defined in the Employee Retirement Income Securities Act of 1974, as amended ("ERISA"), complies in form and in operation in all respects with the applicable requirements of ERISA and the



Internal Revenue Code of 1986, as amended (the "Code"). All required reports and descriptions have been filed or distributed appropriately with respect to each such employee benefit plan and there have been no prohibited transactions with respect to any such plan. No fiduciary has any liability for breach of fiduciary duty or any other failure to act or comply in connection with the administration or investment of the assets of any employee benefit plan. No charge, complaint, action, suit, proceeding, hearing, investigation, claim or demand with respect to the administration or the investment of the assets of any employee benefit plan (other than routine claims for benefits) is pending or, to the Company's knowledge, threatened. The Company (and employees with responsibility for employee benefits matters) have no knowledge of any basis for any such charge, complaint, action, suit, hearing, investigation, claim or demand.

2.16 Leasehold Interests. Each lease or agreement to which the

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Company is a party under which it is a lessee of any property, real or personal, is a valid and subsisting agreement without any material default of the Company with respect to any term thereof and the Company has not been notified of any default and has no reason to believe that it is in default of any term thereunder. To the best of the Company's knowledge, no other party to any such lease or agreement is in default of a material term thereunder. No event has occurred and is continuing which, with due notice or lapse of time or both, would constitute a default or event of default by the Company under any such lease or agreement or, to the best of the Company's knowledge, by any other party thereto. The Company's possession of such property has not been disturbed and no claim has been asserted against the Company adverse to its rights in such leasehold interests.

2.17 Tax Returns and Payments. The Company has filed all federal,

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state and local tax returns and reports as required by law and has paid all taxes and other assessments due prior to the date that any penalty would accrue thereon, or adequate reserves for the payment thereof have been set forth in the Financial Statements. The provision for taxes of the Company are adequate for taxes due or accrued as of the date thereof. No deficiency assessment with respect to or proposed adjustment of the Company's federal, state, county or local taxes is pending or, to the best of the Company's knowledge, threatened. There is no tax lien, whether imposed by any federal, state, county or local taxing authority, outstanding against the assets, properties or business of the Company.

2.18 Insurance. The Company maintains as to its properties and

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business, with financially sound and reputable insurers, insurance against such casualties and contingencies and of such types and in such amounts as is customary for companies similarly situated.

2.19 Labor Agreements and Actions. The Company is not bound by or

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subject to (and none of its assets or properties is bound by or subject to) any written or oral, express or implied, contract, commitment or arrangement with any labor union, and no labor union has requested or, to the knowledge of the Company, has sought to represent any

of the employees of the Company. There is no strike or other labor dispute involving the Company pending, or to the knowledge of the Company threatened, which could have a Material Adverse Effect on the Company, nor is the Company aware of any labor organization activity involving its employees. The Company is not aware that any officer or key employee, or that any group of key employees, intends to terminate their employment with the Company, nor does the Company have a present intention to terminate the employment of any of the foregoing.

2.20 Changes. Since June 30, 1995, there has not been:

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(a) any change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the Financial Statements, except changes in the ordinary course of business, including but not limited to transactions with Rhone-Poulenc Rorer, Inc. and Immunex, which have not been, in the aggregate, materially adverse;

(b) any damage, destruction or loss, whether or not covered by insurance, materially and adversely affecting the assets, properties, financial condition, operating results, prospects or business of the Company (as such business is presently conducted and as it is proposed to be conducted);

(c) any waiver by the Company of a valuable right or of a material debt owed to it;

(d) any satisfaction or discharge of any lien, claim or encumbrance or payment of any obligation by the Company, except in the ordinary course of business and which is not material to the assets, properties, financial condition, operating results or business of the Company (as such business is presently conducted and as it is proposed to be conducted);

(e) any material change or amendment to a material contract or agreement by which the Company or any of its assets or properties is bound or subject;

(f) any material change in any compensation arrangement or agreement with any officer, director or employee; or

(g) to the Company's knowledge, any other event or condition of any character that could be reasonably expected to result in a Material Adverse Effect on the Company.

2.21 Related-Party Transactions. No employee, officer or director of

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the Company, or member of his or her immediate family is indebted to the Company, nor

is the Company indebted (or committed to make loans or extend or guarantee credit) to any of them. To the best of the Company's knowledge, none of such persons has any direct or indirect ownership interest in any firm or corporation with which the Company is affiliated or with which the Company has a business relationship, or any firm or corporation that competes with the Company, except that employees, officers or directors of the Company, and members of their immediate families may own stock in publicly traded companies that may compete with the Company. Except as set forth on the Schedule of Exceptions, no member of the immediate family of any officer or director of the Company is directly or indirectly interested in any material contract with the Company.

2.22 Small Business Matters.  
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(a) The Company, together with its "affiliates" (as that term is defined in Title 13, Code of Federal Regulations, (S)121.401), is a "small business concern" within the meaning of the Small Business Investment Act of 1958, as amended (the "SBIA") and the regulations thereunder, including Title 13, Code of Federal Regulations, (S)121.802. The information set forth in the Small Business Administration Forms 480, 652 and Part A of Form 1031 regarding the Company and its affiliates is accurate and complete. Copies of such forms shall have been completed and executed by the Company and delivered to any Investor requesting such forms (each, an "SBIC Investor").

(b) The proceeds from the sale of the Series E Preferred Stock will be used by the Company for general working capital purposes, for its growth modernization and expansion. No portion of the proceeds of any SBIC Investor (i) will be used to provide capital to a corporation licensed under the SBIA, (ii) will be used outside the United States (except (x) to acquire abroad materials and industrial property rights for a domestic operation or (y) for transfer to a controlled foreign Subsidiary, so long as at least fifty-one percent (51%) of the Company's assets and activities will remain within the United States), or (iii) will be used for any purpose contrary to the public interest (including without limitation, activities which are in violation of law) or inconsistent with free competitive enterprise, in each case, within the meaning of 13 C.F.R. (S)107.901.

(c) The Company's primary business activity does not involve, directly or indirectly, providing funds to others, the purchase or discounting of debt obligations, factoring or long-term leasing of equipment with no provision for maintenance or repair, and the Company is not classified under Major Group 65 (Real Estate) of the SIC Manual.

(d) If the Company breaches the representations in subsections (b) or (c) above in any material respect, then in addition to all other remedies available to the SBIC Investors, each SBIC Investor may demand that the Company immediately repurchase all securities acquired by the SBIC Investor at the purchase price therefor.

2.23 Hazardous Materials. To the best knowledge of the Company, the

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Company has never spilled or released any Hazardous Materials at any site owned or leased by it. To the best knowledge of the Company, all materials used by the Company have been and are handled, packaged, labeled, stored, used and disposed of in accordance with all applicable federal, state and local requirements. To the best knowledge of the Company, no third party has ever generated, used, handled, stored, treated, disposed of, spilled or released any Hazardous Materials at any site owned or leased by the Company, nor has there been or is there threatened any release of any Hazardous Materials on or at any such site. To the best knowledge of the Company, there are not underground storage tanks at any site owned or leased by the Company. For purpose of this Section 2.23, "Hazardous Materials" shall mean any element, substance, compound or mixture (including, without limitation, any pollutant, contaminant, chemical or industrial, toxic or hazardous substance or waste and any break-down product thereof), whether solid, liquid or gaseous, that (i) has been, is or shall be in the future subject to regulation of any kind (including, without limitation, regulation by statute, rule, regulation, ordinance, order, decree, notice, plan or demand letter) by any federal, state or local governmental authority with regard to protection of the environment or protection of environmental health and safety, or (ii) the presence, existence or threat of which shall at any time give rise, under any theory of law or equity, to any liability of any kind or nature whatsoever.

2.24 Disclosure. The Company has fully provided each Investor with

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all the material information which such Investor has requested for deciding whether to purchase the Series E Preferred Stock. Neither this Agreement nor any other statements or certificates made or delivered in connection herewith contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements herein or therein not, in light of the circumstances under which such statements are made, misleading.

3. Representations Warranties and Covenants of Each Investor. This

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Agreement is made with each Investor in reliance upon such Investor's representation and warranties to the Company, which by such Investor's execution of this Agreement such Investor hereby confirms, that:

3.1 Authorization. This Agreement constitutes its valid and legally

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binding obligation, enforceable against the Investor in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium and similar laws affecting creditors' rights and remedies generally.

3.2 Purchase Entirely for Own Account. The Series E Preferred Stock

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to be received by Investor and the Common Stock issuable upon conversion thereof (collectively, the "Securities") will be acquired only for investment for such Investor's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that such Investor has no present intention of selling, granting any participation in, or otherwise distributing the same. By executing this Agreement, each

Investor further represents that such Investor does not have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participations to such person or to any third person, with respect to any of the Securities. Each Investor represents that it has full power and authority to enter into this Agreement.

3.3 Disclosure of Information. Investor has received all the

information it considers necessary or appropriate for deciding whether to purchase shares of Series E Preferred Stock and has received all information it has requested from the Company. Such Investor further represents that it has had an opportunity to ask questions of management of the Company regarding the Company, its business and the terms and conditions of the offering of the Securities and that all such questions have been answered to the satisfaction of such Investor. In entering into this Agreement, the Investor has not relied on any written or oral representation or other information except as provided to the Investor by the Company and its agents. The foregoing, however, does not limit or modify the representations and warranties of the Company in Section 2 of this Agreement or the right of the Investors to rely thereon.

3.4 Investment Experience. The Investor is aware that an investment

in the Series E Preferred Stock involves very significant risks and that, in particular, the Company is in the development stage. Investor is an investor in securities of companies in the development stage and acknowledges that it is able to fend for itself, can bear the economic risk and complete loss of its investment in the Series E Preferred Stock and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment in shares of Series E Preferred Stock. Such Investor has not been organized solely for the purpose of acquiring the Securities.

3.5 Restricted Securities. Each Investor understands that the

Securities it is purchasing are characterized as "restricted securities" under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations such securities may be resold without registration under the Securities Act of 1933, as amended (the "Securities Act"), only in certain limited circumstances. In this connection each Investor represents that it is familiar with Securities and Exchange Commission ("SEC") Rule 144, as presently in effect, and understands the resale limitations imposed thereby and by the Securities Act.

3.6 Further Limitations on Disposition. Without in any way limiting

the representations set forth above, each Investor further agrees not to make any disposition of all or any portion of the Securities unless and until:

(a) There is then in effect a registration statement under the Securities Act covering such proposed disposition and such disposition is made in accordance with such registration statement; or

(b) (i) Such Investor shall have notified the Company of the proposed disposition and shall have furnished the Company with a detailed statement of the circumstances surrounding the proposed disposition and (ii) if reasonably requested by the Company, such Investor shall have furnished the Company with an opinion of counsel, reasonably satisfactory to the Company and its counsel, that such disposition will not require registration of such shares under the Securities Act, provided that the Company will not require the State of Michigan to deliver an opinion under Section 3.6.

(c) Notwithstanding the provisions of subsections (a) and (b) above, no such registration statement or opinion of counsel shall be necessary for a transfer by an Investor which is a partnership to a partner of such partnership or a retired partner of such partnership who retires after the date hereof, or to the estate of any such partner or retired partner or the transfer by gift, will or intestate succession of any partner to his spouse or to the siblings, lineal descendants or ancestors of such partner or his spouse, if the transferee agrees in writing to be subject to the terms hereof to the same extent as if he were an original Investor hereunder.

3.7 Legends. It is understood that the certificates evidencing the

-----  
Securities may bear the following legend:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. THESE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT, AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, MORTGAGED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, OR UNLESS AN EXEMPTION FROM REGISTRATION UNDER SUCH ACT IS AVAILABLE.

3.8 Accredited Investor. Each Investor is an accredited investor as

-----  
defined in Rule 501(a) of Regulation D, as amended, of the SEC under the Securities Act.

3.9 Removal of Legends; Further Covenants.

-----  
(a) Any legend endorsed on a certificate pursuant to Section 3.8 hereof shall be removed (i) if the Securities represented by such certificate shall have been effectively registered under the Securities Act or otherwise lawfully sold in a public transaction, (ii) if such Securities may be transferred in compliance with Rule 144(k)

promulgated under the Securities Act or (iii) if the holder of such Securities shall have provided the Company with an opinion of counsel, in form and substance acceptable to the Company and its counsel and from attorneys reasonably acceptable to the Company and its counsel, stating that a public sale, transfer or assignment of such Securities may be made without registration.

(b) Any legend endorsed upon a certificate pursuant to Section 3.8 hereof shall be removed if the Company receives an order of the appropriate state authority authorizing such removal or if the holder of such Securities provides the Company with an opinion of counsel, in form and substance acceptable to the Company and its counsel and from attorneys reasonably acceptable to the Company and its counsel, stating that such state legend may be removed.

4. California Commissioner of Corporations.  
-----

4.1 Corporate Securities Law. THE SALE OF THE SECURITIES WHICH ARE  
-----

THE SUBJECT OF THIS AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION THEREFOR PRIOR TO SUCH QUALIFICATION IS UNLAWFUL, UNLESS THE SALE OF SECURITIES IS EXEMPT FROM QUALIFICATION BY SECTIONS 25100, 25102 OR 25105 OF THE CALIFORNIA CORPORATIONS CODE. THE RIGHTS OF ALL PARTIES TO THIS AGREEMENT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED, UNLESS THE SALE IS SO EXEMPT.

5. Conditions of Each Investor's Obligations at Closing. The obligations  
-----

of each Investor under Section 1.2 of this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions, the waiver of which shall not be effective against any Investor who does not consent in writing thereto:

5.1 Representations and Warranties. The representations and  
-----

warranties of the Company contained in Section 2 shall be true on and as of the Closing with the same effect as though such representations and warranties had been made on and as of the date of such Closing.

5.2 Performance. The Company shall have performed and complied with  
-----

all agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by it on or before the Closing.

5.3 Qualifications. The offer and sale of the Series E Preferred  
-----

Stock and the underlying shares of Common Stock to the Investors shall be either registered

and qualified with the securities administration of all relevant states or pursuant to this Agreement, or such offer and sale shall be exempt from such registration qualification.

5.4 Proceedings and Documents. All corporate and other proceedings

-----  
in connection with the transactions contemplated at the Closing and all documents incident thereto shall be reasonably satisfactory in form and substance to each Investor and its counsel, and each Investor shall have received all such counterpart original, certified and other copies of such documents as such Investor may reasonably request.

5.5 Opinion of Company Counsel. Each Investor shall have received

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from Pepper, Hamilton & Scheetz, counsel for the Company, an opinion, dated as of the Closing, in form and substance satisfactory to the Investors.

5.6 Investor Rights Agreement. The Investors and the Company shall

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have entered into the Investor Rights Agreement.

6. Conditions of the Company's Obligations at Closing. The obligations

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of the Company to each Investor under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions by such Investor:

6.1 Representations and Warranties. The representations and

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warranties of the Investor contained in Section 3 hereof shall be true on and as of the Closing with the same effect as though such representations and warranties had been made on and as of the Closing.

7. Covenants. In connection with the transactions contemplated hereby, the

-----  
Company hereby covenants and agrees as follows:

7.1 Observer Rights. At any time after the date hereof, the

-----  
Investors shall have the right to have one (1) designated representative (the "Designated Representative") attend any and all meetings of the Company's Board of Directors, in a nonvoting capacity. The initial Designated Representative shall be Gregory J. Forrest, who may be replaced at any time and from time to time by Investors holding a majority of the Series E Preferred Stock, provided that each subsequent Designated Representative shall be reasonably acceptable to the Company. The Company will provide such Designated Representative with all usual and customary communications made to the Board and give such Designated Representative copies of all materials delivered to the Board and/or other non-voting observers outside of meetings. At the request of the Company, the Designated Representative shall enter into a confidentiality agreement with the Company in the form that has been previously delivered to the Company by other non-voting observers to the Board. The provisions of this Section 7.1 shall terminate automatically and be of no further force and effect upon the consummation by the Company of an initial public offering under the Securities Act.



7.2 Registration Rights. The Company hereby grants to each Investor

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all of the rights and benefits set forth in Sections 2.4 through 2.14, inclusive, of that certain Amended and Restated Investors' Rights Agreement dated as of April 7, 1992, as amended to date (the "Investors' Rights Agreement").

7.3 Financial Information, Etc. The Company hereby agrees to comply

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with those affirmative covenants set forth in Sections 3.1 through 3.7, inclusive, of the Investors' Rights Agreement and to afford each Investor with the rights and benefits set forth therein.

7.4 Information Rights and Related Covenants.

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(a) Within ninety (90) days after the date hereof, the Company shall provide to each Investor seeking such information a certificate of its chief financial officer (i) verifying the use of the proceeds of each SBIC Investor from the sale of Series E Preferred Stock and (ii) certifying compliance by the Company with the provisions of this Agreement. In addition to any other rights granted hereunder, the Company shall provide each such Investor and the U.S. Small Business Administration (the "SBA") access to its books and records for the purpose of verifying the use of the proceeds of such Investor's financing.

(b) The Company will at all times comply with the nondiscrimination requirements of 13 C.F.R., Parts 112, 113 and 117.

7.5 Right of First Offer. The Company hereby grants to each

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Investor all of the rights and benefits of Section 4.1 of the Investors' Rights Agreement.

7.6 Best Efforts on Sale of Stock. The Company agrees to use its

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best efforts to include a pro rata portion of the shares of Series E Preferred Stock held by the Investors in any sale of any of the capital stock of the Company by any other investor in the Company.

8. Miscellaneous.

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8.1 Successors and Assigns. The terms and conditions of this

-----

Agreement shall inure to the benefit of and be binding upon the respective permitted successors and assigns of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

8.2 Governing Law. This Agreement shall be governed by and

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construed under the laws of the State of Michigan.

8.3 Counterparts. This Agreement may be executed in two or more

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counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

8.4 Titles and Subtitles. The titles and subtitles used in this

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Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

8.5 Notices. Unless otherwise provided, any notice required or

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permitted under this Agreement shall be given in writing and shall be deemed effectively given upon personal delivery to the party to be notified or, if sent by telecopier, upon confirmation of transmission, or three (3) days after deposit with the United States Post Office, by registered or certified mail, or one (1) day after deposit with an overnight air courier, in each case postage prepaid and addressed to the party to be notified at the address indicated for such party on the signature page hereof, or at such other address as such party may designate by ten (10) days' advance written notice to the other parties.

8.6 Brokers and Finders. Each party represents that it neither is

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nor will be obligated for the payment of any broker or finder fee or commission in connection with this transaction. Each Investor agrees to indemnify and hold harmless the Company from any liability for any commission or compensation in the nature of a broker or finder fee (and the costs and expenses of defending against such liability or asserted liability) for which the Investor or any of its officers, partners, employees or representatives is responsible. The Company agrees to indemnify and hold harmless each Investor from any liability for any commission or compensation in the nature of a broker or finder fee (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its officers, employees or representatives is responsible.

8.7 Expenses. The Company shall pay the reasonable fees and

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expenses of Riordan & McKinzie acting as counsel to SBIC Partners, L.P.

8.8 Severability. If one or more provisions of this Agreement are

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held to be unenforceable under applicable law, such provision shall be excluded from this Agreement and the balance of this Agreement shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

8.9 Entire Agreement. This Agreement and the Investors Rights

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Agreement constitute the entire agreement among the parties hereto pertaining to the subject matter hereof and supersede all prior agreements, term sheets, letters, discussions and understandings of the parties in connection therewith.

8.10 Assurances. Each party to this Agreement shall execute all  
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instruments and documents and take all actions as may be reasonably required to  
effectuate this Agreement, whether before, concurrently with or after the  
consummation of the transactions contemplated hereby.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

COMPANY:

AASTROM BIOSCIENCES, INC.  
P.O. Box 376  
Ann Arbor, Michigan 48106  
Fax: (313) 930-5546

By: /s/ R. DOUGLAS ARMSTRONG, Ph.D.

-----  
R. Douglas Armstrong, Ph.D.  
President and Chief Executive Officer

INVESTORS:

SBIC PARTNERS, L.P.  
201 Main Street, Suite 2302  
Fort Worth, Texas 76102  
Fax: (817) 338-2047

By: Forrest Binkley & Brown L.P.,  
General Partner

By: Forrest Binkley & Brown Venture Co.,  
General Partner

By: /s/ JEFFREY J. BROWN

-----  
Jeffrey J. Brown  
Office of the President

By: SL-SBIC Partners, L.P.,  
General Partner

By: FW-SBIC, Inc.,  
General Partner

By: /s/ PETER STERLING

-----  
Name: Peter Sterling  
Title: Chairman

[Signatures continued on following page]

[Signatures continued from previous page]

STATE TREASURER OF THE STATE OF MICHIGAN,  
CUSTODIAN OF THE MICHIGAN PUBLIC SCHOOL  
EMPLOYEES' RETIREMENT SYSTEM, STATE  
EMPLOYEES' RETIREMENT SYSTEM, MICHIGAN STATE  
POLICE RETIREMENT SYSTEM, AND MICHIGAN JUDGES  
RETIREMENT SYSTEM  
c/o Alternative Investments Division  
430 West Allegan  
Treasury Building, 3rd Floor  
Lansing, Michigan 48933  
Fax: (517) 335-3668

By: /s/ PAUL E. RICE

-----  
Name: Paul E. Rice, Administrator  
Title: Alternative Investments Division

By:

-----  
Name: -----  
Title: -----  
-----

Schedule A  
SCHEDULE OF INVESTORS  
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Investor -----	Number of Shares -----	Aggregate Purchase Price -----
SBIC Partners, L.P.	941,177	\$4,000,002.25
State Treasurer of the State of Michigan	470,588	\$1,999,999
Totals:	----- 1,411,765	----- \$6,000,001.25

Schedule A-1

GOVERNANCE AGREEMENT

Between

AASTROM BIOSCIENCES, INC.

and

RHONE-POULENC RORER INC.

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## GOVERNANCE AGREEMENT

This Governance Agreement is entered into as of September 15, 1995 (the "Effective Date") by and between Aastrom Biosciences, Inc., a Michigan corporation ("ABI"), and Rhone Poulenc Rorer Inc., a Delaware corporation ("RPR"), with respect to the following facts:

A. RPR and ABI entered into the Letter of Intent, which included a term sheet concerning the development and sale of the CPS for Lymphoid Cell Applications. Pursuant to the Letter of Intent, RPR paid ABI \$250,000 for ABI to "standstill" with respect to negotiating transactions with third parties which would be inconsistent with ABI entering into the transactions with RPR as contemplated by the Letter of Intent, with an exception for discussions directed to the sale of substantially all of ABI's assets to, or a merger of ABI with, a third party.

B. The purpose of this Agreement is to implement, replace and supersede the Letter of Intent, effective as of the date of this Agreement.

C. The parties have negotiated, drafted and executed certain additional agreements as contemplated by the Letter of Intent and this Agreement, consisting of:

1. Supply Agreement;
2. License Agreement
3. Stock Purchase Agreement; and
4. Arbitration Agreement (pending).

D. This Agreement, the License Agreement and the Stock Purchase Agreement are effective as of the date hereof. Pursuant to the terms of this Agreement, prior to the end of the First Option Period, the parties will negotiate and execute the Arbitration Agreement, effective as of its execution date, and the Research and Development Collaboration Agreement. The Research and Development Collaboration Agreement together with the Supply Agreement, shall become effective only after RPR delivers the Third Option Event Notice.

E. Pursuant to the Letter of Intent, RPR has paid to ABI \$225,000 as an research and development deposit to enable ABI to initiate preliminary research and development for manufacturing the ten Manual CPS units which have been, or, prior to initiation of the First Option Period are to be, installed at AIS.

F. RPR has conducted due diligence investigation concerning ABI, the CPS, and potential issues concerning the future development of the CPS for Lymphoid Cell Applications.

G. The parties have negotiated and agreed upon a budget for ABI to conduct research and development for the CPS during the First Option Period, which budget is hereinafter referred to as the "First Option Period R&D Budget" and is attached hereto as Exhibit A.

WHEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, mutually agree as follows:

1. Definitions. As used in this Agreement, the following terms have the ----- meanings set forth below.

"ABI" means AASTROM Biosciences, Inc., a Michigan corporation.

"Activation Date" shall mean the date RPR delivers the Third Option Event Notice.

"Affiliate" means any company or other legal entity in which a party holds, directly or indirectly, at least forty percent (40%) or more of (i) the capital, (ii) the income interest in the company or other legal entity, (iii) the voting rights, or (iv) the right to elect or appoint directors.

"AIS" means Applied Immune Sciences, a Delaware corporation, which is an Affiliate of RPR.

"Arbitration Agreement" means the Agreement executed by ABI and RPR prior to the end of the First Option Period and governing the resolution of disputes involving the Implementing Agreements.

"Automated CPS" means the cell production system developed by ABI as a system for growing cells ex vivo for therapeutic purposes which, in its basic format consists of Disposables and Durables, together with modifications and improvements thereof.

"Automated CPS Package" means the deliverable items referenced in Section 2.1 hereof, consisting of three CPS incubators (beta level), one CPS processor (beta level), three machined, reusable-shell cell cassettes, one CPS monitor and 50 bioreactors and associated tubing sets.

"Cobe Distribution Agreement" has the meaning provided in the License Agreement.

"Confidentiality Agreement" means the Mutual Confidentiality Agreement dated January 13, 1995 between RPR, ABI, AIS and Rhone-Poulenc Rorer Pharmaceuticals Inc.

"Confidential Information" means all confidential information, trade secrets and other proprietary information which belongs to a party and which the party keeps confidential for the business advantage of the party. Without limiting the generality of the foregoing, a party's confidential information includes the following information and items which the party endeavors to keep confidential: technology, know-how, inventions, pending patent applications, data, formula, studies, devices, materials, investigations, reports, lists of actual or potential customers, clients and vendors, financial reports and projections, marketing reports and projections, software programs, manufacturing pre-production drawings, prototypes, business plans, business records, scientific evaluations, and so forth. Notwithstanding the foregoing, "Confidential Information" does not include information which:

(a) is publicly disclosed, except by breach of an agreement of confidentiality;

(b) the receiving party can establish by written proof was in its possession at the time of disclosure by the owning party and was not acquired directly or indirectly from the owning party or from any third party under an agreement of confidentiality to the owning party;

(c) the receiving party receives from a third party legally in a position to provide the receiving party with such information, provided that such information was not obtained by said third party directly or indirectly under an obligation of secrecy; or

(d) has been independently developed by the receiving party without the aid, application or use of the owning party's Confidential Information.

"CPS" means any system or device for substantially increasing, the number of cells, ex vivo, for human therapeutic uses, that may be configured in different component structures (such as described for the Automated CPS or the Manual CPS). For purposes of clarity, CPS does not include a system or device (i) which provides for cell manipulation, such as for gene transfer into cells through steps, that does not grow a substantially increased number of cells, such as the Aastron Gene Loader, or (ii) which stores cells, but which does not grow a substantially increased number of cells.

"Disposables" means the cell growth cassette configured to be received and operated by the Automated CPS incubator and/or Automated CPS processor, and

consisting of a medium supply container unit and a separate unit consisting of a cell growth chamber, a waste medium container, and a harvest container (or means for attachment of a harvest container); all such units appropriately connected as a fluid pathway and manufactured as a sterile product for the expansion of cells; each as more completely described in ABI's product specifications for the Automated CPS.

"Durables" means the major components of the Automated CPS (other than the Disposables), including (1) the Automated CPS incubator, an instrument configured to receive and operate the Disposables; (2) the Automated CPS processor, an instrument configured to receive and operate the Disposables for medium priming, cell distribution and/or cell harvesting; and (3) the Automated CPS monitor, an instrument configured to display information to the user regarding the operational status of one or more of the Automated CPS incubators; each as more completely described in ABI's product specifications for the Automated CPS.

"First Option Payment" means the sum of \$1,500,000 payable by RPR to ABI as specified in Section 2.2 hereof.

"First Option Period" has the meaning specified in Section 2.1 hereof.

"First Option Period Initiation Date" has the meaning specified in Section 2.1 hereof.

"First Option Period R&D Budget" means the budgeted funding to be provided by RPR to ABI, as specified in Section 2 hereof and Exhibit A attached hereto.

"Implementing Agreements" means this Agreement, the License Agreement, the Supply Agreement, the Research and Development Collaboration Agreement, the Stock Purchase Agreement and the Arbitration Agreement.

"IPO" means the first underwritten offering by ABI to the public of ABI's common stock registered under the Securities Act of 1933, as amended.

"Letter of Intent" means the letter from RPR to ABI dated June 9, 1995, and the related Term Sheet, concerning using the CPS for Lymphoid Cell Applications.

"License Agreement" means the agreement with that title between RPR and ABI, dated as of the date hereof.

"Lymphoid Cell" means lymphoid stem cell (e.g., a cell capable of generating cells solely of lymphoid lineage) and any cell derived therefrom, including but not limited to the subcortical thymocyte, cortical thymocyte, medullary thymocyte, lymphocyte, B-cell, plasma cell, immunoblast, lymphoplasmacytoid cell and the NK-cell.

"Lymphoid Cell Applications" means any production, expansion, selection or genetic manipulation, including genetic transformation, of Lymphoid Cells, provided that either the starting cell population is a lymphoid selected cell mixture or that the mature lymphoid cell production is not derived ex vivo from a pre-lymphoid cell-type (e.g., multipotent stem cell).

"Manual CPS" means the 750 cm<sup>2</sup> radial flow bioreactor, the tubing kit for medium conduit, a medium supply container, a waste container, and a cell harvest bag, as more completely described in ABI's product specifications for the Manual CPS.

"Research and Development Collaboration Agreement" has the meaning provided in Section 7 hereof.

"RPR" means Rhone-Poulenc Rorer Inc., a Delaware corporation.

"Second Option Payment" means the sum of \$2,000,000 payable by RPR to ABI as specified in Section 3.2 hereof.

"Second Option Period" has the meaning provided in Section 3.1 hereof.

"Second Option Period Initiation Date" has the meaning specified in Section 3.1 hereof.

"Second Option Period R&D Budget" has the meaning provided in Section 2.6 hereof.

"Stock Purchase Agreement" means the agreement with that title between RPR and ABI, dated as of the date hereof.

"Supply Agreement" means the agreement with that title between RPR and ABI, dated as of the date hereof, which will become effective if RPR exercises the Third Option Event Notice.

"Third Option Events" has the meaning provided in Section 3.6 hereof.

"Third Option Event Notice" means the notice to be delivered by RPR to ABI in accordance with Section 3.6 hereof, pursuant to which RPR notifies ABI of its election to proceed with the Third Option Events.

2. First Option Period.  
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2.1 Time Duration. The First Option Period shall commence on the date (the  
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"First Option Period Initiation Date") that is the later of (i) the date of this Agreement, and (ii) the delivery at AIS of 10 manually operated CPS devices (including all necessary Disposables) and shall extend until the latter of (i) the date that is six months

thereafter, and (ii) the date that is three business days after ABI installs at AIS the Automated CPS Package, unless RPR otherwise elects to initiate the Second Option Period prior to the above dates.

2.2 First Option Payment. Within ten (10) days after the First Option Period  
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Initiation Date, RPR shall pay to ABI, by wire transfer, the sum of \$1,500,000 (the "First Option Payment") ; provided, however, that RPR shall not be obligated to make such payment until the Cobe Distribution Agreement has been amended as contemplated by Section 2.4 of the License Agreement. The First Option Payment shall be applied to the purchase by RPR of ABI capital stock in accordance with the terms of the Stock Purchase Agreement.

2.3 First Option Period R&D Budget. RPR hereby agrees to pay to ABI certain  
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funds for ABI to complete the production of the Manual CPS, and to perform related research and development of, and to produce the Automated CPS Package, in accordance with the First Option Period R&D Budget attached hereto as Exhibit A. RPR shall make payments to ABI pursuant to said budget on a monthly basis, payable monthly in advance, in accordance with the schedule and criteria set forth in the First Option Period R&D Budget. Said monthly payments shall be made by wire transfer on or before the first day of each calendar month during the First Option Period. The first monthly installment shall be paid by RPR to ABI within ten days after the date of this Agreement; provided, however, that RPR shall not be obligated to make any payments until the Cobe Distribution Agreement has been amended as contemplated by Section 2.4 of the License Agreement. ABI hereby represents and warrants that it believes that the funds to be provided to ABI pursuant to the First Option Period R&D Budget will be adequate to accomplish the objectives set forth in such budget. ABI shall provide RPR with copies of third party invoices and other necessary explanatory documentation relating to the First Option Period R & D Budget on a monthly basis.

2.4 Standstill. During the First Option Period, ABI shall not discuss with a  
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third party any sale or license of any intellectual property or distribution, marketing, promotion or manufacturing rights owned or licensed to ABI relating to the use of any ABI device or technology for Lymphoid Cell Applications, except for discussions directly related to the sale of substantially all of the assets of ABI to, or a merger of ABI with, a third party.

2.5 Due Diligence Investigation by RPR. During this First Option Period, RPR  
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shall continue to conduct further due diligence investigation concerning ABI, the CPS, and the potential use of the CPS for Lymphoid Cell Applications. ABI shall cooperate with and assist RPR with this due diligence investigation.

2.6 Election to Proceed with the Second Option Period. At any time prior to  
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the expiration of the First Option Period, RPR may elect to initiate the Second Option Period, subject to and in accordance with the terms hereof, by delivering a written notice of said election to ABI (the "Second Option Notice"). RPR shall be entitled to

initiate the Second Option Period only so long as RPR is (i) not in default of its obligations to fund the First Option Period R&D Budget, and (ii) not otherwise in material default of its obligations pursuant to this Agreement.

2.7 RPR Election to Terminate. At any time during the First Option Period,  
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RPR may elect to terminate the transactions contemplated by this Agreement. Said election shall be made by RPR delivering a written notice thereof to ABI. Upon any such termination, (i) RPR shall have no obligation to provide further funds for the First Option Period R&D Budget, so long as RPR has already paid to ABI (a) the funds specified by that budget up through the date of the termination, and (b) funds necessary to reimburse ABI for expenses reasonably incurred by it pursuant to the First Option Period R&D Budget prior to the date of termination, (ii) the License, Supply and Governance Agreements shall terminate, (iii) the \$1,500,000 First Option Payment shall be credited as payment of the purchase price for the stock of ABI, pursuant to Section 2.2 of the Stock Purchase Agreement, (iv) the Stock Purchase, Arbitration and Confidentiality Agreements shall remain in full force and effect, (v) all technology and other intellectual property rights conceived and/or developed solely by ABI shall remain the sole property of ABI, with RPR having no rights therein, and (vi) ABI shall not be obligated to refund any monies which have been paid by RPR to ABI. ABI shall provide RPR with copies of third party invoices and other necessary explanatory documentation relating to the Second Option Period R & D Budget on a monthly basis.

3. Second Option Period.  
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3.1 Time Duration. The Second Option Period shall commence on the date (the  
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"Second Option Period Initiation Date") that is the later of (i) the date RPR delivers the Second Option Notice in accordance with the provisions of Section 2.6, and (ii) the date that is three business days after ABI installs at AIS the Automated CPS Package and shall extend for six months thereafter.

3.2 Second Option Payment. Within ten (10) days after Second Option Period  
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Initiation Date, RPR shall pay to ABI, by wire transfer, the sum of \$2,000,000 (the "Second Option Payment"). The Second Option Payment shall be applied to the purchase of ABI capital stock in accordance with the terms of the Stock Purchase Agreement.

3.3 Second Option Period R&D Budget. During the First Option Period, the  
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parties shall negotiate additional research and development work to be performed by ABI during the Second Option Period, and the payments to be made to ABI for such work. Such work and payments shall be set forth on the Second Option Period R&D Budget to be attached hereto as Exhibit B (the "Second Option Period R&D Budget"). RPR shall make payments to ABI pursuant to said budget on a monthly basis, payable monthly in advance, in accordance with the schedule and criteria set forth in the Second Option Period R&D Budget. Said monthly payments shall be made by wire transfer on or



before the first day of each calendar month during the Second Option Period. The first monthly installment shall be paid by RPR to ABI within ten days after the Second Option Period Initiation Date.

3.4 Standstill. During the Second Option Period, ABI shall not discuss with -----  
a third party any sale or license of any intellectual property or distribution, marketing, promotion or manufacturing rights owned or licensed to ABI relating to the use of any ABI device or technology for Lymphoid Cell Applications, except for discussions directly related to the sale of substantially all of the assets of ABI to, or a merger of ABI with, a third party.

3.5 Due Diligence Investigation by RPR. During the Second Option Period, RPR -----  
shall continue to conduct further due diligence investigation concerning ABI, the CPS, and the potential use of the CPS for Lymphoid Cell Applications. ABI shall cooperate with and assist RPR with this due diligence investigation.

3.6 Election to Proceed with the Third Option Events. At any time prior to -----  
the expiration of the Second Option Period, RPR may elect to proceed with the Third Option Events (defined below), subject to and in accordance with the terms hereof, by delivering to ABI a written notice of said election (the "Third Option Event Notice"). Upon delivery of the Third Option Event Notice, (i) the Supply Agreement and the Research and Development Collaboration Agreement shall each become effective, and (ii) RPR shall become obligated to acquire an additional \$9.0 million of ABI capital stock in accordance with the terms of the Stock Purchase Agreement (collectively, the "Third Option Events"). RPR shall be entitled to proceed with the Third Option Events only so long as RPR is not then in material default under its obligations pursuant to this Agreement. Upon delivery of the Second Option Notice, RPR shall have no obligation to provide further funds for the First Option Period R&D Budget, other than (i) funds payable pursuant to that budget up through the date RPR delivers the Second Option Notice, and (ii) funds necessary to reimburse ABI for expenses reasonably incurred by it pursuant to the First Option Period R&D Budget prior to the date RPR delivers the Third Option Notice.

3.7 RPR Election to Terminate. At any time during the Second Option Period, -----  
RPR may elect to terminate the transactions contemplated by this Agreement. Said election shall be made (a) by RPR's delivering written notice thereof to ABI, or (b) by RPR's failing to deliver, prior to the expiration of the Second Option Period, the Third Option Event Notice. Upon any such termination, (i) RPR shall have no obligation to provide further funds for the Second Option Period R&D Budget, so long as RPR has already paid to ABI (a) the funds specified by that budget up through the date of the termination, and (b) funds necessary to reimburse ABI for expenses reasonably incurred by it pursuant to the Second Option Period R&D Budget prior to the date of termination, (ii) the License, Supply and Governance Agreements shall terminate, (iii) the First Option Payment and the Second Option Payment shall be credited as payment of the purchase price for the stock of ABI, pursuant to Section 2.2 of the Stock

Purchase Agreement, (iv) the Stock Purchase, Arbitration and Confidentiality Agreements shall remain in full force and effect, (v) all technology and other intellectual property rights conceived and/or developed solely by ABI shall remain the sole property of ABI, with RPR having no rights therein, and (vi) ABI shall not refund any monies which have been paid by RPR to ABI.

4. Execution of Stock Purchase Agreement; Purchase of Additional ABI Capital  
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Stock.  
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4.1 On the date hereof, ABI and RPR shall execute the Stock Purchase Agreement.

4.2 If RPR elects to proceed with the Third Option Events, RPR may become obligated to purchase an additional \$5.0 million of ABI capital stock upon the occurrence of the IPO, all in accordance with the terms of Section 8 of the Stock Purchase Agreement.

5. Execution of License Agreement; Grant of License to RPR.  
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On the date hereof, ABI and RPR shall execute the License Agreement, pursuant to which ABI shall grant RPR a worldwide, exclusive license under certain ABI intellectual property rights to the CPS for Lymphoid Cell Applications, all in accordance with the terms and conditions of the License Agreement.

6. Execution of Supply Agreement. On the date hereof, ABI and RPR shall  
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execute the Supply Agreement, which shall become effective only upon delivery by RPR of the Third Option Event Notice.

7. Negotiation and Execution of Research and Development Collaboration  
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Agreement. During the First Option Period, the parties shall negotiate an  
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agreement which specifies the terms and conditions under which ABI shall conduct on behalf of RPR research and development with respect to the use of the CPS for Lymphoid Cell Applications (the "Research and Development Collaboration Agreement"). The Research and Development Collaboration Agreement shall include the terms set forth on Exhibit C hereto and such other commercially reasonable terms as the parties shall agree upon. The Research and Development Collaboration Agreement shall become effective only upon delivery by RPR of the Third Option Event Notice.

8. Termination of Letter of Intent. Effective upon the execution by both  
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parties of this Agreement and each of the Other Implementing Agreements (except for the Research and Development Collaboration Agreement), the Letter of Intent is terminated and shall be of no further force and effect.

9. Public Announcement.

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Any news release or other public announcement relating to this Agreement or any of the other Implementing Agreements, including any of the terms of any such agreement, or to the performance hereunder or thereunder, must be approved by both parties, which approval shall not be unreasonably withheld. Once the text or substance of an announcement has been so approved, it may be repeated without further approval. Any disclosure which is required by law may be made without the prior consent of the other party, although the other party shall be given prompt notice of any such legally required disclosure and an opportunity to comment on the proposed disclosure reasonably in advance to the extent feasible. Further, the disclosing party shall make diligent efforts to limit the nature and scope of any disclosure to the extent reasonably possible and to otherwise prevent the disclosure of the non-disclosing party's Confidential Information.

10. ABI Merger Contingency.

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If RPR delivers the Third Option Event Notice, and if ABI enters into a written agreement with a third party before ninety (90) days after the Activation Date evidencing ABI's intent to merge with or be acquired by the third party (except COBE BCT, Cobe Laboratories or Gambro, and except a merger or acquisition pursuant to which (i) the shareholders of ABI retain a majority ownership interest in the surviving entity, (ii) no other shareholder (other than ABI's current shareholders) will, upon consummation, own and/or have the right to acquire more than 20% of the voting securities of the surviving entity, and (iii) the senior management of ABI shall, upon consummation of the merger or acquisition, remain employed by the surviving entity in substantially similar capacities as the capacities in which such persons are employed prior to the merger or acquisition), then ABI shall give written notice thereof to RPR; and RPR shall have a right for a period of up to ninety (90) days following RPR's receipt of said notice to elect to rescind all of the Implementing Agreements, by delivering to ABI a written notice of rescission within said ninety (90) days. Within ninety (90) days following ABI's receipt of said notice of rescission, ABI shall refund to RPR all monies paid by RPR to ABI pursuant to the Letter of Intent and the Implementing Agreements (including without limitation all funds paid pursuant to the First Option Period Budget and the Second Option Period Budget), together with interest thereon accruing from the date ABI received the monies until the monies are refunded to RPR, using as the interest rate the average of the prime rate reported by the Bank of New York during the period from June 20, 1995 through the date of the payment. Upon receipt of such funds, RPR shall deliver to ABI for cancellation all certificates representing shares of ABI capital stock acquired by RPR pursuant to the Stock Purchase Agreement. ABI shall keep RPR fully informed as to the terms, status and progress of the proposed merger or sale transaction with the third party, excluding only such Confidential Information which the merger or sale party requires to be kept secret.

11. Representations.

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11.1 Mutual Representations. ABI and RPR each represent to the other party

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that (i) it has the authority and right to enter into and perform this Agreement and the other Implementing Agreements, and (ii) its execution, delivery and performance of this Agreement and the other Implementing Agreements will not conflict in any material manner with the terms of any other agreement to which it is or becomes a party.

11.2 Representations from Implementing Agreements. ABI and RPR each hereby

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incorporate by reference in this Agreement the representations and warranties made by such party in the other Implementing Agreements.

12. Arbitration. Except as set forth in subparagraph 12.1 below, any

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controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled by binding arbitration in accordance with the Arbitration Agreement. If the parties cannot timely execute the Arbitration Agreement, the dispute shall be resolved in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("AAA").

12.1 Equitable Court Remedies. Each party recognizes and acknowledges that a

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breach by the other of any of its covenants, agreements or undertakings hereunder relating to confidentiality and non-use of confidential information and ownership and use of intellectual property will cause irreparable damage which cannot be readily remedied in damages and in an action at law, and may, in addition thereto, constitute an infringement of a party's proprietary rights, thereby entitling such party to equitable remedies and costs. Accordingly, notwithstanding the provisions of this Section 12, each party reserves the right (and the other party agrees not to contest such right) to seek injunctive relief and other equitable remedies in a court of competent jurisdiction, instead of arbitration, with respect to the enforcement by each party of such rights.

13. Confidentiality. ABI and RPR hereby confirm the validity of, and warrant

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their continued compliance with, the Confidentiality Agreement, which shall continue in effect.

13.1 Additionally, each of the parties hereby agrees that during the period begin on the date hereof, and ending on the date that is five years after the last to expire or terminate of the Implementing Agreements, it will (i) maintain in confidence all Confidential Information of the other party (including without limitation all Confidential Information received or obtained as a result of either party's performance under any of the Implementing Agreements), (ii) not disclose the other party's Confidential Information without the prior written consent of such party, and (iii) will not use the other party's Confidential Information for any purpose except those permitted by the Implementing Agreements.

13.2 A party shall have the right to disclose the other party's Confidential Information to those of its directors, officers, employees and consultants to whom disclosure is necessary to enable such party's performance under the Implementing Agreements, provided that such persons have undertaken confidentiality obligations at least as strict as those undertaken in this Agreement.

13.3 In fulfilling its obligations under this Section 13, a party shall use the same level of efforts to protect from disclosure the other party's Confidential Information as it uses to protect its own most sensitive Confidential Information, which efforts shall in any event be less than reasonable efforts.

14. General Provisions.  
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14.1 Independent Contractors. The relationship between ABI and RPR is that of independent contractors. ABI and RPR are not joint venturers, partners, principal and agent, master and servant, or employer or employee, and they have no other relationship other than independent contracting parties. Neither party shall have any power to bind or obligate the other in any manner, other than as is expressly set forth in this Agreement.

14.2 Consents Not Unreasonably Withheld. Whenever provision is made in this Agreement for either party to secure the consent or approval of the other, that consent or approval shall not be withheld unreasonably. Whenever in this Agreement provisions are made for one party to object to or disapprove a matter, except as expressly provided otherwise herein (i.e., a decision to be made in the sole discretion of the party), such objection or disapproval shall not be exercised unreasonably or delayed.

14.3 Assignment. Neither this Agreement nor any rights granted hereunder may be assigned or transferred by either party, except with the prior written consent of the other party, which consent shall not be withheld unreasonably, and except in the event of an assignment by a party of all other Implementing Agreements in accordance with the terms thereof.

14.4 Binding Upon Successors and Assigns. Subject to the limitations on assignment herein, this Agreement shall be binding upon and inure to the benefit of any successors in interest and permitted assigns of the parties. Any such successor or assignee of a party's interest shall expressly assume in writing the performance of all the terms and conditions of this Agreement to be performed by such party.

14.5 Entire Agreement; Modification. This Agreement, including the Exhibits, and the other Implementing Agreements and the Confidentiality Agreement, set forth the entire agreements and understandings between the parties as to the subject matters set forth herein and therein. There shall be no amendments or modifications to this

Agreement or the Exhibits, except by a written document which is signed by both parties. The parties acknowledge that they are also approving the other Implementing Agreements at this time.

14.6 Applicable Law. This Agreement shall be construed and enforced in accordance with the internal laws of the Commonwealth of Pennsylvania.

14.7 Headings. The headings for each article and section in this Agreement have been inserted for convenience of reference only and are not intended to limit or expand on the meaning of the language contained in the particular article or section.

14.8 Severability. If any one or more of the provisions of this Agreement is held to be invalid or unenforceable by the arbitration proceedings specified in Section 12 from which no appeal can be or is taken, the provision shall be considered severed from this Agreement and shall not serve to invalidate the remaining provisions thereof. The parties shall make a good faith effort to replace the invalid or unenforceable provision with a valid one which in its economic effect is most consistent with the invalid or unenforceable provision.

14.9 No Waiver. Any delay in enforcing a party's rights under this Agreement or any waiver as to a particular default or other matter shall not constitute a waiver of such party's rights to the future enforcement of its rights under this Agreement, excepting only as to an express written and signed waiver as to a particular matter for a particular period of time.

14.10 Export Controls. This Agreement is made subject to any restrictions concerning the export of products or technical information from the United States of America which may be imposed upon or related to ABI or RPR from time to time by the government of the United States of America. Furthermore, ABI and RPR each agree that it will not export, directly or indirectly, any technical information acquired from the other under this Agreement or any products using such technical information to any country for which the United States government or any agency thereof at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from the Department of Commerce or other agency of the United States government when required by an applicable statute or regulation.

14.11 No Implied Licenses. No licenses by one party to the other are granted under this Governance Agreement, including the Exhibits, by implication or estoppel.

14.12 Notices. Any notices required by this Agreement shall be in writing, shall specifically refer to this Agreement and shall be sent by certified U.S. mail, or by express delivery service such as Federal Express or DHL, or by personal delivery, or by telefacsimile transmission, and shall be sent or delivered to the respective

addresses and telefacsimile numbers set forth below unless subsequently changed by written notice to the other party:

For ABI:                   AASTROM Biosciences, Inc.  
P.O. Box 376  
Ann Arbor, MI 48106  
Attention: President  
Fax: (313) 665-0485

With copy to:            T. Knox Bell  
Gray Cary Ware & Freidenrich  
401 B Street, Suite 1700  
San Diego, CA 92101  
Fax: (619) 236-1048

For RPR:                   RPR GENCELL  
Cell and Gene Therapy Division  
Rhone-Poulenc Rorer Inc.  
500 Arcola Road  
P.O. Box 1200  
Collegetown, PA 19426-0107  
Attention: President and General Counsel  
Fax: (610) 454-8984 and 454-3808

Notices shall be deemed delivered upon receipt at the respective party's address or telefacsimile number as set forth above.

14.13 Compliance with Laws. Each party shall perform its obligations and

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conduct its affairs with respect to this Agreement in compliance with all applicable laws and governmental regulations. If any permit, authorization, registration, license or other governmental approval is required in connection with the performance of this Agreement, the same shall be obtained by the party or parties as required.

14.14 Counterparts. This Agreement may be executed in counterparts, including

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by facsimile, each of which shall be deemed to be an original, but all of which shall together constitute one and the same Agreement.

IN WITNESS WHEREOF, the parties have executed and delivered this Agreement as of the date first set forth above.

AASTROM BIOSCIENCES, INC.

By: /s/ R. Douglas Armstrong

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Name: R. Douglas Armstrong, Ph.D.  
Title: President and CEO

RHONE-POULENC RORER INC.

By: /s/ Thierry Soursac

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Name: Thierry Soursac  
Title: Senior Vice President,  
Rhone-Poulenc Rorer, Inc.  
General Manager, RPR Gencell



[LETTERHEAD OF AASTROM BIOSCIENCES INC.]

EXHIBIT A

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\*CONFIDENTIAL PORTION REDACTED AND FILED  
SEPARATELY WITH THE COMMISSION

EXHIBIT B

Second Option Period R&D Budget

\*

\*CONFIDENTIAL PORTION REDACTED AND FILED  
SEPARATELY WITH THE COMMISSION

EXHIBIT C

PROVISIONS TO BE INCLUDED AS PART OF RESEARCH AND  
DEVELOPMENT COLLABORATION AGREEMENT

1. RPR will fund all research and development to be conducted pursuant to the Research and Development Collaboration Agreement. The scope of such research and development will be determined by RPR after consultation with ABI.
2. All inventions, discoveries and improvements developed, conceived or reduced to practice during the course of or as a result of the work to be performed pursuant to the Research and Development Collaboration Agreement ("R & D Inventions") would, to the extent such R & D Inventions were invented by ABI (such R & D Inventions being referred to herein as ABI Invented R & D Inventions), be included within the definition of ABI Technology and be part of the License. R & D Inventions which are embodied in modifications to or improved operation of the Aastrom CPS shall be the exclusive property of ABI, or be exclusively licensed to ABI, on a royalty free basis, solely for use outside the field of Lymphoid Cell Applications.
3. All R & D Inventions shall be the exclusive property of RPR, or be exclusively licensed to RPR for use in the Field, for a negotiated royalty and/or cost of goods pricing in a supply agreement, with the rights to manufacture licensed products to be apportioned among the parties in the most business sensible manner.
4. The filing, prosecution and maintenance of patent applications, as well as the prosecution of infringement proceedings, relating to R & D Inventions would be as set forth in this License Agreement.
5. It is expected that the Research and Development Collaboration Agreement will have a term of two (2) years.
6. If RPR terminates the Supply Agreement, ABI shall have non-exclusive rights, on a royalty free basis, to all R & D Inventions in which RPR has any ownership interest, to use for all purposes related directly to the CPS, including use of the CPS in the Field.

LICENSE AGREEMENT

Between

AASTROM BIOSCIENCES, INC.

and

RHONE-POULENC RORER INC.

LICENSE AGREEMENT

This Agreement is entered into as of September 15, 1995 (the "Effective Date") by and between AASTROM Biosciences, Inc., a Michigan corporation ("ABI"), and Rhone-Poulenc Rorer Inc., a Delaware corporation ("RPR").

RECITALS

A. This Agreement sets forth the license to be granted by ABI to RPR pursuant to the Governance Agreement, together with the rights and obligations of the parties with respect to said license.

B. ABI is the owner of the ABI Owned Patent Rights.

C. ABI is the exclusive licensee of the ABI In-Licensed Patent Rights.

D. ABI is the owner, licensee or assignee of the ABI Know-How.

E. Simultaneously with the parties entering into this Agreement, the parties are also executing the other Implementing Agreements (other than the Research and Development Collaboration Agreement and the Arbitration Agreement).

IN WITNESS WHEREOF, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, hereby mutually agree as follows

1. Definitions. As used in this Agreement, the following terms have the ----- meanings set forth below.

"Arbitration Agreement" means the agreement to be executed by ABI and RPR prior to the end of the First Option Period and governing the procedures utilized to resolve disputes involving the Implementing Agreements.

"Aastrom Gene Loader" means the products of ABI whose principle purpose or characteristic is the directed-motion or deposition delivery of vectors to target cells, including devices configured to implement these processes, which products are partially described in the patent applications listed on Exhibit A-1.

"ABI" means AASTROM Biosciences, Inc., a Michigan corporation.

"ABI Confidential Know-How" means the ABI Know-How which also is Confidential Information.

"ABI In-Licensed Patent Rights" means the Patent Rights described in Exhibit

B attached hereto, and any Patent Rights which ABI hereafter licenses from a third party which RPR and ABI agree are useful for the development, manufacture or use of the CPS (but only to the extent such Patent Rights are not already licensed to a third party for use in the Field).

"ABI Know-How" means any Know-How which ABI owns or has licensed from a third party as of the date hereof and which is useful for the development, manufacture or use of the CPS, and any other Know-How which ABI hereafter acquires or licenses from a third party which is useful for the development, manufacture, or use of the CPS (but only to the extent that such Know-How is not already licensed to a third party for use in the Field).

"ABI Owned Patent Rights" means the Patent Rights described in Exhibit A attached hereto, and any other Patent Rights which ABI hereafter acquires or develops which RPR and ABI agree are useful for the development, manufacture or use of the CPS (but only to the extent that such Patent Rights are not already licensed to a third party for use in the Field).

"ABI Patent Rights" means the ABI Owned Patent Rights and the ABI In-Licensed Patent Rights.

"ABI Technology" means the ABI Owned Patent Rights, the ABI In-Licensed Patent Rights and the ABI Know-How.

"Addressed Application" means (i) a Grandfathered Competing Product Application, until the expiration of the time period calculated pursuant to Section 4.1.1 hereof, or (ii) an Application within the Field to which RPR or its Affiliates (A) are currently using or selling Licensed Product, or (B) have an ongoing program with respect to the development of Licensed Product or a Potential Licensed Product for use in such Application.

"Affiliate" shall mean any company or other legal entity in which a party holds, directly or indirectly, at least forty percent (40%) or more of (i) the capital, (ii) the income interest in the company or other legal entity, (iii) the voting rights or (iv) the right to elect or appoint directors.

"AIS" means Applied Immune Sciences, Inc., a Delaware corporation and an Affiliate of RPR.

"Application" means (a) the expansion of any Lymphoid Cell for one or more therapeutic uses, or (b) the transfection of a specific Lymphoid Cell type modified with a naturally occurring gene or a synthetic modification thereof for a specific therapeutic use. By way of example, one Application is tumor infiltrating lymphocytes (TIL), such that TIL therapy for renal cell carcinoma and TIL therapy for breast cancer are part of the same Application. Similarly, CD8 cells transfected with

IL-2 and T-cells transfected with p53 constitute different Applications, regardless of therapeutic use.

"Automated CPS" means the automated CPS developed by ABI as a system for growing cells ex vivo for human therapeutic purposes, which in its basic format consists of Disposables and Durables, together with modifications and improvements thereof.

"Blocking Patent Rights" means with respect to an Unaddressed Application, exclusive patent rights which are held by a third party and which RPR and ABI shall mutually agree prevent RPR from freely using the Licensed Product for the Unaddressed Application without obtaining a license from such third party with respect to such exclusive patent rights.

"Cobe" means Cobe Laboratories, Inc., a Colorado corporation.

"Cobe Distribution Agreement" means the Distribution Agreement, dated October 22, 1993, between ABI and COBE, as amended to the date hereof.

"Competing Product" means any cell expansion device or process (other than Licensed Product) which is used to grow a substantially increased number of cells ex vivo to treat a single individual for a particular therapeutic use within the Field. Competing Products shall be determined on a country by country basis, and on a therapy by therapy basis, and a device shall not be deemed to be a Competing Product in a particular country unless and until the Licensed Product shall have received the necessary Government Approvals in that country for the relevant therapeutic use.

"Commercialization Plan" has the meaning provided in Section 4.2.1 hereof.

"Confidential Information" means all confidential information, trade secrets and other proprietary information which belongs to a party and which the party keeps confidential for the business advantage of the party. Without limiting the generality of the foregoing, a party's confidential information includes the following information and items which the party endeavors to keep confidential: technology, know-how, inventions, pending patent applications, data, formula, studies, devices, materials, investigations, reports, lists of actual or potential customers, clients and vendors, financial reports and projections, marketing reports and projections, software programs, manufacturing pre-production drawings, prototypes, business plans, business records, scientific evaluations, and so forth. Notwithstanding the foregoing, "Confidential Information" does not include information which:

(a) is publicly disclosed, except by breach of an agreement of confidentiality ;

(b) the receiving party can establish by written proof was in its

possession at the time of disclosure by the owning party and was not acquired directly or indirectly from the owning party or from any third party under an agreement of confidentiality to the owning party;

(c) the receiving party receives from a third party legally in a position to provide the receiving party with such information, provided that such information was not obtained by said third party directly or indirectly under an obligation of secrecy; or

(d) has been independently developed by the receiving party without the aid, application or use of the owning party's Confidential Information.

"Confidentiality Agreement" means the Mutual Confidentiality Agreement, dated as of January 13, 1995, by and between RPR, ABI, AIS and Rhone-Poulenc Rorer Pharmaceuticals, Inc.

"CPS" means any system or device for substantially increasing the number of cells, ex vivo, for human therapeutic uses, that may be configured in different component structures (such as described for the Automated CPS or the Manual CPS). For purposes of clarity, CPS does not include a system or device (i) which provides for cell manipulation, such as for gene transfer into cells through steps, that does not grow a substantially increased number of cells, such as the Aastrom Gene Loader, or (ii) which stores cells, but does not grow a substantially increased number of cells.

"Defaulting Party" has the meaning provided in Section 18.2.1 hereof.

"Disposables" means the cell growth cassette configured to be received and operated by the Automated CPS incubator and/or Automated CPS processor, and consisting of a medium supply container unit, and a separate unit consisting of a cell growth chamber, a waste medium container, and a harvest container (or means for attachment of a harvest container); all such units appropriately connected as a fluid pathway and manufactured as a sterile product for the expansion of human cells; each as more completely described in ABI's product specifications for the Automated CPS.

"Durables" means the major components of the CPS (other than the Disposables), including (i) the Automated CPS incubator, an instrument configured to receive and operate the Disposables; (ii) the Automated CPS processor, an instrument configured to receive and operate the Disposables for medium priming, cell distribution and/or cell harvesting; and (iii) the Automated CPS monitor, an instrument configured to display information to the user regarding the operational status of one or more of the Automated CPS incubators; each as more completely described in ABI's product specifications for the Automated CPS.



"Exercise Period" has the meaning provided in Section 6.2 hereof.

"Field" means Lymphoid Cell Applications.

"First Option Period" has the meaning provided in the Governance Agreement.

"Funding Commitment" means a commitment by a third party to provide all reasonably anticipated funding for the development and commercialization of the Automated CPS for a specific therapeutic indication, wherein the ability of the third party to provide such funding is, at the time the commitment is made, reasonably certain. By way of illustration, an Unaddressed Application Proposal made by a start-up or development stage company which is supported by a proposal to raise the necessary funds through the sale of equity or issuance of debt would not be deemed to include a Funding Commitment. For the avoidance of doubt, a Funding Commitment need not consist of a guarantee by the third party to provide the required funding under any circumstances, but rather an agreement by the third party that it will provide such funding only to the extent it retains any rights related to the Automated CPS for the specific therapeutic indication.

"Governance Agreement" means the Governance Agreement of even date herewith between ABI and RPR.

"Government Approval" means any approvals, licenses, registrations or authorizations, howsoever called, of any federal, state or local regulatory agency, department, bureau or other government entity, anywhere in the world, necessary for the use of Licensed Product in a cell therapy.

"Grandfathered Competing Product Applications" means the "bag method" Competing Product as used in the Major Pharmaceutical Markets for either of the following applications: (a) TIL treatment of renal cell carcinoma; and (b) peripheral PBMC treatment of HIV infected patients, and (c) any other applications in the areas of TIL therapy, or PBMC therapy for HIV related disease, for which a clinical trial has been initiated by RPR or its Affiliates prior to the earlier of the validation and availability of the Automated CPS or September 14, 1997.

"Implementing Agreements" means the Governance Agreement, the Supply Agreement, the Research and Development Collaboration Agreement, the Stock Purchase Agreement, the Arbitration Agreement and this Agreement.

"Know-How" means all technical data, whether or not tangible, processes, formula, materials and information, techniques, discoveries, inventions, ideas, methods and processes, whether or not patentable, but for which patent applications have not been filed and published, including without limitation, any and all data, preclinical and clinical results, drawings, plans, diagrams, specifications, and other

proprietary information.

"License" means the exclusive license granted to RPR pursuant to the terms of Section 2.1 hereof.

"Licensed Product" means the Automated CPS (both the Durables and the Disposables) as used for one or more specific Lymphoid Cell Applications, for which product ABI and RPR have approved the specifications for the CPS and the financial terms for ABI to manufacture and sell the CPS to RPR pursuant to the Supply Agreement, plus such other CPS products for use in the Field for which ABI and RPR mutually approve the specifications and financial terms pursuant to the Supply Agreement.

"Lymphoid Cell" means lymphoid stem cell (e.g., any cell capable of generating cells solely of lymphoid lineage) and any cell derived therefrom, including but not limited to, the subcortical thymocyte, cortical thymocyte, medullary thymocyte, lymphocyte, B-cell, plasma cell, immunoblast, lymphoplasmacytoid cell and the NK-cell.

"Lymphoid Cell Applications" means any production, expansion, selection or genetic manipulation, including genetic transformation, of Lymphoid Cells, provided that either the starting cell population is a lymphoid selected cell mixture, or that the mature lymphoid cell production is not derived ex vivo from a pre-lymphoid cell-type (e.g., multipotent stem cell).

"Major Pharmaceutical Market" means (i) the United States and Canada, (ii) the aggregate of Germany, France, Spain, Italy and the United Kingdom, and (iii) Japan (collectively, the "Initial Major Pharmaceutical Markets"), and any additional country which hereafter shall come to constitute three percent 3% or more of the worldwide market for pharmaceuticals, measured on the basis of dollars spent for the consumption of pharmaceuticals.

"Non-Defaulting Party" has the meaning provided in Section 16.2 hereof.

"Patent Rights" means all letters patent and pending applications for patents of the United States and all countries foreign thereto, including regional patents, and all reissues, divisions, continuations, continuations-in-part, extensions (including, without limitation, any extensions thereof under the United States Patent Term Restoration Act or otherwise), substitutions, renewals, confirmations, supplementary protection certificates, registrations, revalidations or additions of any of the foregoing, as applicable.

"Potential Licensed Product" means a CPS product for use in the Field for which product ABI and RPR have not yet mutually approved the specifications and financial terms pursuant to the Supply Agreement. By way of explanation, a

Potential Licensed Product may be a concept-stage CPS which has not yet been the topic of discussion between ABI and RPR.

"Proposed Other Agreements" has the meaning provided in Section 6.2 hereof.

"Regulatory Approval Plan" has the meaning provided in Section 7.1.1 hereof.

"Research and Development Collaboration Agreement" means the agreement with that title to be negotiated by RPR and ABI during the First Option Period, which will become effective if RPR exercises its option to proceed with the Third Option Events in accordance with the provisions of the Governance Agreement.

"RPR" means Rhone-Poulenc Rorer Inc., a Delaware corporation.

"RPR Business" has the meaning provided in Section 2.5 hereof.

"RPR Improvements" means any ideas, discoveries or improvements relating to the ABI Technology conceived, made or reduced to practice by ABI and/or RPR arising out of or during the course of any work performed pursuant to the Governance Agreement or the Research and Development Collaboration Agreement.

"SEC" means the United States Securities and Exchange Commission.

"Second Option Payment" means the sum of \$2,000,000 payable by RPR to ABI, as specified in Section 3.2 of the Governance Agreement.

"Second Option Period" has the meaning provided in Section 3.1 of the Governance Agreement.

"Supply Agreement" means the agreement with that title between RPR and ABI, dated as of the date hereof, which will become effective if RPR exercises its option to proceed with the Third Option Events in accordance with the provisions of the Governance Agreement.

"Third Option Event Notice" has the meaning provided in Section 3.6 of the Governance Agreement.

"Third Party Improvements" means any ideas, discoveries or improvements relating to the ABI Technology conceived, made or reduced to practice by ABI and/or a third party in connection with an Unaddressed Application Agreement.

"Unaddressed Application" means an Application (other than a Grandfathered Competing Product Application) within the Field with respect to which RPR and its Affiliates (i) are not currently using or selling Licensed Product, or (ii) do not have an ongoing program with respect to the development of Licensed Product or any Potential Licensed Product for use in such Application.

"Unaddressed Application Proposal" has the meaning provided in Section 4.3 hereof.

"Unaddressed Market Proposal" has the meaning provided in Section 4.3 hereof.

2. Grant of License.  
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2.1 Grant of License. Subject to the terms, limitations, restrictions and  
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reservations set forth in this Agreement, ABI hereby grants to RPR a sole and exclusive worldwide license or sublicense, as applicable, to the ABI Technology for the CPS in the Field.

2.1.1 By way of explanation of the terms, limitations, restrictions and reservations set forth in this Agreement provided for hereinbelow, the License grant of Section 2.1 includes, but is not limited to, the following restrictions and rights:

a. to use, sell, offer to sell, lease and/or import Licensed Product supplied by ABI pursuant to the Supply Agreement;

b. to make, have made and manufacture Licensed Product in the event ABI defaults in its obligation to manufacture and supply Licensed Product in accordance with the terms of the Supply Agreement, but only to the extent so permitted in the Supply Agreement; and to use, sell, offer to sell, lease and/or import said Licensed Product;

c. to enforce RPR's exclusively licensed ABI Patent Rights and ABI Confidential Know-How against ABI and/or a third party who infringes the ABI Patent Rights or uses the ABI Confidential Know-How for the CPS in the Field, except for rights reserved hereunder by ABI or for acts otherwise authorized under this Agreement; and

d. to conduct research and development activities incidental to using the CPS in the Field.

2.2 Right to Manufacture. RPR hereby grants to ABI and its designees the  
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exclusive right to manufacture CPS for RPR and its Affiliates subject to the terms of the Supply Agreement.

2.3 Restriction. For the avoidance of doubt, the License shall not include

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the grant to RPR of the right under the ABI Technology: (a) to make, have made, use, sell, offer to sell, license, lease and/or import any CPS for any fields of use or applications outside the Field, or (b) to make, use or sell any product or to provide any service which would infringe the ABI Patent Rights or use the ABI Confidential Know-How, other than for CPS.

2.4 COBE's Rights.

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2.4.1. ABI has entered into the Cobe Distribution Agreement, pursuant to which Cobe has exclusive, worldwide rights to distribute the CPS for stem cell applications. RPR hereby acknowledges receipt and review of a copy of the Cobe Distribution Agreement. On or prior to the date hereof, ABI and Cobe have amended the Cobe Distribution Agreement to delete from Section 2.01(d) thereof the provisions which permit Cobe to sell the Products (as such term is defined in the Cobe Distribution Agreement) to its Affiliates (as such term is defined in the Cobe Distribution Agreement) for Lymphoid Cell Applications.

2.4.2 In the event of any breach (actual, threatened or apparent) by Cobe of Cobe's obligations pursuant to Sections 2.01(d), 2.05(c) (iii), 2.05(c) (iv) or 2.05 (d) of the Cobe Distribution Agreement relative to Lymphoid Cell Applications, ABI, RPR and Cobe shall pursue good faith discussions in an attempt to resolve the matter to the mutual satisfaction of all parties. If a satisfactory resolution is not reached promptly, then ABI hereby authorizes RPR to pursue appropriate legal proceedings against Cobe to obtain remedies for such breach, which proceedings shall be at the expense of RPR. In the event ABI is required to be a necessary party in said legal proceedings, then ABI shall join as a plaintiff party in said proceedings, at the expense of RPR. Any recovery or other settlement obtained in such proceedings shall be the sole property of RPR.

2.4.3 ABI hereby agrees not to amend the Cobe Distribution Agreement so as to diminish the rights or restrictions provided in Sections 2.01(d), 2.05(c) (iii), 2.05(c) (iv) or 2.05 (d) thereof without the prior written consent of RPR.

2.4.4 Notwithstanding the provisions in Section 3.03(b) of the Cobe Distribution Agreement, ABI hereby agrees that ABI will not provide any training to Cobe or Cobe's Affiliates (as such term is defined in the Cobe Distribution Agreement) or customers for use of any CPS for Lymphoid Cell Applications.

2.4.5 Notwithstanding anything to the contrary contained herein, no rights are granted to RPR which would conflict with or impair the rights granted to Cobe in the Cobe Distribution Agreement (as so amended). This Agreement shall be construed, enforced and implemented so as to define and limit the rights granted to RPR in this Agreement so as to not conflict with or impair the rights granted to Cobe in the Cobe Distribution Agreement (as so amended).

2.5 RPR Business. This Agreement is being entered into on the understanding

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that RPR and its Affiliates will be engaged in the business of providing cell therapy-related services and/or products for Lymphoid Cell Applications (the "RPR Business"). If RPR and/or its Affiliates ceases to conduct the RPR Business after a Governmental Approval as contemplated by Section 8 hereof has been obtained, (i) then RPR shall not be entitled to assign or sublicense its rights under this Agreement to a third party without the prior written approval of ABI, which approval shall be dependent upon the capability of the assignee or sublicensee to reasonably optimize the market commercialization of Licensed Product; and (ii) if such an assignment or sublicense does not occur, then ABI shall be entitled to terminate this Agreement.

2.6 Reserved Rights. ABI reserves the right to use the ABI Technology within

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the Field for (a) making and selling Licensed Product or Potential Licensed Product (i) for the user's non-commercial research purposes or (ii) labeled "Not For Human Use", (b) with the prior written consent of RPR, conducting preclinical research in collaboration with commercial third parties with respect to the use of the CPS for applications within the Field which are not being (or to be) pursued by RPR as an Addressed Application, (c) internal research by ABI with respect to the use of the CPS for applications within the Field, and (d) fulfilling its obligations under the Supply Agreement and/or the Research and Development Collaboration Agreement.

2.7 Exclusive Right. Except as permitted by Sections 2.6, 4.3.2, 5 or 6

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hereof, ABI shall not grant any rights to any third party, and ABI shall not exercise any rights for itself (other than pursuant to the Supply Agreement), to use, license, lease, make, import, market, distribute, promote, sell and/or have sold any CPS for Lymphoid Cell Applications. Any agreement with respect to the sale or other transfer of any CPS by ABI to any third party (other than a sale or other transfer permitted by Sections 2.6, 4.3.2, 5 or 6) shall expressly provide that (i) the CPS may not be used (either by the third party or its customers) for Lymphoid Cell Applications, and (ii) RPR shall be a third party beneficiary of such provision.

2.8 Sublicensees. The License shall include the right to grant sublicenses

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under the License to RPR's Affiliates and to such third parties who are participants in the RPR Business. So long as RPR and its Affiliates continue to conduct the RPR Business in the United States, RPR may also grant sublicenses under the License to qualified third parties in foreign countries who conduct a business similar to the RPR Business. RPR shall also have the right to grant sublicenses under the License to third parties solely to enable such third parties to conduct research and development with respect to the use of the CPS in the Field. Any RPR sublicensee shall be bound by all of the terms of this Agreement, particularly including the limited field of use and the confidentiality obligations. A copy of any such sublicense agreement shall be furnished to ABI prior to the sublicensee exercising any rights thereunder. Except as provided in this Section 2.8, RPR shall not grant any sublicenses under the License without the prior written approval from ABI.

2.9 Early Termination of License. Pursuant to the Governance Agreement, RPR

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has certain options to continue the rights specified in the Governance Agreement, including rights specified in this Agreement. Notwithstanding anything else to the contrary contained in this Agreement, the License and this Agreement shall terminate automatically and be of no further force or effect in the event that RPR does not (a) pay the Second Option Payment to ABI before the expiration of the First Option Period, or (b) deliver the Third Option Event Notice before the expiration of the Second Option Period, all in accordance with the terms of the Governance Agreement.

2.10 Third Party Relationships. In order to protect the exclusivity of the

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License, except as may otherwise be agreed upon by RPR in writing, and except as is otherwise expressly permitted in this Agreement, ABI will not enter into any agreement, arrangement or understanding, whether oral or written, with a third party which would (i) grant to such third party any rights to make, have made, use, sell, have sold, offer to sell or import Licensed Product or Potential Licensed Product for use in the Field, or (ii) permit such third party to assert any claim with respect to the manufacture, use, sale or importation of Licensed Product or Potential Licensed Product for use in the Field.

2.11 Field of Use Compliance. In order to insure field of use compliance by

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all interested parties, a portion of the research to be conducted pursuant to the Governance Agreement and the Research and Development Collaboration Agreement will be focused on developing and implementing modifications to the Automated CPS which will endeavor to prevent use of any Automated CPS sold to RPR and its Affiliates for any field of use other than Lymphoid Cell Applications. ABI likewise agrees to use reasonable efforts to develop and implement modifications to ABI's other CPS products which are sold to third parties (other than RPR and its Affiliates) which will endeavor to prevent the use of such other CPS products for Lymphoid Cell Applications for which a Licensed Product is available or for any other Addressed Application. Any agreement with respect to the sale or other transfer of the CPS by RPR or its Affiliates to any third party shall expressly provide that (a) the CPS may not be used (either by the third party or its customers) outside the Field, and (b) ABI shall be a third party beneficiary of such provision.

3. Royalty.

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3.1 Units Purchased From ABI. Excepting only as is otherwise specified in this

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Agreement, with respect to units of the Durables and Disposables which RPR purchases from ABI pursuant to the Supply Agreement, no royalty shall be payable, so long as RPR pays the purchase price as specified in the Supply Agreement. Notwithstanding the foregoing, if additional patent rights result from the Research and Development Collaboration Agreement, some royalty might be payable in accordance with the terms of said Research and Development Collaboration Agreement.

3.2 Units Not Purchased From ABI. With respect to any units of the Durables

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or the Disposables which RPR acquires from a party other than ABI (other than upon expiration of the Supply Agreement with respect to the Licensed Product), if RPR acquires said units at a price less than the price otherwise payable by RPR under the Supply Agreement, then RPR shall pay to ABI an earned royalty equal to \* percent \* of the then current purchase price which is then applicable for said units under the Supply Agreement, so long as and to the extent that said royalty does not cause the aggregate of the price paid by RPR to acquire the units, plus the royalty payable to ABI, plus the ABI Royalties Payable thereon to exceed the price otherwise payable by RPR under the Supply Agreement. If the Supply Agreement is no longer in effect with respect to a particular Licensed Product (other than upon expiration of the Supply Agreement with respect to such Licensed Product), then the last price applicable under the Supply Agreement shall be used for purposes of calculating the \* royalty pursuant to this Section 3.2.

3.2.1 Royalty Term. Notwithstanding any contrary section of this agreement

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relating to the term of RPR's royalty obligation to ABI, RPR's royalty obligation to ABI with respect to all CPS or Licensed Product manufactured, used or sold by RPR or its Affiliates shall be \* of the most recent purchase price of said Licensed Product and shall extend until the later of (i) the last to expire of the valid granted patents within the ABI Patent Rights covering said CPS or Licensed Product, or any component or process thereof, if a patent within the ABI Patent Rights is granted, or (ii) ten years from the first commercial sale of said CPS or Licensed Product. In the situation of subsection 3.2.1 (ii), RPR's royalty obligation shall also include an continuing obligation of \* for years ten through twenty from the commercial sale of said Licensed Product or other CPS manufactured using ABI Confidential Know-How.

3.2.2 For the avoidance of doubt, the provisions of this section 3.2 are intended to be applicable only in the situations where RPR is permitted to manufacture pursuant to the Supply Agreement.

3.3 Royalties to ABI Licensors. ABI shall be solely responsible for any

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payments due its licensors arising out of the manufacture, sale or use by RPR or its Affiliates or their customers of Licensed Product. However, the parties acknowledge that said payments are included in calculating the purchase price to be paid by RPR pursuant to the Supply Agreement.

4. Commercialization Effort.

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4.1 RPR Obligations.

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(a) RPR acknowledges that the exclusive nature of this Agreement obligates RPR to develop and incorporate diligently the ABI Technology and CPS devices into

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SEPARATELY WITH THE COMMISSION



commercial Lymphoid Cell Therapy uses on a global basis, and includes the obligation to maximize, over time, the commercial opportunities for ABI revenues from the sale of CPS devices for Lymphoid Cell Applications in a manner which does not adversely impact the RPR Business interests in cell therapy. This diligence obligation places certain restrictions on RPR as regards implementing competing automated cell expansion technologies to the extent that such implementation would injure the interests of ABI; however, this restriction is not intended to injure the cell therapy business interests of RPR. Accordingly, notwithstanding anything which might be construed inconsistently in the other subsections of Section 4 of this Agreement, RPR agrees to maintain reasonable business awareness of market opportunities for the use of the CPS for Lymphoid Cell Applications, and RPR agrees to exercise reasonable business judgment and to respond diligently with good business sense to market demands and opportunities for the use of the CPS for Lymphoid Cell Applications.

(b) Pursuant to subsection (a) above, RPR shall use commercially reasonable, diligent and good faith efforts to exploit the License by obtaining the necessary Government Approvals for using and marketing Licensed Product within the Field, and to develop and service the market demand therefor, in the Major Pharmaceutical Markets. Said reasonable diligence shall be at least equal to the level of efforts that RPR devotes to the incorporation into the RPR Business of its other process improvements of similar market value and therapeutic status. It is understood by the parties that RPR's obligations pursuant to this Section 4.1 shall require it, upon exercise of the Third Option, to use commercially reasonable, diligent and good faith efforts to begin developing the Automated CPS for use in the applications which are the then primary targets for RPR's ex vivo cell therapy business. Such targets are currently TIL therapy and PBMC therapy. RPR shall be obligated, from the the Activation Date, to conduct diligently reasonable pre-clinical bioequivalency studies to support supplemental regulatory filings to transition the Grandfathered Competing Product Applications from the use of the "bag-method" to the use of the Automated CPS.

4.1.1 Notwithstanding anything contained in this Section 4 to the contrary, however, RPR shall not be obligated to use, market or sell Licensed Product in a given country for a Grandfathered Competing Product Application during the \* following the date all necessary approvals have been obtained for the use of such Grandfathered Competing Product Application in that country, plus such longer time period as it may be financially or technically infeasible to reasonably phase out a Competing Product in favor of Licensed Product used for the Grandfathered Competing Product Application. In the event that said infeasibility necessitates more than said \* for a transition to Licensed Product from a Competing Product for a Grandfathered Competing Product Application, then the parties shall negotiate in good faith to determine means to avoid injury to Aastrom's business interests unless the delay was for causes beyond the reasonable control of RPR.

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SEPARATELY WITH THE COMMISSION

4.1.2 By way of clarification of RPR's obligations pursuant to this Section 4.1, ABI acknowledges that RPR shall have sole discretion in determining the manner in which a Licensed Product will be exploited in the countries within a particular Major Pharmaceutical Market, as well as the order of the countries within the Major Pharmaceutical Markets in which a particular Licensed Product will be introduced.

4.1.3 On an annual basis, RPR shall prepare and deliver to ABI a report briefly describing RPR's plans for the development and commercialization of Licensed Product (each such plan being referred to herein as a "Development Plan"). It is understood by the parties that Development Plans will not be static plans, but will necessarily evolve over time as technology and market conditions change. After receipt of a Development Plan, ABI may request that representatives of RPR meet with representatives of ABI to discuss such Development Plan. At that time, ABI may propose additional applications for Licensed Product that ABI may wish to include in the Development Plan, which proposals RPR will consider in good faith.

4.2 Use of Licensed Product in Other Venues. As long as RPR and/or its

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Affiliates is/are diligently developing and servicing the market for a specific therapy within an Application through the ex vivo cell therapy centers, RPR's obligations pursuant to this Section 4 (the breach of which may result in RPR's loss of exclusive rights) shall not require RPR to market, use and/or sell a Licensed Product for such specific therapy outside of ex vivo cell therapy centers owned or operated by RPR or its Affiliates (such other venues being referred to herein as "Other Venues") until at least \* have elapsed from the date of RPR's or RPR's Affiliate's first commercial sale of such specific therapy. After such period, to comply with RPR's diligence obligations, ABI may require RPR to negotiate the marketing, use and/or sale of such Licensed Product in the Other Venues by RPR for such specific therapy on terms and conditions mutually satisfactory to both parties consistent with RPR's exclusive license.

4.3 Unaddressed Application or Market Proposals. If, at any time after the

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date that is three years after the date of the Third Option Event Notice, ABI develops or receives from a third party a bona fide proposal with respect to (i) the development or use of Licensed Product or a Potential Licensed Product for a specific therapeutic indication within an Unaddressed Application for one or more countries in a Major Pharmaceutical Market (an "Unaddressed Application Proposal"), or (ii) the development or use of a Licensed Product in one or more Major Pharmaceutical Markets (other than the Initial Major Pharmaceutical Markets) for a specific therapeutic indication within an Addressed Application, but only if RPR is in default under Section 4.1.2 with respect to the use or marketing of the Licensed Product for the specific therapeutic indication in such Major Pharmaceutical Market (an "Unaddressed Market Proposal"), then ABI shall present such proposal to RPR.

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SEPARATELY WITH THE COMMISSION

4.3.1 Upon receipt of an Unaddressed Application Proposal or an Unaddressed Market Proposal, RPR shall have a period not to exceed ninety days to present ABI with a bona fide plan and commitment (the "Commercialization Plan") to initiate, within an eighteen month period, development of Licensed Product or Potential Licensed Product for such specific therapeutic indication and for such specific country(ies). It is expressly understood that a Commercialization Plan may consist of a commitment by RPR to initiate discussions directly with the applicable third party regarding the feasibility of RPR and the third party collaborating with respect to the development of Licensed Product or Potential Licensed Product, as applicable, for the specific therapeutic indication within the Unaddressed Application or Addressed Application, as applicable, for the specific country(ies). Upon delivery of said Commercialization Plan, RPR shall be deemed to have satisfied its obligations pursuant to Section 4.1 with respect to such Unaddressed Application; provided that RPR thereafter uses commercially reasonable, diligent and good faith efforts to implement such Commercialization Plan in accordance with its terms.

4.3.2 If RPR does not deliver the Commercialization Plan within the time provided by the first sentence of Section 4.3.1, or if RPR notifies ABI in writing of its intention not to deliver the Commercialization Plan within the relevant time period, RPR shall grant back rights (on commercially reasonable terms to be negotiated, including without limitation, whether such grant back shall be on an exclusive or non-exclusive basis) to Aastrom in the specific therapeutic indication in the specific market identified in the Unaddressed Application Proposal or Unaddressed Market Proposal.

4.3.3 Notwithstanding anything contained in this Agreement to the contrary, in no event shall RPR be required, pursuant to Section 4.3.2, to grant back any rights with respect to the use of any Licensed Product or Potential Licensed Product for more than one specific therapeutic indication per twelve month period (on a cumulative basis); provided, however, that a grant back which relates solely to a specific therapeutic indication within an Unaddressed Application wherein the third party has Blocking Patent Rights shall not be counted for purposes of the numerical limitation set forth in this Section 4.3.3.

5. RPR's Use of Competing Products. If RPR markets, sells or uses

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commercially a Competing Product for a particular therapeutic indication within a Lymphoid Cell Application (excluding however for the Grandfathered Competing Product Applications to the extent permitted by Section 4.1.1) in a particular country, then the License shall convert to a nonexclusive license for such therapeutic indication within such Lymphoid Cell Application in the relevant country; and, subject to the provisions of Section 6.2, ABI shall be free to pursue any and all other arrangements for the sale and use of Licensed Product (but not any other CPS without first offering it to RPR pursuant to the provisions of Section 6.2) for such therapeutic indication within the Lymphoid Cell Application in the relevant country (but not in any other country or for any other Lymphoid Cell Application).

6. Loss of License Rights.

6.1 RPR's Failure to Adhere to Development Plans or Commercialization Plans.

In the event that RPR shall fail to use commercially reasonable efforts to satisfy its Development Plans or a Commercialization Plans (as they may evolve over time) with respect to a particular Lymphoid Cell Application in a particular Major Pharmaceutical Market, then ABI shall have the right, upon 180 days prior written notice, for that particular Lymphoid Cell Application in that particular Major Pharmaceutical Market, (i) to convert to nonexclusive the License for that particular Lymphoid Cell Application in that particular Major Pharmaceutical Market; and (ii) to terminate the License with respect to all improvements to the applicable Licensed Product developed subsequent to such termination without funding or assistance from RPR, but only with respect to that particular Lymphoid Cell Application in that particular Major Pharmaceutical Market. Upon any such conversion or termination, ABI shall, subject to the provisions of Section 6.2, be entitled to pursue other arrangements for commercially using and selling Licensed Product in that particular Major Pharmaceutical Market and for that particular application (which arrangement may be sales directly by ABI or through licensees or assignees).

6.2 RPR's Right of First Refusal. In exercising its rights pursuant to

Sections 5 or 6.1, ABI may not enter into any agreement, arrangement or understanding with a third party with respect to the making, using or selling of Licensed Product or Potential Licensed Product without giving RPR written notice of its intention to do so, along with a summary of all material provisions of the proposed agreements (the "Proposed Other Agreements"). Upon receipt of such notice and agreements, RPR shall have a right of first refusal to enter into a similar agreement with ABI on terms and conditions which are identical to those of the agreement(s) which ABI proposes to enter into with the third party. Such right of first refusal may be exercised by RPR in writing at any time within one month after its receipt of the notice specified in the first sentence of this Section (the "Exercise Period"). In the event RPR does not exercise its right of first refusal on any particular occasion, such right of first refusal shall again become effective in the event that ABI does not enter into the Proposed Other Agreements with the third party within six months after the first to occur of ABI's receipt of RPR's written notification that it will not exercise its right of first refusal or the expiration of the Exercise Period.

6.3 Failure to Commercialize on Grant Back. In the event that ABI and/or the

third party shall not use commercially reasonable, diligent and good faith efforts to develop and commercialize License Product in the specific field and market for which rights have been granted back pursuant to Section 4.3.2., then RPR shall have the right, upon 180 days prior written notice, if no cure is made within said 180 days, to terminate the grant back, whereupon the exclusivity of RPR's License with respect to the specific therapeutic indication covered by such grant back shall be restored; provided that RPR, thereafter, exerts reasonable commercial diligence with respect to

such therapeutic indication. RPR shall have third party beneficiary rights to enforce said due diligence obligations.

6.4 Dispute Resolution. If there is any dispute as to whether or not RPR is

meeting its commercialization obligations in any particular Major Pharmaceutical Market for any particular application, or if there is any dispute as to whether or not ABI and/or a Third Party are meeting their diligence obligations under any rights granted back pursuant to Section 4.3.2, the parties shall pursue good faith discussions and negotiations in an effort to resolve said dispute for a period of at least ninety (90) days. If such discussions do not resolve the dispute, then either party may require the dispute to be resolved through arbitration as set forth in Section 19 hereof.

7. Regulatory Approvals.

7.1 RPR Responsibility.

7.1.1 From and after the date hereof, RPR and its Affiliates shall be responsible for obtaining, and shall pay for all costs necessary to obtain, any and all Government Approvals for the marketing or use of Licensed Product for Lymphoid Cell Applications, as may be required in any country where Licensed Product will be commercially sold or used. Without limiting the generality of the foregoing, RPR and its Affiliates shall fund all clinical trials and shall pay for all applications and license fees required of any government authority in furtherance of its obligation pursuant to the preceding sentence. RPR shall prepare a plan for obtaining required Government Approvals (the "Regulatory Approval Plan"), which shall be updated on a periodic basis as needed, and RPR shall furnish to ABI a copy of the Regulatory Approval Plan, together with the updates. From time to time, RPR may confer with ABI with respect to the implementation of the Regulatory Approval Plan. ABI shall cooperate with and assist RPR with respect to said Government Approval matters, all at the expense of RPR.

7.1.2 All Government Approvals obtained for Licensed Product or a Potential Licensed Product for Lymphoid Cell Applications shall be in the name of RPR and/or its Affiliates and shall be owned by RPR and/or its Affiliates, excepting only to the extent that the applicable governmental authorities require otherwise. In the event that the applicable governmental authorities require that a particular Government Approval be in the name of ABI, ABI shall assign its interest in and to such Governmental Approval to RPR and/or its Affiliates as such interest relates to the Field. RPR shall have the responsibility to file all required reports and to maintain the continued effectiveness for all Government Approvals.

7.1.3 RPR and ABI acknowledge and understand that in addition to, and perhaps simultaneously with, RPR's efforts to obtain Government Approvals for Licensed Product for Lymphoid Cell Applications, ABI (or its licensee) will be pursuing efforts

to obtain regulatory approvals for the Automated CPS for stem cell applications and for other applications outside the Field. In order to avoid conflicting efforts for obtaining regulatory approvals for different applications of the Automated CPS, both RPR and ABI shall use reasonable efforts to cooperate and coordinate with each other relative to pursuing efforts for obtaining regulatory approvals in an effort not to impact adversely the other party's regulatory approval plan for the respective products or applications. Notwithstanding anything contained in this Section 7.1.3 to the contrary, however, neither party shall be required to take any action, or omit from taking any action, in connection with any regulatory approval to the extent that such action or omission would result in additional cost to, or otherwise adversely affect, such party or its Affiliates or their respective customers.

7.2 Transfers. In the event of any termination of this Agreement in accordance

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with its terms, or in the event the License converts to a nonexclusive license with respect to a particular Lymphoid Cell Application in a particular Major Pharmaceutical Market, then ABI shall be entitled to utilize all data which relates primarily to the safety of the Automated CPS (which shall expressly exclude, among other things, any efficacy data or proprietary process data) which has previously been used by RPR to obtain and maintain the Government Approvals for such Lymphoid Cell Application, in order to assist ABI in obtaining any Government Approvals to enable ABI to commercially make, use or sell Licensed Product for such Lymphoid Cell Application in such Major Pharmaceutical Market.

8. Milestone Payment. RPR shall pay to ABI a milestone payment in the

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amount of \* within ten days after the earlier to occur of (i) all necessary Government Approvals are obtained by RPR or its Affiliates or sublicensees for the first Lymphoid Cell Application which uses Licensed Product in any country in a Major Pharmaceutical Market, or (ii) the first commercial revenues (excluding revenues from clinical trials being conducted to obtain Governmental Approvals) are received by RPR or its Affiliates or sublicensees for the first Lymphoid Cell Applications therapy which uses Licensed Product.

9. Patent Prosecution and Maintenance by ABI. Subject to the requirements,

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limitations and conditions set forth in this Agreement, ABI shall direct and control (i) the preparation, filing and prosecution of the United States and foreign patent applications for the ABI Patent Rights (including any interferences and foreign oppositions) and (ii) the maintenance of the patents issuing therefrom. RPR shall have full rights of consultation with ABI and the patent attorney selected by ABI in all matters related to the ABI Patent Rights applicable to Lymphoid Cell Applications. ABI shall use reasonable diligent efforts to implement all reasonable requests made by RPR with regard to the preparation, filing, prosecution and/or maintenance of the patent applications and/or patents within the ABI Patent Rights. With respect to the costs for patent matters which benefit Licensed Product or Potential Licensed Products, RPR shall pay 50% of said costs, including attorneys' fees, governmental fees, and all other applicable costs. RPR's obligation under this Section 9 shall apply with respect

\*CONFIDENTIAL PORTION REDACTED AND FILED  
SEPARATELY WITH THE COMMISSION

to costs which accrue from and after the effective date of the Governance Agreement between the parties (i.e., September 15, 1995).

9.1 Standby Rights of RPR. If ABI elects not to pursue any particular action

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to obtain or maintain particular Patent Rights which specifically describe in the specification thereof an application in the Field, then ABI shall promptly notify RPR of such non-election in good time in respect of patent filing, prosecution and maintenance deadlines. Upon receipt of such notification, or in the event that ABI otherwise fails to promptly pursue any particular action to obtain or maintain particular Patent Rights useful in the Field, RPR shall be entitled to undertake such action in its own name or in the name of ABI (or its licensor), at the expense of RPR. In the event RPR elects to undertake such action, ABI shall have no further rights under the patent rights in question and will grant to RPR all of ABI's rights and interest therein, and all necessary authority to so file, prosecute and maintain such patent application or patent, with the provision that RPR shall execute a document granting back to ABI license rights in such patent application or patent, on a royalty free basis, for use outside the Field.

9.2 Improvements. Any improvements to the ABI Patent Rights, including any

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new inventions, conceived, developed or reduced to practice solely by ABI prior to the Activation Date shall be owned by ABI, but shall be deemed to be part of the ABI Owned Patent Rights which are subject to the License. Any improvements to the ABI Patent Rights, including any new inventions, conceived and developed during the term of the Research and Development Collaboration Agreement shall be governed by the terms and conditions of the Research and Development Collaboration Agreement to be negotiated by the parties during the First Option Period, the material terms of which are attached to the Governance Agreement as Exhibit C.

9.3 Intellectual Property Right Disclaimers. ABI shall not disclaim any

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intellectual property right or abandon any application for any intellectual property right relating to the CPS for use in the Field without allowing RPR the opportunity to exercise its rights under Section 9.1.

9.4 Patent Term Restoration and Other Extensions of Patent Life. ABI shall

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keep RPR informed of the issuance of each U.S. patent and foreign patent within ABI Patent Rights, giving the date of issuance and patent numbers, and each notice pertaining to any patent included within ABI Patent Rights which it receives as patent owner pursuant to the Drug Price Competition and Patent Term Restoration Act of 1984 or any equivalent foreign laws, including notices pursuant to sections 101 or 103 of said Act from persons who have filed an abbreviated NDA ("ANDA"), and also, any other notices relating to any administrative or otherwise extensions of patent life. All such notices shall be given promptly, but in any case within 10 days of each such patent's date of issue or receipt of each such notice under such Act or equivalent, whichever is applicable. The parties shall cooperate in attaining any

such permitted extensions of patent life.

10. Infringement.

10.1 RPR Prosecution Against Third Party Infringers. In the event a party to

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this Agreement acquires information that a third party is infringing one or more of the ABI Patent Rights, the party acquiring such information shall promptly notify the other party in writing of such infringement. Subject to the provisions hereof, RPR shall have the right initially to prosecute at its discretion any and all infringements of any ABI Patent Rights to the extent that such infringement relates to Lymphoid Cell Applications and to defend all charges of infringement arising with respect to Licensed Products and/or Potential Licensed Products, and to enter all settlements, judgments or other arrangements respecting the same, all at its own expense or liability, subject to the terms of this Section 10. Prior to initiating any infringement proceedings, RPR shall confer and consult with ABI with respect to the potential impact of such infringement proceedings on ABI's other Patent Rights and, in the event that ABI shall inform RPR in good faith that such infringement proceedings are likely to have a material adverse effect on ABI, RPR shall not institute such proceedings unless the subject infringement is having or is likely to have a material adverse effect on the competitive position of the ex vivo cell therapy centers owned or operated by RPR and its Affiliates or on RPR's sales of Licensed Product and/or Potential Licensed Products. ABI shall permit any infringement proceedings to be brought in its name if required by law, and RPR shall hold ABI harmless from any costs, expenses or liability respecting all such infringements or charges of infringement, including attorneys' fees. With respect to any infringement proceeding brought by RPR, ABI agrees to be joined as a party plaintiff if permitted by law and if RPR so requests and to give RPR reasonable assistance and authority to file and prosecute the suit.

10.2 Costs. The expenses of suits that RPR elects to bring, including any

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expenses of ABI incurred in conjunction with the prosecution of such suits or the settlement thereof, shall be paid for entirely by RPR, and RPR shall hold ABI free, clear and harmless from and against any and all costs of such litigation, including attorneys' fees. Monetary recoveries from litigation pursuant to Section 10.1 shall be apportioned as follows: RPR has the right to first reimburse itself for all out-of-pocket costs and expenses of every kind and character, including reasonable attorneys' fees, involved in the litigation or settlement of such suit from any sums recovered in such suit or in settlement. If, after such reimbursement, any funds shall remain from said recovery, such funds shall be allocated equitably between the parties. It is agreed by the parties that their relative financial support of the legal expenses of bringing the infringement action shall be one of the material factors in making such equitable allocation.

10.3 Failure of RPR to Prosecute Infringer. As regards the first discovered

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infringer of an ABI Patent Right: if RPR does not bring suit against said infringer



pursuant to Section 10.1, or has not commenced negotiations with said infringer for discontinuance of said infringement, as herein provided, within one hundred eighty (180) days after receipt of notice (pursuant to Section 10.1), ABI shall have the right, but shall not be obligated, to bring suit for such infringement and to join RPR as a party plaintiff or to use RPR's name if required by law, in which event ABI shall hold RPR free, clear and harmless from and against any and all costs and expenses of such litigation, including attorneys' fees. If RPR has commenced negotiations with an alleged infringer of the patent for discontinuance of such infringement within such 180-day period, RPR shall have an additional one hundred eighty (180) days from the termination of such initial 180-day period to conclude its negotiations before ABI could bring suit for such infringement.

10.4 RPR's Retained Rights to Prosecute Infringer. RPR shall retain its right  
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to initiate patent infringement litigation respecting a second and subsequent infringer of an ABI Patent Right which is already the subject of a pending patent infringement litigation by RPR if RPR places such infringer(s) on proper legal notice that such infringer's infringing activities shall be addressed in a legal action initiated subsequent to the resolution of the pending litigation.

10.5 ABI Recovery. In the event ABI brings suit pursuant to Section 10.3, ABI  
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shall have the right to reimburse itself out of any sums recovered in such suit or settlement thereof for all out-of-pocket costs and expenses of every kind and character, including reasonable attorneys' fees, necessarily involved in the prosecution or settlement of such suit, and if after such reimbursement, any funds shall remain from said recovery, and if said recovery was in part for RPR's lost profits from Licensed Product, then such funds shall be allocated equitably between the parties. It is agreed by the parties that their relative financial support of the legal expenses of bringing the infringement action shall be one of the material factors in making such equitable allocation.

10.6 Selection of Legal Counsel. Each party shall always have the right to be  
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represented by counsel of its own selection in any suit for infringement of the ABI Patent Rights instituted by the other party under the terms hereof. The expense of such counsel shall be borne by the party retaining such counsel.

10.7 Cooperation by ABI. ABI agrees to cooperate fully with RPR at the request  
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and expense of RPR, including by giving testimony and producing documents lawfully requested in the course of a suit prosecuted by RPR for infringement of the ABI Patent Rights and shall endeavor to cause the employees of ABI, its Affiliates, and sublicensees, as appropriate, to cooperate with RPR.

10.8 Approval of Settlement. Neither party shall, without the prior written  
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consent of the other party, compromise or settle any litigation described in Sections 10.1 or 10.3 if such compromise or settlement imposes any obligations or restrictions on the other party regarding the use of the Patent Rights which were the

subject of the infringement action.

11. Equitable Adjustment of Transfer Price. In the event that RPR and/or its

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Affiliates shall be required to pay any royalties as a result of any settlement agreed to by ABI or as a result of any judgment in which it is determined that Licensed Product does infringe a third party's Patent Rights, then the parties shall negotiate in good faith to determine an equitable adjustment of the transfer price or future royalties payable by RPR and/or its Affiliates to ABI with respect to sales of Licensed Product pursuant to the Supply Agreement. Furthermore, on a Licensed Product-by-Licensed Product basis, and on a country-by-country basis, RPR may offset one-half of any reasonable out-of-pocket expenses incurred in defending any infringement proceedings for the applicable Licensed Product in the applicable country relating to the ABI Patent Rights from future payments payable to ABI under the Supply Agreement with respect to such Licensed Product used or sold in such country; provided, however, in no event may such offset result in ABI receiving payments which are less than the sum of (i) the costs incurred directly by ABI in manufacturing such Licensed Product, (ii) a 35% gross margin and (iii) the royalties which ABI is obligated to pay to third party licensors with respect to the sale of such Licensed Product from ABI to RPR; and provided, further, that the balance of any unused offset will be carried over and applied to future payments due ABI with respect to such Licensed Product.

12. Indemnity.

12.1 RPR Indemnity. RPR shall defend, indemnify and hold harmless ABI and its

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Affiliates and their agents, directors, officers and employees ("ABI Indemnified Persons") from and against any and all losses, costs, liabilities, damages, fees and expenses, including reasonable attorneys' fees and expenses (collectively, "Liabilities"), to which an ABI Indemnified Person may become subject insofar as the Liabilities arise out of or are alleged or claimed to arise out of (i) the inaccuracy of any representation or warranty of RPR contained herein or in the other Implementing Agreements, (ii) the negligence or willful misconduct of RPR or its employees or agents.

12.2 ABI Indemnity. ABI shall defend, indemnify and hold harmless RPR and its

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Affiliates and their agents, directors, officers and employees ("RPR Indemnified Persons") from and against any and all Liabilities to which an RPR Indemnified Person may become subject insofar as the Liabilities arise out of or are alleged or claimed to arise out of (i) the inaccuracy of any representation or warranty of ABI contained herein or in the other Implementing Agreements, (ii) the negligence or willful misconduct of ABI or its employees or agents.

12.3 Cooperation. In the event that either party seeks indemnification under

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this Section 12, it shall inform the other party of a claim as soon as reasonably practical after it receives notice of the claim, shall permit the other party to assume direction

and control of the defense of the claim (including the right to settle the claim solely for monetary consideration which, in the case of ABI, shall not include the right to (i) grant third party(ies) licenses or other rights under the ABI Technology which conflict with the License, (ii) or to otherwise enter into any agreement, arrangement or understanding which would require RPR or its Affiliates or their respective customers to pay any royalties to any third parties), and shall cooperate as requested at the expense of the other party with respect to documented and reasonable out-of-pocket expenses of the cooperating party in the defense of the claim.

13. Representations, Disclaimers and Covenants.  
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13.1 Authority. ABI and RPR each represents and warrants to the other that  
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(i) it has the authority to enter into and perform this Agreement, and (ii) its execution, delivery and performance of this Agreement and the full performance and enjoyment of the rights of RPR hereunder will not conflict with, breach, or constitute a default under, the terms of any other license, contract or agreement, whether written or oral, to which it is or becomes a party or by which it or its assets is or becomes bound.

13.2 Ownership. ABI further represents and warrants that:  
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13.2.1 To its knowledge, it is the exclusive owner of the ABI Owned Patent Rights and the exclusive licensee of the ABI In-Licensed Patent Rights, and has the full right to grant the rights and perform the obligations contemplated by this Agreement.

13.2.2 It has no knowledge from which it can be inferred that the ABI Patent Rights are invalid or unenforceable or that their exercise would infringe Patent Rights of third parties.

13.2.3 During the term of this Agreement, (i) ABI will use reasonable best efforts not to encumber or diminish the rights granted to RPR hereunder, including without limitation, by not committing any acts or permitting the occurrence of any omissions which would cause the breach or termination of any agreements between third parties and ABI which extend intellectual property rights to RPR pursuant to the terms of this Agreement (collectively, "ABI Licenses"), and (ii) ABI will promptly provide RPR notice of any such alleged breach.

13.2.4 As of the date hereof, ABI is not in breach of any of its obligations under any of the ABI Licenses.

13.2.5 The inception, development and reduction to practice of the ABI Technology for use in the Field has not been achieved with the aid of any funding from any governmental agency or authority.

13.3 Disclaimer. EXCEPT AS PROVIDED IN THIS SECTION 13, ABI MAKES NO

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WARRANTIES CONCERNING THE ABI TECHNOLOGY, INCLUDING WITHOUT LIMITATION, ABI MAKES NO EXPRESS OR IMPLIED WARRANTY (i) OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE (ii) THAT ANY LICENSED PRODUCT WILL BE FREE FROM AN INFRINGEMENT ON PATENT RIGHTS OF THIRD PARTIES, (iii) AS TO THE VALIDITY OR SCOPE OF THE ABI PATENT RIGHTS, OR (iv) THAT NO THIRD PARTIES ARE IN ANY WAY INFRINGING THE ABI PATENT RIGHTS.

13.4 Limited Liability. With respect to any claim by one party against another

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party arising out of the performance or failure to perform under this Agreement, the parties expressly agree that the liability of such party to the other party for such breach shall be limited as specified in this Agreement or as is otherwise limited at law or equity, and in no event shall a party be liable for indirect, incidental or consequential damages or lost profits.

14. Compliance With Laws.

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14.1 General. Each party shall, at its expense, comply with all laws, rules

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and regulations applicable to the performance by it of its obligations under this Agreement. RPR shall register this Agreement with any governmental agency which requires RPR to so register, and RPR shall pay all costs and legal fees in connection therewith.

14.2 Export Controls. This Agreement is made subject to any restrictions

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concerning the export of products or technical information from the United States of America which may be imposed upon or related to ABI or RPR from time to time by the government of the United States of America. Furthermore, ABI and RPR each agree that it will not export, directly or indirectly, any technical information acquired from the other under this Agreement or any products using such technical information to any country for which the United States government or any agency thereof at the time of export requires an export license or other governmental approval for such export, without first obtaining the written consent to do so from the Department of Commerce or other agency of the United States government when required by an applicable statute or regulation.

14.3 Patent Marking. To the extent relevant under applicable law, RPR shall

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mark Licensed Product or its container in accordance with the patent marking laws of the country in which Licensed Product is made, used or sold.

15. Publicity. Any news release or other public announcement relating to this

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Agreement, including any of its terms, or to the performance hereunder, must be approved by both parties, which approval shall not be unreasonably withheld. Once the text or substance of an announcement has been so approved, it may be repeated without further approval. Any disclosure which is required by law may be made

without the prior consent of the other party, although the other party shall be given prompt notice of any such legally required disclosure and an opportunity to comment on the proposed disclosure reasonably in advance to the extent feasible. Further, the disclosing party shall make diligent efforts to limit the nature and scope of any disclosure to the extent reasonably possible and to otherwise prevent the disclosure of the non-disclosing party's Confidential Information. The parties acknowledge that ABI will be obligated to file a copy of this Agreement with the SEC if and when ABI's stock is registered under the Securities Act of 1933, as amended or the Securities and Exchange Act of 1934, as amended, subject to the diligent obligations stated in the preceding sentence. ABI shall be entitled to disclose the substance of this Agreement to ABI's shareholders (and to prospective shareholders to whom ABI's stock is offered for purchase) under the customary confidentiality agreement and subject to the diligence requirements in the second sentence preceding this sentence.

16. Confidentiality.  
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16.1 ABI and RPR hereby confirm the validity of, and warrant their continued compliance with, the Confidentiality Agreement, which shall continue in effect. Additionally, each of the parties hereby agrees that during the period beginning on the date hereof and ending on the date that is five years after the last to expire or terminate of the Implementing Agreements, it will (i) maintain in confidence all Confidential Information of the other party (including without limitation all Confidential Information received or obtained as a result of either party's performance under any of the Implementing Agreements), (ii) not disclose the other party's Confidential Information without the prior written consent of such party, and (iii) will not use the other party's Confidential Information for any purpose except those permitted by the Implementing Agreements.

16.2 A party shall have the right to disclose the other party's Confidential Information to those of its directors, officers, employees and consultants to whom disclosure is necessary to enable such party's performance under the Implementing Agreements, provided that such persons have undertaken confidentiality obligations at least as strict as those undertaken in this Agreement.

16.3 In fulfilling its obligations under this Section 16, a party shall use the same level of efforts to protect from disclosure the other party's Confidential Information as it uses to protect its own most sensitive Confidential Information, which efforts shall in any event be not less than reasonable efforts.

17. Trademarks and Tradenames. The trademark and tradename of ABI shall be  
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placed on each Licensed Product manufactured by ABI, with at least the same prominence as any other trademark or tradename placed on Licensed Product. As long as the License shall not have terminated, RPR shall have the right to use the applicable trademarks and tradenames of ABI in connection with RPR's use and sale

of Licensed Product.

18. Term and Termination.

18.1 Term. Unless terminated sooner in accordance with the provisions set

forth herein, including Section 2.9 hereof, this Agreement, and the License, shall commence on the date of this Agreement and terminate simultaneously with any termination of the Supply Agreement. Provided however, if the Supply Agreement or this Agreement is terminated due to a material default thereunder or hereunder by ABI or due to the bankruptcy or insolvency of ABI, then the License shall continue for the purposes as specified in Section 2.1, subject to RPR paying the royalty as specified in Section 3.2 for so long as any ABI Patent Rights remain in effect.

18.2 Termination Upon Default.

18.2.1 In the event of a material default hereunder by a party ("Defaulting Party"), the other party ("Non-Defaulting Party") may give the Defaulting Party written notice of the default and elect to terminate this Agreement sixty (60) days after the Defaulting Party receives the notice if, within said time period, the Defaulting Party fails to resolve the default by (i) curing the default or beginning the cure of the default and diligently completing the cure of the default thereafter even if after the end of the aforementioned sixty (60) day time period, (ii) providing a written explanation reasonably satisfactory to the Non-Defaulting Party that a default has not occurred, or (iii) entering into a written agreement with the Non-Defaulting Party for the cure or other resolution of the default. Upon failure of the Defaulting Party to resolve the default as so required, the Non-Defaulting Party may terminate this Agreement by giving written notice to the Defaulting Party, said termination to be effective upon the date specified in the notice. Any dispute arising hereunder shall be resolved by binding arbitration in accordance with provisions of Section 19 hereof. If any termination relates to breaches which are limited to a particular Licensed Product and/or Major Pharmaceutical Market, then any termination by ABI shall apply only with respect to that Licensed Product(s) and/or that Major Pharmaceutical Market(s). If it is determined that RPR or its Affiliates intentionally used commercially a Licensed Product outside the Field, then ABI may terminate this Agreement without RPR having any right to cure.

18.2.2 The rights granted to the Non-Defaulting Party pursuant to Subsection 18.2.1 shall be in addition to and not in substitution for any other remedies that may be available to such party. Except as otherwise expressly stated herein, termination shall not relieve the Defaulting Party from liability and damages to the other party for breach of this Agreement.

18.3 Termination Upon Bankruptcy Event. This Agreement may be terminated by a

party upon written notice to the other in the event that (i) the other party shall make an assignment for the benefit of its creditors, file a petition in bankruptcy,

petition or apply to any tribunal for the appointment of a custodian, receiver or any trustee for it or a substantial part of its assets, or shall commence any proceeding under any bankruptcy, reorganization, arrangement, readjustment of debt, dissolution or liquidation law or statute of any jurisdiction, whether now or hereafter in effect; or (ii) if there shall have been filed against the other party any such bona fide petition or application, or any such proceeding shall have been commenced against it, in which an order for relief is entered or which remains undismissed for a period of 90 days or more; or (iii) if the other party by any act or omission shall indicate its consent to, approval of or acquiescence in any such petition, application, or proceeding or order for relief or the appointment of a custodian, receiver or trustee for it or any substantial part of its assets, or shall suffer any such custodianship, receivership or trusteeship to continue undischarged for a period of 90 days or more (hereinafter, an "Insolvency Event"). Termination shall be effective upon the date specified in such notice. All rights and licenses granted under or pursuant to any section of this Agreement are, and shall otherwise be deemed to be, for purposes of Section 36(n) of the Bankruptcy Code, licenses to "intellectual property" as defined under Section 101(52) of the Bankruptcy Code. The parties agree that RPR, as a licensee or sublicensee, as applicable, of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Bankruptcy Code. The parties further agree that, if an Insolvency Event shall occur with respect to ABI, RPR shall be entitled to a complete duplicate of (or complete access to, as appropriate) any such intellectual property and all embodiments of such intellectual property, and the same, if not already in its possession, shall be promptly delivered to RPR upon any such occurrence.

18.4 Voluntary Termination. RPR may voluntarily terminate this Agreement

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upon one hundred eighty (180) days' prior written notice to ABI at any time with respect to any country(ies).

18.5 Cessation of RPR Business. If RPR ceases to conduct the RPR Business, and

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if RPR does not assign or sublicense its rights under this Agreement in accordance with Section 2.5, then ABI may terminate this Agreement.

18.6 Rights Upon Termination. Notwithstanding any other provision of this

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Agreement, upon any termination of this Agreement in its entirety, the License shall terminate (subject to the rights of RPR pursuant to the second sentence of Section 18.1). Except as permitted by Section 18.7, upon such termination, RPR shall have no further right to develop, manufacture or market Licensed Product. Subject to the provisions of Section 18.7, upon any termination of this Agreement in its entirety, RPR shall promptly return all materials, samples, documents, information, and other materials which embody or disclose the ABI Technology. Any termination of this Agreement shall not relieve either party from any obligations accrued to the date of such termination. The parties' obligations pursuant to Sections 12 and 16 shall survive any termination of this Agreement. All of the foregoing shall relate only to Licensed Product and/or country(ies) and/or applications to which the termination relates.

Upon termination of this Agreement (except for a termination due to a material default by ABI under this Agreement or the Supply Agreement, or due to the bankruptcy or insolvency of ABI), RPR shall not have the right to use any ABI valid and unexpired ABI Patent Rights or ABI Confidential Know-How to manufacture any CPS.

18.7 Licensed Product Purchased. With respect to all Licensed Product

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purchased by RPR prior to any early termination of this Agreement, RPR and its Affiliates and sublicensees and their customers shall have the continuing right to use and sell (but not to make) Licensed Product for Lymphoid Cell Applications.

19. Arbitration. Except as set forth in subparagraph 19.1 below, any

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controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled by binding arbitration in accordance with the Arbitration Agreement. If the parties cannot timely execute the Arbitration Agreement, the dispute shall be resolved in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("AAA").

19.1 Equitable Court Remedies. Each party recognizes and acknowledges that a

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breach by the other of any of its covenants, agreements or undertakings hereunder relating to confidentiality and non-use of Confidential Information and ownership and use of intellectual property will cause irreparable damage which cannot be readily remedied in damages and in action at law, and may, in addition thereto, constitute an infringement of a party's proprietary rights, thereby entitling such party to equitable remedies and costs. Accordingly, notwithstanding the provisions of this Section 19, each party reserves the right (and the other party agrees not to contest such right) to seek injunctive relief and other equitable remedies in a court of competent jurisdiction, instead of arbitration, with respect to the enforcement by each party of such rights.

20. General Provisions.

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20.1 Independent Contractors. The relationship between ABI and RPR is that of

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independent contractors. ABI and RPR are not joint venturers, partners, principal and agent, master and servant, employer or employee, and have no other relationship other than independent contracting parties. ABI shall have no power to bind or obligate RPR in any manner, other than as is expressly set forth in this Agreement. Likewise RPR shall have no power to bind or obligate ABI in any manner other than as is expressly set forth in this Agreement.

20.2 Force Majeure. Both parties to this Agreement shall be excused from the

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performance of their obligations under this Agreement if such performance is prevented by force majeure and the non-performing party promptly provides notice of the prevention to the other party. Such excuse shall be continued so long as the condition constituting force majeure continues and the non-performing party takes



reasonable efforts to remove the condition. For purposes of this Agreement, force majeure shall include conditions which are beyond the reasonable control of a party and which could not have been avoided by the exercise of reasonable diligence, including without limitation, an act of God, voluntary or involuntary compliance with any regulation, law or order of any government, war, civil commotion, strike or other labor disturbance, epidemic, failure or default of public utilities or common carriers, destruction of production facilities or materials by fire, earthquake, storm or like catastrophe. Provided however, payments of any monies due and owing hereunder shall not be delayed by the payor because of a force majeure affecting the payor.

20.3 Consents Not Unreasonably Withheld. Whenever provision is made in this

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Agreement for either party to secure the consent or approval of the other, that consent or approval shall not unreasonably be withheld or delayed. Whenever in this Agreement provisions are made for one party to object to or disapprove a matter, such objection or disapproval shall not unreasonably be exercised.

20.4 Assignment. Neither this Agreement nor any rights granted hereunder may

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be assigned or transferred by either party except with the prior written consent of the other party, which consent shall not be unreasonably withheld, except to an Affiliate(s) of the party or to a successor-in-interest of substantially all of the party's assets. Upon any such permitted assignment, both the assignee and the assignor shall be liable for the performance of the assigning party's obligations under this Agreement. Any such purported assignment for which consent is required and is not obtained shall be void.

20.5 Binding Upon Successors and Assigns. Subject to the limitations on

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assignment herein, this Agreement shall be binding upon and inure to the benefit of any successors in interest and assigns of ABI and RPR. Any such successor or assignee of a party's interest shall expressly assume in writing the performance of all the terms and conditions of this Agreement to be performed by such party.

20.6 Entire Agreement; Modification. This Agreement, the other Implementing

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Agreements and the Confidentiality Agreement set forth the entire agreement and understanding between the parties as to the subject matter set forth in this Agreement. There shall be no amendments or modifications to this Agreement, except by a written document which is signed by both parties.

20.7 Governing Law. This Agreement shall be construed and enforced in

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accordance with the internal laws of the Commonwealth of Pennsylvania.

20.8 Headings. The headings for each article and section in this Agreement

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have been inserted for convenience of reference only and are not intended to limit or expand on the meaning of the language contained in the particular article or section.

20.9 Severability. If any one or more of the provisions of this Agreement is  
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held to be invalid or unenforceable by the arbitration proceedings specified in  
Section 17 from which no appeal can be or is taken, the provision shall be  
considered severed from this Agreement and shall not serve to invalidate the  
remaining provisions thereof, so long as the essential benefits of this  
Agreement will still be realized. The parties shall make a good faith effort to  
replace the invalid or unenforceable provision with a valid one which in its  
economic effect is most consistent with the invalid or unenforceable provision.

20.10 No Waiver. Any delay in enforcing a party's rights under this Agreement  
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or any waiver as to a particular default or other matter shall not constitute a  
waiver of such party's rights to the future enforcement of its rights under this  
Agreement, excepting only as to an express written and signed waiver as to a  
particular matter for a particular period of time.

20.11 Name. Whenever there has been an assignment by RPR as permitted by this  
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Agreement, the term "RPR" as used in this Agreement shall also include and refer  
to, if appropriate, such assignee.

20.12 Export Controls. This Agreement is made subject to any restrictions  
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concerning the export of products or technical information from the United  
States of America which may be imposed upon or related to ABI or RPR from time  
to time by the government of the United States of America. Furthermore, ABI and  
RPR each agree that it will not export, directly or indirectly, any technical  
information acquired from the other under this Agreement or any products using  
such technical information to any country for which the United States government  
or any agency thereof at the time of export requires an export license or other  
governmental approval, without first obtaining the written consent to do so from  
the Department of Commerce or other agency of the United States government when  
required by an applicable statute or regulation.

20.13 No Implied Licenses. No licenses by one party to another are granted  
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under this Agreement by implication or estoppel.

20.14 Notices. Any notices required by this Agreement shall be in writing,  
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shall specifically refer to this Agreement and shall be sent by (i) hand  
delivery, (ii) registered mail, return receipt requested, (iii) overnight  
delivery service, or (iv) telefacsimile transmission, and shall be sent or  
delivered to the respective addresses and telefacsimile numbers set forth below,  
unless subsequently changed by written notice to the other party:

For ABI:                    AASTROM Biosciences, Inc.  
                              P.O. Box 376  
                              Ann Arbor, MI 48106  
                              Attention: President  
                              Fax: (313) 665-0485

With copy to: T. Knox Bell  
Gray Cary Ware & Freidenrich  
401 B Street, Suite 1700  
San Diego, CA 92101  
Fax: (619) 236-1048

For RPR: RPR GENCELL  
Cell and Gene Therapy Division  
Rhone-Poulenc Rorer Inc.  
500 Arcola Road  
P.O. Box 1200  
Collegeville, PA 19426-0107  
Attention: President and General Counsel  
Fax: (610) 454-8984 and 454-3808

Notices shall be deemed delivered upon receipt at the respective party's address or telefacsimile number as set forth above.

20.15 Compliance with Laws. Each party shall perform its obligations and

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conduct its affairs with respect to this Agreement in compliance with all applicable laws and governmental regulations. If any permit, authorization, registration, license or other governmental approval is required in connection with the performance of this Agreement, the same shall be obtained by the party or parties as required.

20.16 Counterparts. This Agreement may be executed in counterparts, each of

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which shall be deemed an original and all of which shall constitute one and the same agreement. Signatures for this Agreement may be transmitted by telefacsimile as binding signatures of the parties.

IN WITNESS WHEREOF, the parties have executed this Agreement by their duly authorized representatives as of the date set forth above.

AASTROM Biosciences, Inc.

Rhone-Poulenc Rorer Inc.

By: /s/ R. Douglas Armstrong

By: /s/ Thierry Soursac

-----  
Print Name: R. Douglas Armstrong, Ph.D.  
Title: President and CEO

-----  
Print Name: Thierry Soursac  
Title: Senior V.P.,  
Rhone-Poulenc Rorer Inc.  
General Manager, RPR  
Gencell

EXHIBIT A  
ABI OWNED PATENT RIGHTS

---

U. S. Application, Ser. # \_\_\_\_\_, Atty. Ref #P03 33674, P03  
33754-757 Apparatus and Method for Maintaining and Growing Biological Cells  
Armstrong et al.  
Filed: 6/6/95  
- - - - -

This Application is five separate applications, drawing on the same text, but  
with different claims tied to the Cell Production System and its individual  
components.

EXHIBIT A-1  
PATENT APPLICATIONS RELATED TO GENE LOADER

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Patent applications filed to date which are related to the Astrom Gene Loader are identified as follows:

1. U.S. Application #08/134,105  
Filed: 10/8/93  
Entitled: Methods of Increasing Rates of Infection by Directing Motion of Vectors
2. U.S. Application #08/353,531  
Filed: 12/9/94  
Entitled: Methods, Compositions and Apparatus for Cell Transfection
3. U.S. Application (Continuation of #08/134,105)  
Filed: 6/7/95  
Entitled: Methods of Increasing Rates of Infection by Directing Motion of Vectors

As specified in the definition of cCPS, the Astrom Gene Loader is not treated as a CPS.

EXHIBIT B  
ABI IN-LICENSED PATENT RIGHTS

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A. U.S. PATENTS AND APPLICATIONS

1. U.S. APPLICATION, SER. NO. 07/845,969, ATTY. REF. NO. 2363-043-55

Methods, Compositions and Devices for Maintaining and Growing Human Stem  
and/or Hematopoietic Cells

FILED: 3/4/92; (NOW ABANDONED) continuation filed 1/6/94 (SER.

NO.08/178,433)

NOTICE OF ALLOWANCE: 4/17/95

2. U.S. PATENT NO. 4,839,292; JOSEPH G. CREMONESE

Cell Culture Flask Utilizing a Membrane Barrier

ISSUED: 6/13/89

3. U.S. PATENT NO. 5,437,994

Method and Compositions for the Ex Vivo Replication of Stem Cells, for the  
Optimization of Hematopoietic Progenitor Cell Cultures, and for Increasing  
the Metabolism, GM-CSF Secretion and/or IL-6 Secretion of Human Stromal  
Cells

FILED: 7/29/91; Continuation filed 12/10/93, (Ser. No. 08/164,779), and

amendment on 8/1/94

PATENT ISSUED: 8/1/95

4. U.S. PATENT NO. 5,399,493

Method for Human Gene Therapy, Including Methods and Compositions for the  
Ex Vivo Replication and Stable Genetic Transformation of Human Stem Cells,  
for the Optimization of Human Hematopoietic Progenitor Cell Cultures and  
Stable Genetic Transformation Thereof, and for Increasing the Metabolism,  
GM-CSF Secretion and/or IL-6 Secretion of Human Stromal Cells.

PATENT ISSUED: 3/21/95

5. U.S. APP., SER. NO. 07/815,513, ATTY. REF. NO. 2363-036-55

Methods for Regulating the Specific Lineages of Cells Produced in a Human  
Hematopoietic Cell Culture, Methods for Assaying the Effect of Substances  
on Lineage-Specific Cell Production, and Cell Compositions Produced by  
these Cultures

FILED: 1/2/92; continuation filed 11/2/94 (SER. NO. 08/334,011)

EXHIBIT B (CONT'D)  
ABI IN-LICENSED PATENT RIGHTS

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B. FOREIGN PATENT FILINGS

1. PCT APP. NO. PCT/US 90/03438 (U.S. APPLICATION NO. 07/366,639)  
Attorney Reference No. 2363-22-55a epc

Methods, Compositions and Devices for Growing Cells

FILED: 6/14/90

STATUS: National Stage filed: 12/15/91 - Canada, Japan, EPO

South Korea filed: 2/18/91 (Application No. 700181/91)

2. PCT APP. NO. PCT/US91/09173 (U.S. APP. NOS. 07/628,343, 07/737,024)  
Attorney reference no. 2363-059-55a pct

Methods for Culturing and Transforming Human Stem Cell-Containing  
Compositions

FILED: 6/17/91

STATUS: Publication No. WO 9211355 published 6/9/92.

National Stage filed: 6/15-17/93 - Japan, Russia, EPO, S. Korea,  
Canada, Australia

3. PCT APP. NO. PCT/US93/01803 (U.S. APP. NO. 07/845,969)

Attorney Reference no. 2363-072-55a cip pct

Methods, Compositions and Devices for Maintaining and Growing Human and/or  
Hematopoietic Cells

FILED: 3/4/93

STATUS: Publication No. WO 9318132 published 9/16/93.

National Stages filed: 9/4/94 - Australia, Canada, EPO, Japan,  
South Korea and U.S.

STOCK PURCHASE AGREEMENT

Between

AASTROM BIOSCIENCES, INC.

and

RHONE-POULENC RORER INC.



STOCK PURCHASE AGREEMENT

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STOCK PURCHASE AGREEMENT

This Stock Purchase Agreement (this "Agreement") is made as of September 15, 1995, by and between Aastrom Biosciences, Inc., a Michigan corporation (the "Company"), and Rhone-Poulenc Rorer Inc., a Delaware corporation (the "Purchaser"), with respect to the factual recitals set forth below.

Certain terms used in this Agreement are defined in Section 1 of this Agreement.

RECITALS

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A. The Company and the Purchaser have entered into a Governance Agreement dated as of September 15, 1995 (the "Governance Agreement"), setting forth, among other things, the terms and conditions of a preliminary research collaboration between the parties concerning the development and sale of the CPS for Lymphoid Cell Applications.

B. As specified in the Governance Agreement, certain option payments paid by the Purchaser to the Company in connection with the parties' collaboration shall be applied toward the purchase by the Purchaser of shares of the capital stock of the Company.

C. As specified in the Governance Agreement, the Purchaser has the option to purchase \$12.5 million of the capital stock of the Company, including an obligation to purchase \$9.0 million of the capital stock of the Company if it exercises the Third Option.

D. As specified in the Governance Agreement, if the Purchaser exercises the Third Option, the Purchaser is also obligated under certain circumstances to purchase \$5.0 million of the capital stock of the Company in the event of a Qualifying IPO.

E. The Company has previously furnished to the Purchaser (i) a copy of the Memorandum, (ii) a copy of the Articles, and (iii) a copy of the Bylaws (collectively, the "Series D Documents").

F. As specified in the Governance Agreement, the Company and the Purchaser have negotiated, drafted and executed the following additional implementing agreements of even date herewith (hereinafter collectively called, together with this Agreement, the "Implementing Agreements"):

- a. Governance Agreement;
- b. Supply Agreement;
- c. License Agreement;
- d. Arbitration Agreement; and
- e. Research and Development Collaboration Agreement.

1. Definitions.

-----

"Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Activation Closing" means the closing for the purchase and sale of the Activation Shares, as contemplated by Section 6.1 hereof.

"Activation Closing Date" means the date of the Activation Closing, as contemplated by Section 6.1 hereof.

"Activation Date" means the date on which the Purchaser delivers the Third Option Event Notice in accordance with the provisions of the Governance Agreement.

"Activation Shares" means the shares of the Company's capital stock to be purchased by Purchaser pursuant to Section 3.1 hereof.

"Arbitration Agreement" means the agreement of that title of even date herewith between the Purchaser and the Company.

"Articles" means the Company's Amended and Restated Articles of Incorporation.

"Bylaws" means the Company's Amended and Restated Bylaws.

"Code" means the Internal Revenue Code of 1986, as amended.

"Commission" means the United States Securities and Exchange Commission.

"Common Stock" means shares of Common Stock of the Company, no par value per share.

"Company Benefit Plan" means any employee benefit plan, program, arrangement and contract (including without limitation any "employee benefit plan" as defined in Section 3(3) of ERISA) maintained or contributed to by the Company or any ERISA Affiliates or with respect to which the Company or any

ERISA Affiliates could incur liability under Sections 4069, 4201 or 4212(c) or ERISA.

"Conversion Shares" means the shares of Common Stock or other securities which are issuable upon conversion of any Preferred Stock which may be purchased hereunder.

"CPS" has the meaning provided in the License Agreement.

"Environmental Laws" means any federal, state, local or foreign law, regulation, agency interpretation, policy, order, decree, judgment or judicial opinion relating to (x) the manufacture, transport, use, treatment, storage, recycling, disposal, release or threatened release of Hazardous Substances, or (y) the preservation, restoration or protection of natural resources or health.

"Environmental Permits" means any permit, license, approval, identification number or other authorization involving Hazardous Substances or required under any Environmental Law.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, together with the rules and regulations promulgated thereunder.

"ERISA Affiliates" means any trade or business (whether or not incorporated) that is part of the same controlling group as, or under common control with, the Company within the meaning of Section 414(b)(c)(m) or (o) of the Code.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Financial Statements" means the financial statements of the Company as specified in Section 9.6 hereof.

"First Option Payment" has the meaning provided in the Governance Agreement.

"First Option Period" has the meaning provided in the Governance Agreement.

"Governance Agreement" means the Governance Agreement, dated as of the date hereof, setting forth, among other things, the terms and conditions of a preliminary research collaboration between the parties concerning the development and sale of the CPS for Lymphoid Cell Applications.

"Hazardous Substance" means any matter containing substances which are (a) listed, classified or regulated pursuant to any Environmental law, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601 et seq.; the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.; the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq.; the Toxic Substances Control Act, 15 U.S.C. 2601 et seq.; and the Clean Air Act, 42 U.S.C. 7401 et seq.; each as amended, (b) any petroleum products or by-products, asbestos containing material, polychlorinated biphenyl, radioactive materials or radon gas, or (c) any other matter to which exposure is prohibited, limited or regulated by any government authority or Environmental Law.

"Implementing Agreements" has the meaning provided in Recital F.

"IPO" shall mean the first underwritten offering by the Company to the public of Common Stock, registered under the Act.

"IPO Closing" means the closing for the purchase and sale of the IPO Shares, as contemplated by Section 8.5 hereof.

"IPO Shares" means the shares of Common Stock having an aggregate value of \$5.0 million which may be purchased by the Purchaser pursuant to Section 8 hereof.

"Licenses" means the operating authority, licenses, franchises, permits, certificates, consents, rights and privileges of the Company contemplated by Section 9.21 hereof.

"Lymphoid Cell Applications" has the meaning provided in the Governance Agreement.

"Memorandum" means the Company's Private Placement Memorandum, dated April 5, 1995, relating to an offering of the Company's Series D Preferred Stock, which sets forth relevant information concerning the Company.

"Non-Coupon Preferred Stock" means any preferred stock of the Company that carries no fixed dividend and is convertible by the holder into shares of Common Stock.

"Preferred Stock" means shares of Series E Preferred Stock of the Company, no par value per share, having the rights, privileges and preferences set forth on Exhibit D to this Agreement.

"Premium" means the premium specified in Section 8.2 of this Agreement.

"Private Placement" means an offering and sale of the Company's securities in a transaction not involving a Public Offering.

"Public Offering" means a public offering of the Company's securities registered on a registration statement under the Act.

"Purchaser Observer" has the meaning provided in Section 11.13 hereof.

"Qualifying IPO" means an IPO in which the proceeds to the Company (net of offering expenses and underwriting discounts and commissions) are at least \$10.0 million (excluding any IPO Shares purchased by the Purchaser).

"Qualifying Issuance" means a Qualifying IPO or a Qualifying Private Placement, as the case may be.

"Qualifying Private Placement" means a Private Placement after the date hereof but prior to the first anniversary of the Activation Date, involving the issuance by the Company of Common Stock or shares of the Company's Non-Coupon Preferred Stock solely for cash, and in which the gross proceeds to the Company are not less than \$5 million, at least half of which comes from new investors. Qualifying Private Placement shall include a Private Placement that has multiple closings for the sale of shares of the same securities at the same price within any six-month period. For the avoidance of doubt, a transaction or series of related transactions involving the issuance of Common Stock or shares of the Company's Non-Coupon Preferred Stock shall not be deemed to constitute a Qualifying Private Placement if, as part of such transaction or series of transactions, the purchaser receives anything of value (including, without limitation, any rights with respect to the Company's intellectual property or the manufacturing, marketing or sale of the Company's products) other than the Common Stock or Non-Coupon Preferred Stock being sold in such transaction(s).

"Second Option Payment" has the meaning provided in the Governance Agreement.

"Second Option Period" has the meaning provided in the Governance Agreement.

"Series D Documents" means the Memorandum, the Articles and the Bylaws.

"Shares" means the shares of the Company's capital stock to be purchased by Purchaser hereunder.



"Termination Closing" means the closing for the purchase and sale of the Termination Shares, as contemplated by Section 6.2 hereof.

"Termination Shares" means the shares of the Company's capital stock to be purchased by Purchaser pursuant to Section 4.1 hereof.

"Third Option" has the meaning provided in the Governance Agreement.

"USRPHC" means United States real property holding corporation.

"1934 Act Registration Statement" means a registration statement filed pursuant to the requirements of Section 12 of the Exchange Act or pursuant to any equivalent provision of any similar federal law then in effect.

2. Option Periods and Option Payments.  
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2.1 First Option. As specified in the Governance Agreement, the  
-----

Purchaser has certain rights during a First Option Period, for which the Purchaser has paid to the Company a \$1.5 million First Option Payment.

2.2 Second Option. As specified in the Governance Agreement, the  
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Purchaser has the option to extend the Governance Agreement for a Second Option Period if the Purchaser pays to the Company a \$2.0 million Second Option Payment.

2.3 Third Option. As specified in the Governance Agreement, if the  
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Purchaser pays the Second Option Payment and exercises its Third Option during the Second Option Period, the Supply Agreement and the Research and Development Collaboration Agreement shall become activated, and the obligations of the parties as of and following the Activation Date under this Agreement shall become irrevocable.

3. Purchase and Sale of Shares.  
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3.1 Purchase of Shares on Activation Date. In the event the  
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Purchaser exercises the Third Option, on the Activation Date, this Agreement shall become effective in all respects and the Purchaser shall purchase from the Company, and the Company shall issue and sell to the Purchaser, such number of Shares (the "Activation Shares") having an aggregate value equal to \$12.5 million, at a purchase price per share determined in accordance with Section 5 hereof. The purchase price for the Activation Shares shall be paid as follows:

3.1.1 On the Activation Closing Date, the Purchaser shall pay to the Company in immediately available funds the amount of \$9.0 million, and

the Company shall credit toward the purchase of the Activation Shares, the amounts of the First Option Payment (\$1.5 million) and the Second Option Payment (\$2.0 million), for an aggregate of \$12.5 million.

3.1.2 On the Activation Date, if the Company has previously closed its IPO, the Purchaser shall also purchase the IPO Shares, subject to the provisions of Section 8 hereof.

3.2 Class of Capital Stock. The Shares to be issued and

-----  
sold to the Purchaser pursuant to this Agreement shall be (i) Preferred Stock if the issuance is prior to the closing of the Company's IPO, or (ii) Common Stock if the issuance is after the closing of the Company's IPO.

3.3 Voting Rights. Once the final purchase price for the Activation

-----  
Shares is determined pursuant to Section 5 hereof, the Common Stock equivalent of the Activation Shares can be determined, and each such Common Stock equivalent shall have one vote. From the Activation Closing Date until the final purchase price is determined, the Activation Shares shall have voting rights equal to 1,500,000 shares of Common Stock. The voting rights for the Termination Shares shall be one vote per share commencing with the Termination Closing.

4. Purchase of Termination Shares.

4.1 No Exercise of Second Option. If the Purchaser has not exercised

-----  
the Second Option within the time frames contemplated by the Governance Agreement, then the Purchaser shall, at the Termination Closing, purchase from the Company, and the Company shall issue and sell to the Purchaser, 88,235 Shares having an aggregate value of \$1.5 million, at a purchase price per Share of \$17.00.

4.2 No Exercise of Third Option. If the Purchaser has exercised the

-----  
Second Option, but not the Third Option, within the time frames contemplated by the Governance Agreement, then the Company shall, at the Termination Closing, issue and sell to the Purchaser 205,882 Shares having an aggregate value of \$3.5 million, at a purchase price per Share of \$17.00. The shares purchased pursuant to Section 4.1(a) or 4.1(b) are referred to herein as the "Termination Shares."

5. Purchase Price for Activation Shares. The purchase price per Share

-----  
for the Activation Shares shall be determined as follows:

5.1 After A Qualifying Issuance. In the event that the Activation

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Date shall occur after a Qualifying Issuance, then the purchase price per Activation Share shall be the higher of (i) the price per share in the most recent Qualifying Private Placement (on a common stock conversion equivalent basis),

plus a premium of 30% (but subject to adjustment pursuant to Section 5.2(a) or (b)), or (ii) the average of the closing sales price per share of Common Stock for the fifteen trading days immediately preceding the Activation Date, but not below the purchase price per share in the Qualifying IPO, plus a premium of 30%; In either such event, the Series E Conversion Price shall initially be the purchase price per Activation Share. If the Qualifying Issuance under this Section 5.1 shall have been a Qualifying Private Placement and, the Company has a Qualifying IPO within four months after the Activation Date, the Series E Conversion Price shall be adjusted to the purchase price per share in the Qualifying IPO plus a premium of 30%.

5.2 Prior to A Qualifying Issuance. In the event that the Activation

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 Date shall occur prior to a Qualifying Issuance, then on the Activation Closing Date, the Purchaser shall purchase from the Company, and the Company shall issue and sell to the Purchaser, 1,000,000 Activation Shares, at a nominal purchase price of \$12.50 per Activation Share. The Series E Conversion Price shall initially be \$12.50, and shall be subject to adjustment as follows:

(a) If the Company has a Qualifying IPO within four months following the Activation Date, then the Series E Conversion Price shall be the price per share in the Qualifying IPO, plus a premium of 30%.

(b) If the Company has a Qualifying Private Placement (and does not have a Qualifying IPO) within four months following the Activation Date, then the Series E Conversion Price shall be the price per share in the Qualifying Private Placement (on a common stock conversion equivalent basis), plus a premium of 25%.

(c) If the Company has either a Qualifying IPO or a Qualifying Private Placement more than four months, but less than twelve months, after the Activation Date, then the Series E Conversion Price shall be the price per share in the Qualifying IPO or Qualifying Private Placement (on a common stock conversion equivalent basis), as the case may be, plus a declining premium, as follows:

Month	Premium
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5	23
6	21
7	19
8	17
9	15
10	13
11	11
12	10

(d) If the Company has not had a Qualifying Issuance prior to the first anniversary of the Activation Date, then the Series E Conversion Price shall be \$7.50.

5.3 Termination of Options. In order to clarify the

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understanding of the parties hereto, the Purchaser acknowledges that if the Purchaser does not exercise the Third Option and purchase an aggregate of \$12.5 million of Shares, the Purchaser shall nevertheless be obligated to purchase the Termination Shares as provided in Section 4, and the purchase price per Termination Share shall be \$17.00. In such event, the Company shall credit toward the purchase of such Termination Shares the amounts of the First Option Payment (\$1.5 million) and the Second Option Payment (\$2.0 million), if applicable.

6. Closing Dates; Delivery. The closings of the sale and purchase of  
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the Shares under this Agreement shall occur as follows:

6.1 The closing for the purchase and sale of the Activation Shares (the "Activation Closing") shall occur on the Activation Date, or such other date as shall be agreed upon by the parties (the "Activation Closing Date"), by means of the parties delivering all necessary signed documents and by the Purchaser paying the full purchase price for the Activation Shares by wire transfer and credits of the First Option Payment and the Second Option Payment, at the Company's offices in Ann Arbor, Michigan. At the Activation Closing, the parties shall deliver the documents, instruments and certificates specified in Section 13 hereof.

6.2 The closing for the purchase and sale of the Termination Shares (the "Termination Closing") shall occur within ten days following any termination or expiration of the Purchaser's options under the Governance Agreement without the options being extended or exercised. At the Termination Closing, the parties shall deliver the documents, instruments and certificates specified in Section 14 hereof.

6.3 The closing for the purchase of the IPO Shares (the "IPO Closing") shall occur as specified in Section 8.5 hereof.

7. Conditions to the Activation Closing.  
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7.1 Conditions to the Obligations of the Purchaser at the  
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Activation Closing. The obligation of the Purchaser to purchase the Activation  
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Shares at the Activation Closing is subject to the satisfaction on or prior to the Activation Closing Date of the following conditions, any of which may be waived by the Purchaser.

7.1.1 The Purchaser shall have received the opinion of counsel contemplated by Section 13.1.

7.1.2 The representations and warranties of the Company contained herein in Sections 9.1, 9.4, 9.5, 9.13, 9.19 and 9.20 shall be true and correct in all material respects at and as of the Activation Closing Date.

7.1.3 All of the covenants and agreements of the Company contained in this Agreement and required to be performed on or prior to the Activation Closing Date shall have been performed in a manner reasonably satisfactory in all respects to the Purchaser.

7.1.4 No action or proceeding before any court or governmental body shall be pending or threatened wherein an unfavorable judgment, decree or order will prevent the carrying out of this Agreement or the other Implementing Agreements or of any of the transactions contemplated hereby or thereby, declare unlawful the transactions contemplated by this Agreement or the other Implementing Agreements, or cause such transactions to be rescinded.

7.1.5 All consents required to enable the Company to observe and comply with all of its obligations contemplated hereby shall have been obtained and all "blue sky" filings necessary at or prior to the Activation Closing in connection with the issuance and sale of the Activation Shares shall have been made.

7.1.6 The Company shall have delivered the documents described in Section 13.4.

7.1.7 All corporate, shareholder and other proceedings taken or to be taken by the Company in connection with the transactions contemplated hereby to be consummated at or prior to the Activation Closing, and all documents incident thereto, shall be reasonably satisfactory in form and substance to the Purchaser.

7.1.8 The other Implementing Agreements shall be in full force and effect.

7.2 Conditions to the Obligations of the Company at the  
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Activation Closing. The obligation of the Company to issue and sell the  
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Activation Shares at the Activation Closing is subject to the satisfaction on or prior to the Activation Closing Date of the following conditions, any of which may be waived by the Company:

7.2.1 All of the representations and warranties of the Purchaser contained herein shall be true and correct in all material respects at and as of the Activation Closing Date with the same effect as if made on the Activation Closing Date.

7.2.2 All of the covenants and agreements of the Purchaser contained in this Agreement and required to be performed on or prior to the Activation Closing Date shall have been performed in a manner reasonably satisfactory in all respects to the Company.

7.2.3 No action or proceeding before any court or governmental body shall be pending or threatened wherein an unfavorable judgment, decree or order will or could prevent the carrying out of this Agreement or the other Implementing Agreements or of any of the transactions contemplated hereby, declare unlawful the transactions contemplated by this Agreement or the other Implementing Agreements, or cause such transactions to be rescinded.

7.2.4 All consents required to enable the Purchaser to observe and comply with all of its obligations contemplated hereby shall have been obtained.

7.2.5 The other Implementing Agreements shall be in full force and effect.

8. Initial Public Offering Commitment.

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8.1 In the event that the Company closes a Qualifying IPO prior to the Activation Date, the Purchaser shall have the option, but shall not be obligated, to participate in the Qualifying IPO and purchase an additional number of Shares having an aggregate value of \$5.0 million, at a purchase price per Share equal to the price per share of Common Stock in the Qualifying IPO. The Purchaser may also elect to delay purchasing the IPO Shares until the Activation Date.

8.2 If the Purchaser has elected to delay its participation in the Qualifying IPO until the Activation Date, then on the Activation Date, the Purchaser shall purchase the IPO Shares at a purchase price per Share equal to the higher of (i) the price per share of Common Stock in the Qualifying IPO, plus the Premium, if applicable, or (ii) the average of the closing sales price per share of Common Stock for the fifteen trading days immediately preceding the Activation Date, plus the Premium, if applicable. The Premium shall be calculated by adding 5% (on a non-compounded basis) to the purchase price for each full month after November 9, 1996, until the purchase price is paid, up to a maximum Premium of 20%.

8.3 If the Purchaser does not exercise the Third Option, the Purchaser shall have no obligation to purchase the IPO Shares.

8.4 If the Purchaser exercises the Third Option, and the Company subsequently has a Qualifying IPO, then the Purchaser shall be obligated to purchase the IPO Shares (unless the Purchaser has previously purchased IPO

Shares pursuant to Section 8.1 above), at the time specified in Section 8.5 below, at a purchase price per Share equal to the price per share of Common Stock in the Qualifying IPO; provided, however, that the Purchaser shall have no obligation to purchase the IPO Shares if the Supply Agreement shall have been terminated more than two years prior to the Qualifying IPO.

8.5 The IPO Closing shall occur as follows:

(a) If the Qualifying IPO occurs before the Activation Date, and the Purchaser elects to purchase the IPO Shares pursuant to Section 8.1 hereof, then the purchase and IPO Closing shall occur simultaneously with the closing of the Qualifying IPO.

(b) If the Qualifying IPO occurs before the Activation Date, and the Purchaser did not elect for an early purchase at the time of the IPO pursuant to Section 8.1, then the purchase and IPO Closing shall occur on the Activation Date, simultaneous with the Activation Closing.

(c) If the Qualifying IPO occurs after the Activation Date, then the purchase and IPO Closing shall occur simultaneous with the Company closing its Qualifying IPO.

9. Representations and Warranties of the Company.  
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The Company hereby represents and warrants to the Purchaser as of the date hereof, the following, subject to the exceptions set forth on the Schedule of Exceptions attached hereto as Exhibit A, or, as provided in particular representations and warranties below, subject to the Memorandum. At the Activation Closing, the Company shall make the representations and warranties contained in Sections 9.1, 9.4, 9.5, 9.13, 9.19 and 9.20.

9.1 Organization and Standing; Articles and Bylaws. The Company  
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is a corporation duly organized, validly existing, and in good standing under the laws of the State of Michigan, and has all requisite corporate power and authority to own and operate its properties and assets and to carry on its business as presently conducted and to enter into and perform this Agreement and the other Implementing Agreements. The nature of the Company's activities and its properties (both owned and leased) do not make it necessary for the Company to qualify to do business in any other jurisdiction, except where the failure to so qualify would not have a material adverse effect upon the business and operations of the Company.

9.2 Capitalization. As of the date of this Agreement, the  
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authorized capital stock of the Company is as described in Schedule 9.2 of Exhibit A to this Agreement and consists of (a) 17,000,000 shares of Common Stock, and (b) 8,540,000 shares of preferred stock. All issued and outstanding

shares of the Company's capital stock have been duly authorized and validly issued and are fully paid and nonassessable. Except as set forth in the Schedule of Exceptions, there are no outstanding rights of first refusal, preemptive rights or other rights, options, warrants, conversion rights, or other agreements either directly or indirectly providing for the purchase or acquisition from the Company of any shares of its capital stock. All of the outstanding shares of capital stock of the Company have been duly and validly issued in compliance with federal and state securities laws.

9.3 Subsidiaries. The Company has no subsidiaries. The Company

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does not presently own or control, directly or indirectly, any equity interest in any corporation, association or business entity. The Company is not, directly or indirectly, a participant in any joint venture or partnership.

9.4 Authorization. All corporate action on the part of the

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Company, its officers, directors and shareholders necessary for the authorization, execution and delivery of this Agreement, and the performance of the Company's obligations under this Agreement, has been taken. At or prior to the Activation Closing, or the Termination Closing, as applicable, all corporate action on the part of the Company, its officers, directors and shareholders necessary for the authorization, issuance, sale and delivery of the Shares (and the Conversion Shares) will have been taken. This Agreement, when executed and delivered by the Company and the Purchaser, shall constitute the valid and legally binding obligation of the Company, enforceable in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors.

9.5 Validity of the Shares. The sale of the Shares (including any

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Conversion Shares) is not and will not be subject to any preemptive rights or rights of first refusal that have not been waived. When issued, sold and delivered in compliance with the provisions of this Agreement, the Shares will be validly issued, fully paid and nonassessable, and will be free of any liens, encumbrances or, except as set forth in the immediately following sentence, restrictions. The Shares may be subject to restrictions on transfer under state and/or federal securities laws as set forth herein or as otherwise required by such laws at the time a transfer is proposed. The voting rights, designations, preferences, limitations and special rights of the Shares (including the Conversion Shares), when issued, shall be as fully set forth in the Articles and Exhibit D attached hereto. The Company has reserved a sufficient number of shares of its Common Stock (as hereinafter defined) for issuance upon conversion of any Preferred Stock issued and sold hereunder and such shares of Common Stock, when issued in accordance with the terms of such Preferred Stock, will be duly authorized, validly issued, fully paid, non-assessable and free and clear of all encumbrances, liens or restrictions, except for restrictions on transfer imposed by applicable securities laws.

9.6 Financial Statements. The Company has delivered to the Purchaser

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(a) its audited balance sheet as at June 30, 1995, together with audited



statements of income, shareholders' equity, and cash flows for the fiscal year then ended, and (b) its unaudited balance sheet as of July 31, 1995 and its unaudited income statement for the one (1) month then ended (collectively, the "Financial Statements"). The Financial Statements, together with the notes thereto, are complete and correct in all material respects, have been prepared in accordance with generally accepted accounting principles applied on a consistent basis throughout the periods indicated, except as disclosed therein, and present fairly the financial condition and position of the Company at the dates shown and the results of operations of the Company for the periods therein specified; provided, however, that the unaudited financial statements are subject to normal year-end adjustments, which are not expected to be material, and do not contain footnotes required under generally accepted accounting principles.

9.7 Material Contracts and Agreements. As used herein, the term

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"material" shall mean an obligation which will cause the Company to incur expenses greater than, or which has a value greater than, \$50,000. Except as set forth in the Memorandum and the Schedule of Exceptions, the Company does not have any material contract, agreement, lease, or other commitment, written or oral, absolute or contingent. All material contracts, agreements, leases and other commitments to which the Company is a party are valid, binding, and in full force and effect in all material respects and, to the best of the Company's knowledge, without any material breach by any party thereto.

9.8 Outstanding Indebtedness. The Company does not have any

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indebtedness for borrowed money, or other liabilities (fixed or contingent), which the Company has directly or indirectly created, incurred, assumed or guaranteed, or with respect to which the Company has otherwise become directly or indirectly liable, that is not disclosed in the Financial Statements, the Memorandum, or the Exhibits attached to this Agreement, other than indebtedness incurred in the ordinary course of business since July 31, 1995 which in the aggregate does not exceed \$50,000.

9.9 Officers, Directors and Shareholders. Set forth in the

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Memorandum is a list of officers, directors and major shareholders of the Company as of the date of this Agreement, which list is full, complete and correct. The Company has also delivered to the Purchaser a complete list of the Company's shareholders as of the date hereof.

9.10 Changes. Except as set forth in the Schedule of Exceptions

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or the Memorandum, since July 31, 1995 until the date of this Agreement, to the best of the Company's knowledge there has not been:

(a) Any change in the assets, liabilities, financial condition, or operations of the Company from that reflected in the Financial Statements, other than changes in the ordinary course of business, none of which

individually or in the aggregate has had a material adverse effect on such assets, liabilities, financial condition or operations of the Company;

(b) Any change, except in the ordinary course of business, in the contingent obligations of the Company by way of guaranty, endorsement, indemnity, warranty or otherwise;

(c) Any damage, destruction or loss, whether or not covered by insurance, materially and adversely affecting the properties or business of the Company;

(d) Any waiver or compromise by the Company of a valuable right or of a material debt owed to it;

(e) Any direct or indirect loans made by the Company to any employee, officer, director or shareholder of the Company, other than travel advances made in the ordinary course of business;

(f) Any increase in the compensation of any employee, officer or director of the Company, other than for ordinary course of business annual compensation review adjustments;

(g) Any declaration or payment of any dividend or other distribution of the assets of the Company;

(h) Any material labor organization activity;

(i) Any material debt, obligation or liability incurred, assumed or guaranteed by the Company, except current liabilities incurred in the ordinary course of business;

(j) Any change in the outstanding securities of the Company, other than the issuance of Common Stock upon exercise of outstanding stock options;

(k) Any capital expenditure or commitment by the Company in excess of \$50,000 individually or \$200,000 in the aggregate;

(l) Any change in any method of accounting or accounting practice or policy used by the Company, other than such changes required by GAAP;

(m) Any failure by the Company to pay creditors aggregate amounts in excess of \$100,000 owed to such creditors when due;

(n) Any disclosure of any secret or confidential intellectual property (except by way of issuance of any patent) or any lapse or abandonment of any intellectual property (or any registration or grant thereof or any application relating thereto) to which, or under which, the Company has any right, title, interest or license;

(o) Any agreement by or on behalf of the Company, whether in writing or otherwise, to take any of the actions specified in this Section 9.10;

(p) To the best of the Company's knowledge, any other event or condition (or events or conditions) of any character which, either individually or cumulatively, has materially and adversely affected the business, affairs, prospects, conditions, operations, properties or assets of the Company.

9.11 Title to Properties and Assets; Liens, etc.. The Company has

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good and marketable title to its properties and assets, including the properties and assets reflected in the Financial Statements, and good title to all its leasehold estates, in each case subject to no mortgage, pledge, lien, lease, encumbrance or charge, other than (a) as reflected in the Financial Statements or in the notes thereto, (b) liens resulting from taxes which have not yet become delinquent, or (c) minor liens, encumbrances or defects of title which do not, individually or in the aggregate, materially detract from the value of the property subject thereto or materially impair the operations of the Company. With respect to property it leases, to the best of the Company's knowledge, the Company is in compliance with such leases in all material respects.

9.12 Patents, Trademarks, etc.. The Company owns and possesses or

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is licensed under all patents, patent applications, licenses, trademarks, service marks, trade names, inventions, processes, formulae, trade secrets, franchises, copyrights and other proprietary rights necessary for the operation of its business as now conducted and as proposed to be conducted, with no known infringement of or conflict with the rights of others. To the best of the Company's knowledge, such ownership, possession or license is exclusive and not subject to termination without the Company's consent. The Company is not aware of any third party that is infringing or violating any of its patents, licenses, trademarks, service marks, trade names, inventions, processes, formulae, trade secrets, franchises, copyrights or other proprietary rights.

9.13 Compliance with Other Instruments. The Company is not in violation of

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any term of its Articles or Bylaws or, to the best of the Company's knowledge, any material mortgage, indenture, contract, agreement, instrument, judgment, decree, order, statute, rule or regulation applicable to the Company, except for violations which, in the aggregate, are not material. The execution, delivery and performance of and compliance with this Agreement and the other Implementing Agreements, and the issuance and sale of the Shares pursuant

hereto, will not with or without the giving of notice or the passage of time, or both, result in any such violation, or be in conflict with or constitute a default under any such term, result in the creation of any mortgage, pledge, lien, encumbrance or charge upon any of the properties or assets of the Company or cause the Company to lose the benefit of any right or privilege it presently enjoys.

9.14 Litigation, etc.. There are no actions, suits, proceedings,

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orders, claims or investigations before any federal, state, municipal, foreign or other governmental department, commission, board, bureau, agency or instrumentality pending or, to the best of the Company's knowledge, threatened against or affecting the Company or its assets or business (or any basis therefor known to the Company), which question the validity of this Agreement or the other Implementing Agreements or any action taken or to be taken in connection with this Agreement or the other Implementing Agreements or which, either individually or in the aggregate, might result in a material adverse change in the business, prospects, conditions, affairs or operations of the Company or in any of its properties or assets, or in any material impairment of the right or ability of the Company to carry on its business as now conducted or as proposed to be conducted, or in any material liability on the part of the Company. The foregoing includes, without limitation, actions pending or threatened (or any basis therefor known to the Company) involving the prior employment of any of the Company's employees or former employees (other than as described in the Schedule of Exceptions), their use in connection with the Company's business of any information or techniques allegedly proprietary to any of their former employers, or their obligations under any agreements with prior employers.

9.15 Tax Returns and Payments. The Company has accurately

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prepared and timely filed all tax returns (federal, state and local) required to be filed by it. All taxes shown to be due and payable on said returns, any assessments, fees or charges and all other taxes due and payable by the Company on or before the date hereof, have been paid or will be paid prior to the time they become delinquent. No deficiency assessment or proposed adjustment of the Company's federal, state or local taxes is pending and the Company has no knowledge of any proposed liability for any tax to be imposed upon its properties or assets for which there is not an adequate reserve reflected in the Financial Statements.

9.16 Employees. To the best of the Company's knowledge, no

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employee of the Company is obligated under any contract (including licenses, covenants, or commitments of any nature) or other agreement, or subject to any judgment, decree or order of any Court or administrative agency that would conflict with such employee's obligation to use his or her best efforts to promote the interests of the Company or that would conflict with the Company's business as conducted or as proposed to be conducted. Except as set forth in the Schedule of Exceptions, to the best of the Company's knowledge, no employee of the Company is in violation of any term of any employment contract, proprietary information and inventions agreement, non-competition agreement or any other

contract or agreement relating to the relationship of any such employee with the Company or any previous employer. The Company has no collective bargaining agreements with any of its employees and, to the best of the Company's knowledge, there is no labor union organizing activity pending or threatened with respect to the Company. Except as set forth on the Schedule of Exceptions or the Memorandum, there is no pension, health, profit sharing, bonus, stock purchase, stock option, hospitalization, insurance, severance or any other employee benefit or welfare benefit plan with respect to any officer or employee of the Company.

9.17 Insurance. The Company maintains insurance coverage of the

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types and in the amounts which the Company reasonably believes is adequate for its business as of the date of this Agreement.

9.18 Registration Rights. No person has any right to cause the

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Company to effect registration under the Act of any shares of Common Stock or other securities of the Company, other than pursuant to the Amended and Restated Investors' Rights Agreement.

9.19 Governmental Consents. All consents, approvals, orders or

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authorizations of, or registrations, qualifications, designations, declarations or filings with, any governmental authority, required on the part of the Company in connection with the valid execution and delivery of this Agreement or the other Implementing Agreements, the offer, sale or issuance of the Shares, or the consummation of any other transaction contemplated by this Agreement, have been obtained, or will be obtained prior to the applicable closing, excepting only for routine blue sky law notices to be filed with certain state and federal securities commissions after the applicable closing, which notices or filings will be filed on a timely basis.

9.20 Offering. Assuming the accuracy of the representations and

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warranties of the Purchaser contained in Section 10 hereof, the offer, issuance and sale of the Shares (including any Conversion Shares) are and will be exempt from the registration and prospectus delivery requirements of the Act and are exempt from registration and qualification under the registration, permit or qualification requirements of all applicable state securities laws.

9.21 Operating Rights. The Company has all operating authority,

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licenses, franchises, permits, certificates, consents, rights and privileges (collectively "Licenses") as are necessary or appropriate to the operation of its business as now conducted and as proposed to be conducted, except where the failure to have such License would not have a material adverse effect on its business as now conducted and as proposed to be conducted. Such Licenses are in full force and effect, no violations have been or are expected to have been recorded in respect of any such Licenses, and no proceeding is pending or, to the knowledge of the Company, threatened that could result in the revocation or

limitation of any of such Licenses. The Company has conducted its business so as to comply in all material respects with all such Licenses.

9.22 Full Disclosure. Neither this Agreement, the representations

and warranties by the Company contained herein, the Exhibits hereto, the Financial Statements, the Memorandum, nor any other written statement or certificate delivered or to be furnished to the Purchaser (or the Purchaser's counsel) in connection with this Agreement, when read together, contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained herein or therein not misleading.

9.23 Manufacturing Rights. Excepting only as specified in the

Memorandum or the Schedule of Exceptions, the Company has not granted rights or licenses to manufacture, assemble or sell its products to any person, corporation, partnership or other entity, is not bound by any agreement that affects the Company's exclusive right to manufacture, assemble or sell its products, and has not licensed or sold any of its technology or proprietary information to any person, corporation, partnership or other entity.

9.24 Proprietary Information.

(a) The Company has taken all reasonable security measures to protect the secrecy, confidentiality and value of all trade secrets, know-how, inventions, designs, processes and technical data required to conduct its business.

(b) Each officer, employee and consultant of the Company has signed (and each future officer, employee and consultant will be required to sign) a proprietary information agreement in the Company's standard form, each of which agreements is in full force and effect as of the date hereof. Except as set forth in the Schedule of Exceptions, to the best of the Company's knowledge, none of the Company's current or former officers, employees or consultants is or will be in violation thereof, and the Company will use its best efforts to prevent any such violation.

9.25 Environmental Matters. Except as would not have a material

adverse effect on the business, operations, properties, assets, financial condition or prospects of the Company, to the best of the Company's knowledge, the Company (a) is not violating and has not in the past violated any Environmental Laws or Environmental Permits, (b) is not exposed to any claims of liability for any off-site disposal or contamination, (c) has not received any claim or threatened claim relating to any Environmental Law, Environmental Permit or otherwise relating to any Hazardous Substance, and (d) is not aware of any circumstances likely to result in claims, liability, investigation, monitoring or remediation under any Environmental Law. With respect to the Company's period of ownership, lease or

use of any property, to the best of the Company's knowledge, there has not been any contamination, release or threat of release of any Hazardous Substance at any currently or formerly owned, leased or used real property that would have a material adverse effect on the business, operations, properties, assets, financial condition or prospects of the Company.

9.26 Employee Benefit Plan.  
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(a) To the best of the Company's knowledge, with respect to each Company Benefit Plan, no event has occurred, other than claims for benefits, and there exists no condition or set of circumstances in connection with which (a) the Company or any of its ERISA Affiliates could be subject to any liability under the terms of such Company Benefit Plans, ERISA, the Code or any other applicable law or regulation which would, individually or in the aggregate, have a material adverse effect on the business, operations, properties, assets, financial condition or prospects of the Company. Except as set forth in the Schedule of Exceptions, none of the Company Benefit Plans (a) promises or provides retiree medical or life insurance benefits to any person, or (b) is subject to Title IV or ERISA, and neither the Company nor any of its ERISA Affiliates has incurred, or reasonably expects to incur, any direct or indirect liability under or by operation of Title IV of ERISA.

9.27 Real Property Holding Company. The Company acknowledges that  
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as a result of the investment contemplated hereunder, it may have a foreign interest-holder within the meaning of Treasury Regulation ("Reg.") (P) 1.897-2(h)(1)(i). The Company represents and warrants that it is not a United States real property holding corporation ("USRPHC") within the meaning of Internal Revenue Code Section 897(c)(2) and the regulations thereunder, and agrees to use reasonable efforts to avoid becoming a USRPHC. The Company agrees to make determinations as to its status as a USRPHC, and will file statements concerning those determinations with the Internal Revenue Service, in the manner and at the times required under Reg. (P) 1.897-2(h), or any supplementary or successor provision thereto. Within 30 days of a request from the Purchaser, the Company will inform the Purchaser, in the manner set forth in Reg. (P) 1.897-2(h)(1)(iv) or any supplementary or successor provision thereto, whether the Purchaser's interest in the Company constitutes a United States real property interest (within the meaning of Internal Revenue Code Section 897(c)(1) and the regulations thereunder) and whether the Company has provided to the Internal Revenue Service all required notices as to its USRPHC status.

9.28 Activation Closing Date. On the Activation Closing Date, the  
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Company shall deliver to the Purchaser a revised Schedule of Exceptions to the representations and warranties contained herein. The Company and the Purchaser acknowledge that material changes may occur between the date hereof and the Activation Closing Date and that the Purchaser's obligation to purchase the

Activation Shares is subject only to the continuing accuracy of the representations and warranties contained in Sections 9.1, 9.4, 9.5, 9.13, 9.19 and 9.20, hereof.

9.29 Termination Closing. On the Termination Closing Date, the

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Company shall remake the representations and warranties contained in Sections 9.4, 9.5, 9.13, 9.19 and 9.20.

10. Representations and Warranties of the Purchaser.

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The Purchaser hereby represents and warrants to the Company as follows:

10.1 Legal Power. It has the requisite legal power to enter into

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this Agreement, to purchase the Shares hereunder and to carry out and perform its obligations under the terms of this Agreement.

10.2 Due Execution. This Agreement has been duly authorized,

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executed and delivered by the Purchaser and, upon due execution and delivery by the Company, this Agreement will be a valid and legally binding agreement of the Purchaser, enforceable in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors.

10.3 Investment Representations.

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(a) The Purchaser will be acquiring the Shares for its own account, not as nominee or agent, for investment and not with a view to, or for resale in connection with, any distribution or public offering thereof within the meaning of the Act.

(b) The Purchaser understands that (i) the Shares (other than the IPO Shares) have not been registered under the Act by reason of a specific exemption therefrom, that they must be held by it indefinitely, and that it must, therefore, bear the economic risk of such investment indefinitely, unless a subsequent disposition thereof is registered under the Act or is exempt from such registration; (ii) each certificate representing the Shares (other than the IPO Shares) will be endorsed with the following legend:

"THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED, OR OTHERWISE TRANSFERRED UNLESS (A) COVERED BY AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR (B) THE COMPANY HAS BEEN FURNISHED WITH AN OPINION OF COUNSEL ACCEPTABLE TO THE COMPANY TO THE EFFECT THAT



NO REGISTRATION IS LEGALLY REQUIRED FOR SUCH TRANSFER."

and (iii) the Company will instruct any transfer agent not to register the transfer of any of the Shares (other than the IPO Shares) unless the conditions specified in the foregoing legend are satisfied.

(c) The Purchaser has been furnished with such materials and has been given access to such information relating to the Company as the Purchaser has requested, and it has been afforded the opportunity to ask questions regarding the Company and the Shares, all as it has found necessary to make an informed investment decision.

(d) By reason of its business or financial experience, it has the capacity to protect its own interests in connection with this transaction.

(e) The Purchaser is a corporation, having assets in excess of \$5,000,000, it was not formed for the purpose of acquiring the Shares, and it is an "accredited investor" as defined in Rule 501 promulgated under the Act.

10.4 Activation Closing; Termination Closing and IPO Closing. At  
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and as of the dates of the Activation Closing and the Termination Closing, the Purchaser shall reaffirm the continuing accuracy of the representations and warranties of Sections 10.1 and 10.3.

11. Covenants of the Company. From and after the Activation Closing (or  
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in the case of the covenants contained in Sections 11.6, 11.7, 11.8 and 11.12, the Termination Closing), the Company covenants and agrees with the Purchaser as follows:

11.1 Use of Proceeds. The proceeds of the sale of the Shares have  
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been and will be used for working capital and general corporate purposes.

11.2 Access to Information. Up until the date of the Company's  
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IPO, the Company shall, and shall cause its officers, directors, employees, auditors and other agents to, provide the Purchaser such financial, operating and other data and information with respect to the business and properties of the Company as the Purchaser shall reasonably request from time to time to monitor the investment made pursuant hereto and to exercise its rights hereunder.

11.3 Financial Statements and Other Reports.  
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11.3.1 Up until the date of the Company's IPO, the Company will furnish to the Purchaser, as soon as practicable, and in any event

within 90 days after the end of each fiscal year of the Company, an annual report of the Company, including a balance sheet as of the end of such fiscal year and statements of operations, shareholders' equity and cash flows for such fiscal year, together with the related notes thereto, setting forth in each case in comparative form corresponding figures for the preceding fiscal year, all of which will present fairly the financial position of the Company and the results of its operations and changes in its financial position as of the time and for the period then ended. The financial statements shall be accompanied by an unqualified report of independent public accountants of recognized national standing to the effect that such financial statements have been prepared in accordance with generally accepted accounting principles applied on a basis consistent with prior years (except as otherwise specified in such report), and present fairly the financial position of the Company and the results of its operations and changes in its financial position as of the time and for the period then ended. The Company will conduct its business such that such report of the independent public accounts will not contain any qualifications as to the scope of the audit, the continuance of the Company, or with respect to the Company's compliance with generally accepted accounting principles, except for change in methods of accounting in which such accountants concur.

11.3.2 Up until the date of the Company's IPO, the Company will furnish to Purchaser as soon as practicable, and in any event within 45 days after the end of each fiscal quarter of the Company, a report of the Company, consisting of an unaudited balance sheet as of the end of such quarter, and unaudited statements of operations, shareholders' equity and cash flows for such quarter, and for the fiscal year-to-day, setting forth in each case in comparative form the corresponding figures for the preceding year. All such reports shall be certified by the Treasurer of the Company to present fairly the financial position of the Company and the results of its operations and changes in its financial position as of the time and for the period then ended and to have been prepared in accordance GAAP, subject to normal year-end adjustments, which shall not be material in nature or amount.

11.4 Consents. On or before the Activation Closing, the Company  
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shall obtain all consents and shareholder approvals needed to enable it to perform all of its obligations under this Agreement and the other Implementing Agreements and the transactions contemplated hereby and thereby.

11.5 Restrictive Agreement. Subsequent to the Activation Closing  
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or the Termination Closing, the Company will not be a party to any agreement or instrument which by its terms would restrict the Company's performance of its obligations pursuant to this Agreement or the Shares (including any redemption or conversion thereof) or the other Implementing Agreements.

11.6 Notification of Registration Under the Exchange Act. The  
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Company will give the holder of record of the Shares prompt written notice of the effectiveness of any registration statement filed pursuant to the requirements of

Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or pursuant to any equivalent provision of any similar federal law then in force (a "1934 Act Registration Statement") relating to the Common Stock, and the number of shares of such class of equity securities outstanding at the time such registration statement becomes effective. If the Company has filed a 1934 Act Registration Statement or a registration statement on any form other than Form S-8 (or any successor form serving the same general purpose) pursuant to the requirements of the Act, the Company further covenants that it will file all reports required to be filed by it under the Act or the Exchange Act and the rules and regulations thereunder or, if the Company is not required to file such reports, it will, upon the request of the holder of record of the Shares, make publicly available such information as will enable it to sell the Shares without a registration statement, and will take such further action as such holder may request, all to the extent required from time to time to enable such holder to sell the Shares, without registration within the limitations of the exemptions provided by (i) Rule 144 and Rule 144A adopted by the Commission under the Act, as such rules may be amended from time to time, or (ii) any similar rule or regulation hereafter adopted by the Commission.

11.7 Reservation of Shares. The Company shall at all times  
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reserve and keep available, free from preemptive rights, out of its authorized and unissued Common Stock the number of shares of Common Stock issuable upon conversion of the Preferred Shares.

11.8 Repurchase, Redemption and Other Actions. The Company will  
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give the Purchaser at least thirty calendar days notice of any action, whether by repurchase or redemption of its securities or otherwise, which would cause the percentage of outstanding voting securities of the Company owned by the Purchaser to exceed 19.9% of the outstanding voting securities of the Company, on a fully diluted, as converted basis.

11.9 Listing of Common Stock. From and after the closing of the  
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Company's IPO, the Company shall use its reasonable best efforts to cause the Common Stock to be listed for trading at all times on either the Nasdaq National Stock Market or the American Stock Exchange or the New York Stock Exchange.

11.10 Michigan Business Corporation Act. The Company will not  
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take any action to amend the Bylaws or Articles so as to make Chapter 7B of the MBCA, or any successor provision thereto, applicable to any acquisition by Purchaser of shares of Common Stock or other securities of the Company. In the event that the Articles are amended so as to make Chapter 7B of the MBCA, or any successor provision thereto, applicable to any acquisition by the Purchaser of, the Shares (including any Conversion Shares) or any other securities of the Company, the Company shall take such actions as shall be necessary and permitted by the MBCA so that (a) the securities that the Purchaser is entitled to acquire will, upon such issuance, and (b) the Shares (including any Conversion

Shares) will, in accordance with their terms, be duly accorded full voting rights. The Company will use its reasonable best efforts, including the solicitation of votes by proxy, to obtain such votes of stockholders of the Company as shall be necessary to accord the Purchaser with such full voting rights.

11.11 Stockholders' Rights. The Company shall not adopt a  
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stockholder rights plan, enter into any agreement, arrangement or understanding or grant any warrants, options, rights or other privileges which, upon acquisition by the Purchaser of the Shares (including any Conversion Shares) or pursuant to Section 11.8 hereof, would result in the Purchaser, in its capacity as a holder of such securities, being subject to different rights and obligations as all other holders of Common Stock or voting securities of the Company, as a result of such acquisition.

11.12 Removal of Restrictive Legend. The Company shall remove the  
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legend set forth in Section 10.3 from any stock certificate issued to the Purchaser by delivery of substitute certificate(s) without such legend if the Purchaser shall have delivered to the Company an opinion of counsel in form and substance reasonably satisfactory to the Company to the effect that such legend is not required for purposes of compliance with the Act.

11.13 Board Observer. Subject to the limitation provided below,  
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from and after the Activation Closing Date, (i) the Purchaser shall be entitled to have present, in a non-voting observer capacity at all meetings of the Board of Directors of the Company (the "Board"), one person designated by the Purchaser and reasonably acceptable to the Company (the "Purchaser Observer"), and (ii) the Company (a) shall deliver notice of all meetings of the Board to the Purchaser Observer simultaneously with, and in the same form as, notice to the directors of the Company, and (b) shall deliver to the Purchaser copies of all written materials furnished to the Board simultaneously with the delivery of such written materials to the Board. The Purchaser Observer shall enter into a confidentiality agreement reasonably acceptable to the Company. The Purchaser Observer shall withdraw from any portion of a Board meeting at which time there is a discussion of matters that present a conflict of interest to the Purchaser. The Company may withhold from delivery to the Purchaser Observer written materials concerning matters which present a conflict of interest to the Purchaser.

12. Stock Registration and Information Rights.  
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By its execution and delivery of this Agreement, the Purchaser shall have the stock registration rights as have been granted by the Company pursuant to Sections 2.4 through 2.15 of that certain Amended and Restated Investors' Rights Agreement dated April 7, 1992 by and among the Company and certain investors and shareholders of the Company, a copy of which has been delivered to the Purchaser.

13. Activation Closing. At the Activation Closing, the following shall

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occur:

13.1 Opinion of the Company's Counsel. The Company shall deliver

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to the Purchaser an opinion of counsel to the Company (which counsel shall be reasonably acceptable to Purchaser), substantially in the form attached hereto as Exhibit B, addressed to the Purchaser and dated the date of the Activation Closing. In rendering the opinion called for under this Section 13.1, counsel may rely as to factual matters on certificates of public officials, officers of the Company, and officers of the Purchaser.

13.2 Receipt of Purchase Price. At the Activation Closing, the

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Purchaser shall deliver to the Company, by wire transfer, funds in the amount of \$9.0 million, in payment for the Activation Shares, and the Company shall credit toward the purchase of the Activation Shares, the amounts of the First Option Payment and the Second Option Payment. The parties acknowledge that if the Purchaser elects not to exercise the Third Option, the Purchaser shall receive credits for the First Option Payment and the Second Option Payment, if applicable, toward the purchase of the Termination Shares having an aggregate value of \$1.5 million or \$3.5 million, as the case may be.

13.3 Implementing Agreements. The Purchaser and the Company shall

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sign and deliver to each other copies of the other Implementing Agreements.

13.4 Delivery of Stock Certificates and Other Documents. The

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Company shall deliver to Purchaser (i) a stock certificate representing the Activation Shares, and (ii) a copy of the Articles, certified by the Corporations and Securities Bureau of the Department of Commerce of the State of Michigan, (iii) a copy of the Bylaws, certified by the Secretary of the Company, and (iv) evidence reasonably satisfactory to the Purchaser of the adoption by the Board of actions duly approving this Agreement and the other Implementing Agreements and the transactions contemplated hereby and thereby.

14. Termination Closing. The Termination Closing shall not be

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subject to any conditions other than as set forth in this Section 14, and the Company shall have no obligation to make any representations or warranties as of the date of, and in connection with, the Termination Closing, except as set forth in Section 9.29. At the Termination Closing, the following shall occur:

14.1 Opinion of the Company's Counsel. The Company shall deliver

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to the Purchaser an opinion of counsel to the Company (which counsel shall be reasonably acceptable to the Company), substantially in the form attached hereto as Exhibit C, which opinion shall be addressed to the Purchaser and dated the date of the Termination Closing. In rendering the opinion called for under this

Section 14.1, counsel may rely as to factual matters on certificates of public officials, officers of the Company, and officers of the Purchaser.

14.2 Credit for Purchase Price. At the Termination Closing, the

Company shall credit in full payment of the purchase price for the Termination Shares, the amounts of the First Option Payment and the Second Option Payment.

14.3 Delivery of Stock Certificates and Other Documents. The

Company shall deliver to Purchaser (i) a stock certificate representing the Termination Shares, and (ii) a copy of the Articles, certified by the Corporations and Securities Bureau of the Department of Commerce of the State of Michigan, (iii) a copy of the Bylaws, certified by the Secretary of the Company, and (iv) evidence reasonably satisfactory to the Purchaser of the adoption by the Board of actions duly approving this Agreement and the transactions contemplated hereby.

15. IPO Closing. At the IPO Closing, the following shall occur:

15.1 Opinion of the Company's Counsel. The Company shall deliver

to the Purchaser a copy of the opinion of counsel delivered to the underwriters in the IPO and upon which the Purchasers shall be entitled to rely.

15.2 Receipt of Purchase Price. At the IPO Closing, the Purchaser

shall deliver to the Company, by wire transfer, funds in the amount of \$5.0 million, in payment for the IPO Shares.

15.3 Delivery of Stock Certificates and Other Documents. The

Company shall deliver to Purchaser (i) a stock certificate representing the IPO Shares, and (ii) a copy of the Articles, certified by the Corporations and Securities Bureau of the Department of Commerce of the State of Michigan, (iii) a copy of the Bylaws, certified by the Secretary of the Company, and (iv) evidence reasonably satisfactory to the Purchaser of the adoption by the Board of actions duly approving the issuance and sale to the Purchaser of the IPO Shares.

16. Miscellaneous.

16.1 Governing Law. This Agreement shall be governed by and

construed under the laws of the State of Michigan as applied to agreements among Michigan residents, made and to be performed entirely within the State of Michigan.

16.2 Survival. The representations, warranties, covenants and

agreements made herein shall survive any investigation made by the Purchaser and the closing of the transactions contemplated hereby. All statements as to factual matters contained in any certificate or other instrument delivered by or on behalf of the Company pursuant hereto or in connection with the transactions contemplated

hereby shall be deemed to be representations and warranties by the Company hereunder as of the date of such certificate or instrument.

16.3 Successors and Assigns. Except as otherwise expressly  
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provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto.

16.4 Entire Agreement. This Agreement, the Exhibits hereto, the  
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Memorandum, the other Implementing Agreements, and the other documents delivered pursuant hereto constitute the full and entire understanding and agreement among the parties with regard to the subjects hereof and no party shall be liable or bound to any other party in any manner by any representations, warranties, covenants or agreements except as specifically set forth herein or therein. Nothing in this Agreement, express or implied, is intended to confer upon any party, other than the parties hereto and their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

16.5 Separability. In case any provision of this Agreement shall  
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be invalid, illegal or unenforceable, it shall, to the extent practicable, be modified so as to make it valid, legal and enforceable and to retain as nearly as practicable the intent of the parties, and the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

16.6 Amendment and Waiver. Any term of this Agreement may be  
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amended and the observance of any term of this Agreement may be waived (either generally or, in a particular instance, either retroactively or prospectively, and either for a specified period of time or indefinitely), with the written consent of the Company and the Purchaser. Any amendment or waiver effected in accordance with this Section 16.6 shall be binding upon each holder of any securities purchased under this Agreement at the time outstanding (including securities into which such securities have been converted), each future holder of all such securities, and the Company. Upon the effectuation of each such amendment or waiver, the Company shall promptly give written notice thereof to the record holders of the Shares (including the Conversion Shares) who have not previously consented thereto in writing.

16.7 Delays or Omissions. No delay or omission to exercise any  
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right, power or remedy accruing to the Company or the Purchaser upon any breach, default or noncompliance of the Purchaser or the Company under this Agreement shall impair any such right, power or remedy, nor shall it be construed to be a waiver of any such breach, default or noncompliance, or any acquiescence therein, or of any similar breach, default or noncompliance thereafter occurring. It is further agreed that any waiver, permit, consent or approval of any kind or character on the Purchaser's part of any breach, default or noncompliance under

this Agreement, or any waiver on the Company's or the Purchaser's part of any provisions or conditions of this Agreement must be in writing and shall be effective only to the extent specifically set forth in such writing, and that all remedies, either under this Agreement, the Series D Documents, by law, or otherwise afforded to the Company and the Purchaser, shall be cumulative and not alternative.

16.8 Notices. All notices and other communications required or

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permitted hereunder shall be in writing, shall specifically refer to this Agreement, and shall be sent by (i) hand delivery, (ii) registered mail, return receipt requested, (iii) overnight delivery services, or (iv) telefacsimile transmission, and shall be sent or delivered to the respective addresses and telefacsimile numbers set forth below, unless subsequently changed by written notice to the other party:

If to the

Company, to: AASTROM Biosciences, Inc.  
P.O. Box 376  
Ann Arbor, MI 48106  
Attention: President  
Fax: (313) 930-5546

With a copy to: T. Knox Bell, Esq.  
Gray Cary Ware & Freidenrich  
401 B Street, Suite 1700  
San Diego, CA 92101  
Fax: (619) 236-1048

If to the

Purchaser, to: RPR GENCELL  
Cell and Gene Therapy Division  
Rhone-Poulenc Rorer Inc.  
500 Arcola Road  
P.O. Box 1200  
Collegeville, PA 19426-0107  
Attention: President and General Counsel  
Fax: (610) 454-8984 and 454-3808

16.9 Finder's Fees.

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(a) The Company (i) represents and warrants that it has retained no finder or broker in connection with the transactions contemplated by this Agreement, and (ii) hereby agrees to indemnify and to hold the Purchaser harmless of and from any liability for any commission or compensation in the nature of a finder's fee to any broker or other person or firm (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its employees or representatives is responsible.



(b) The Purchaser (i) represents and warrants that it has retained no finder or broker in connection with the transactions contemplated by this Agreement, and (ii) hereby agrees to indemnify and to hold the Company harmless of and from any liability for any commission or compensation in the nature of a finder's fee to any broker or other person or firm (and the costs and expenses of defending against such liability or asserted liability) for which the Purchaser or any of its employees or representatives are responsible.

16.10 Fees and Expenses. Each party shall bear all of its own

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fees, costs and expenses relating to the negotiation and preparation of this Agreement and the consummation of the transactions contemplated hereby. If legal action is brought by the Company or by the Purchaser to enforce or interpret this Agreement, the prevailing party shall be entitled to recover its attorneys' fees and legal costs in connection therewith.

16.11 Information Confidential. The Purchaser acknowledges and

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agrees that information received by it pursuant hereto and to be received by it in connection with matters contemplated under the Implementing Agreements, constitute confidential information to the extent identified as confidential by the Company, which is and will be furnished by the Company to the Purchaser solely for the Purchaser's use to evaluate Purchaser's investment in the Company and as permitted by the Implementing Agreements, unless otherwise expressly agreed to in writing by the Company. Provisions of the Research and Development Collaboration Agreement and the License Agreement contain limitations on the use and dissemination of any such confidential information, and the terms and conditions of such provisions are hereby incorporated by reference, as though expressly set forth herein. The Purchaser hereby agrees to refrain from using or disseminating any such confidential information for any purpose other than as may be permitted by the provisions of this Agreement and the other Implementing Agreements. Notwithstanding the foregoing, information shall not be deemed confidential if it (i) is or becomes generally available to the public, (ii) was known to the Purchaser prior to when it was received from the Company, or (iii) is subsequently disclosed to the Purchaser in good faith by a third party who the Company believes has a right to make such disclosure.

16.12 Titles and Subtitles. The titles of the paragraphs and

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subparagraphs of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

16.13 Counterparts. This Agreement may be executed in counterparts,

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including by facsimile, each of which shall be deemed an original, but all of which together shall constitute one instrument.

16.14 Arbitration. Any controversy or claim arising out of or

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relating to this Agreement, or the breach thereof, shall be settled by binding arbitration in accordance with the Arbitration Agreement. If the parties cannot

timely execute the Arbitration Agreement, the dispute shall be resolved in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("AAA").

IN WITNESS WHEREOF, this Agreement is hereby executed as of the date set forth on page 1 of this Agreement.

The Company:

Aastrom BIOSCIENCES, INC.  
Domino's Farms, Lobby L  
24 Frank Lloyd Wright Drive  
Ann Arbor, MI 48106

The Purchaser:

RHONE-POULENC RORER INC.  
500 Arcola Road  
Collegeville, PA 19426-0107

By: /s/ R. DOUGLAS ARMSTRONG

By: /s/ THIERRY SOURSAC

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Title: President and CEO

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Title: Senior Vice President

Print Name: R. Douglas Armstrong, Ph.D.

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Print Name: Thierry Soursac

EXHIBIT A  
SCHEDULE OF EXCEPTIONS

EXHIBIT A

SCHEDULE OF EXCEPTIONS

Exceptions as of September 15, 1995

The following are exceptions to the representations and warranties of the Company set forth in Section 9 of the Stock Purchase Agreement (the "Agreement") dated as of September 15, 1995, with reference to the paragraph designations of the Agreement. The reference to specific paragraphs should not be construed as limiting the noted exceptions to that particular paragraph. Any exception noted below is deemed disclosed for purposes of all relevant paragraphs whether or not cross-referenced. Capitalized terms used herein shall have the meanings ascribed to them in the Agreement and the Memorandum, unless defined otherwise herein.

Section 9.2 Capitalization.  
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The Company's authorized and issued capital stock and stock options are summarized on Schedule 9.2 attached hereto.

Section 9.7 Material Contracts.  
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The Company entered into an equipment lease financing agreement with Key Corp. for up to \$240,000.

Section 9.8 Outstanding Indebtedness.  
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None, other than as noted in preceding paragraph.

Section 9.9 Officers, Directors and Shareholders.  
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Effective as of September 15, 1995, the Company's V.P. of Development Research, Bernard Palsson, is resigning, and Dr. Palsson will continue as a part-time consultant with the Company through December 1995. The Company is recruiting for a replacement for Dr. Palsson.

Section 9.10 Changes Since July 31, 1995.  
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None.

Section 9.14 Litigation.  
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The Company has written letters to a former employee, Richard M. Schwartz, Ph.D. and Dr. Schwartz's new employer, SyStemix, (i) reminding them of Dr. Schwartz's duty to maintain strict confidentiality as to the Company's trade secrets; and (ii) asking if there has been any breach of this confidentiality obligation; and (iii) commenting that a new invention by Systemix's appears to be derived from the Company's trade secrets. Systemix and Dr. Schwartz have denied any use of the Company's trade secrets. The Company has reserved its rights in this matter, but does not presently contemplate pursuing this potential claim in the near future.

SCHEDULE 9.2

Capitalization

Security	Authorized	Liq. Pref.	Issued
Preferred Stock			
Series A	2,500,000	1.00	2,500,000
Series B	3,030,000	2.00	3,030,000
Series C *	10,000	1,000.00	10,000
Series D	3,000,000	4.00	2,576,001
Common Stock	17,000,000	0.00	2,609,861
Options for Common Stock		0.00	539,500

\* Series C shares are convertible into 2,500,000 common shares

Outstanding Preferred Share (common stock equivalents :	10,530,001
Outstanding Common Shares:	2,609,861
Outstanding Options:	539,500
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Fully Diluted Common Stock Equivalents:	13,679,362

EXHIBIT B  
FORM OF OPINION OF COUNSEL  
ACTIVATION CLOSING

FORM OF OPINION TO BE DELIVERED  
BY COUNSEL TO AASTROM BIOSCIENCES, INC.

1. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Michigan and has all necessary corporate power to own, operate or lease the properties and assets now owned, operated or leased by it, and to carry on the business of the Company as it has been and as it is currently conducted. The Company is not qualified to do business as a foreign corporation in any jurisdiction, and the Company has represented to us that it has no assets or employees in any state other than Michigan.

2. The Company has all requisite corporate power to sell the Shares, and to carry out and perform its other obligations under the terms of the Agreement and the other Implementing Agreements. The Agreement and the other Implementing Agreements have been duly authorized, executed and delivered, and each is a valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

3. The authorized capital stock of the Company consists of \_\_\_\_\_ shares of common stock and \_\_\_\_\_ shares of preferred stock (of which \_\_\_\_\_ shares have been designated as Series A Preferred Stock, \_\_\_\_\_ shares have been designated as Series B Preferred Stock, \_\_\_\_\_ shares have been designated as Series C Preferred Stock, \_\_\_\_\_ shares have been designated as Series D Preferred Stock and \_\_\_\_\_ shares have been designated as Series E Preferred Stock. The Company (i) has issued the shares of Common Stock and shares of its preferred stock, and (ii) has granted the stock options and warrants and (iii) has reserved for issuance the Common Stock and shares of its preferred stock, all as represented by the Company in the Schedule attached hereto. All previously issued and outstanding shares have been duly authorized and validly issued, and are fully paid and nonassessable. To the best of our knowledge, there are no outstanding rights, options, warrants, conversion rights or agreements for the purchase or acquisition from the Company of any shares of its capital stock, other than as referenced above.

4. The Shares, when issued, sold and delivered in compliance with the provisions of the Agreement, will be duly authorized, validly issued, fully paid, and nonassessable, and will be free of any liens or encumbrances, except that the Shares are subject to restrictions on transfer under state and/or federal securities laws. The issuance of the Shares is not subject to any preemptive rights or, to the best of our knowledge, rights of first refusal which have not been waived. The shares of Common Stock issuable upon conversion of the Preferred Shares (i) have been duly and validly reserved, (ii) are not subject to any preemptive rights or, to the best of our knowledge, rights of first refusal, and (iii) upon conversion of the Preferred Shares in accordance with the Articles and cancellation of the Preferred Shares, will be duly authorized, validly issued, fully paid, and nonassessable.



5. Neither the performance of the Company's obligations under the Agreement or the other Implementing Agreements, nor the issuance of the Preferred Shares, nor the issuance of the Common Stock issuable upon conversion of the Preferred Shares, will violate any term of the Articles or Bylaws; and such transactions will not, in any material respect, violate or conflict with or constitute a default under the provisions of any Material Contract.

6. Except as disclosed in the Memorandum or the Schedule of Exceptions, to the best of our knowledge, no action, suit, proceeding or investigation is pending or threatened against the Company or its properties or that questions the validity of the Agreement or any action to be taken in connection therewith.

7. All consents, approvals and authorizations of and filings with any federal or state governmental authority required on the part of the Company, if any, in connection with the consummation of the transactions contemplated by the Agreement have been obtained or made, except for the filings which the Company is making after the [Termination] [Activation] Closing as specified under the Securities Act of 1933, as amended (the "Securities Act") and any state securities laws.

8. Subject to the accuracy of the Purchaser's representations and warranties set forth in Section 10 of the Agreement, the offer and sale of the Shares in conformity with the terms of the Agreement are exempt from the registration requirements of Section 5 of the Securities Act, as amended and in compliance with applicable state securities laws.

[The forgoing opinion may be delivered at the Termination Closing and/or Activation Closing by one or more law firms on behalf of AASTROM Biosciences, Inc.]

EXHIBIT C  
FORM OF OPINION OF COUNSEL  
TERMINATION CLOSING

FORM OF OPINION TO BE DELIVERED  
BY COUNSEL TO AASTROM BIOSCIENCES, INC.

1. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Michigan and has all necessary corporate power to own, operate or lease the properties and assets now owned, operated or leased by it, and to carry on the business of the Company as it has been and as it is currently conducted. The Company is not qualified to do business as a foreign corporation in any jurisdiction, and the Company has represented to us that it has no assets or employees in any state other than Michigan.

2. The Company has all requisite corporate power to sell the Shares, and to carry out and perform its other obligations under the terms of the Agreement and the other Implementing Agreements. The Agreement and the other Implementing Agreements have been duly authorized, executed and delivered, and each is a valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

3. The authorized capital stock of the Company consists of \_\_\_\_\_ shares of common stock and \_\_\_\_\_ shares of preferred stock (of which \_\_\_\_\_ shares have been designated as Series A Preferred Stock, \_\_\_\_\_ shares have been designated as Series B Preferred Stock, \_\_\_\_\_ shares have been designated as Series C Preferred Stock, \_\_\_\_\_ shares have been designated as Series D Preferred Stock and \_\_\_\_\_ shares have been designated as Series E Preferred Stock. The Company (i) has issued the shares of Common Stock and shares of its preferred stock, and (ii) has granted the stock options and warrants and (iii) has reserved for issuance the Common Stock and shares of its preferred stock, all as represented by the Company in the Schedule attached hereto. All previously issued and outstanding shares have been duly authorized and validly issued, and are fully paid and nonassessable. To the best of our knowledge, there are no outstanding rights, options, warrants, conversion rights or agreements for the purchase or acquisition from the Company of any shares of its capital stock, other than as referenced above.

4. The Shares, when issued, sold and delivered in compliance with the provisions of the Agreement, will be duly authorized, validly issued, fully paid, and nonassessable, and will be free of any liens or encumbrances, except that the Shares are subject to restrictions on transfer under state and/or federal securities laws. The issuance of the Shares is not subject to any preemptive rights or, to the best of our knowledge, rights of first refusal which have not been waived. The shares of Common Stock issuable upon conversion of the Preferred Shares (i) have been duly and validly reserved, (ii) are not subject to any preemptive rights or, to the best of our knowledge, rights of first refusal, and (iii) upon conversion of the Preferred Shares in accordance with the Articles and cancellation of the Preferred Shares, will be duly authorized, validly issued, fully paid, and nonassessable.

5. Neither the performance of the Company's obligations under the Agreement or the other Implementing Agreements, nor the issuance of the Preferred Shares, nor the issuance of the Common Stock issuable upon conversion of the Preferred Shares, will violate any term of the Articles or Bylaws; and such transactions will not, in any material respect, violate or conflict with or constitute a default under the provisions of any Material Contract.

6. Except as disclosed in the Memorandum or the Schedule of Exceptions, to the best of our knowledge, no action, suit, proceeding or investigation is pending or threatened against the Company or its properties or that questions the validity of the Agreement or any action to be taken in connection therewith.

7. All consents, approvals and authorizations of and filings with any federal or state governmental authority required on the part of the Company, if any, in connection with the consummation of the transactions contemplated by the Agreement have been obtained or made, except for the filings which the Company is making after the [Termination] [Activation] Closing as specified under the Securities Act of 1933, as amended (the "Securities Act") and any state securities laws.

8. Subject to the accuracy of the Purchaser's representations and warranties set forth in Section 10 of the Agreement, the offer and sale of the Shares in conformity with the terms of the Agreement are exempt from the registration requirements of Section 5 of the Securities Act, as amended and in compliance with applicable state securities laws.

[The forgoing opinion may be delivered at the Termination Closing and/or Activation Closing by one or more law firms on behalf of AASTROM Biosciences, Inc.]

EXHIBIT D

SUMMARY OF SERIES E PREFERRED STOCK

SUMMARY OF  
SERIES E PREFERRED STOCK OF  
AASTROM BIOSCIENCES, INC.

I. TERMS OF PREFERRED STOCK  
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The terms of the Series E Preferred Stock will be substantially the same as the terms of the Series D Preferred, except as noted herein. The Series A, B, C, D Preferred Stock together with the Series E Preferred Stock, when treated jointly are referred to herein as the "Preferred." The following are the principal terms of the Series E Preferred Stock:

A. Rights, Preferences,  
Privileges and  
Restrictions of Series  
E Preferred Stock:

1. Dividend Provisions. A holder of  
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Series E Preferred Stock will be entitled to receive, *pari passu*, with holders of Series B, C and D Preferred Stock dividends at the rate of 8% per annum on the liquidation preference when and as declared by the Board, if funds are legally available. The Series E Preferred Stock, together with the Series B, C and D Preferred Stock, will be entitled to receive dividends in preference to any dividend on Series A Preferred Stock. If dividends are declared on the Common Stock, the holders of Preferred shall be entitled to receive concurrently a dividend of an equal amount per share. Dividends on the Series E Preferred Stock will be noncumulative. No dividends have been paid on the Preferred, and no dividends are likely to be paid in the next few years.

2. Liquidation Preference. In the event  
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of any liquidation, dissolution or winding up of the Company, a holder of Series E Preferred Stock will be entitled to receive, on a parity with holders of the Series B, C and D Preferred Stock and in preference to the holders of shares of Series A Preferred Stock and Common Stock, an amount equal to the respective original purchase prices, plus any declared but unpaid dividends on the Series E Preferred Stock.

3. Voluntary Conversion. A holder of

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Series E Preferred Stock will have the right to convert the Series E Preferred Stock, at the option of the holder, at any time, into shares of Common Stock. The total number of shares of Common Stock into which Series E Preferred Stock may be converted will be determined by dividing the original purchase price by the conversion price. The initial conversion price will be the original purchase price, resulting in a one-for-one conversion, unless and until there is a change in the conversion price .

4. Automatic Conversion. Series E

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Preferred Stock will be converted automatically into Common Stock, at the then applicable conversion price, immediately upon the closing of a firm commitment underwritten public offering of shares of the Common Stock of the Company at a public offering price per share (prior to underwritings, commissions and offering expenses) equal to or exceeding \$6.00 per share in an offering resulting in gross proceeds to the Company which exceed \$10,000,000.

5. Voting Rights. A holder of Series E

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Preferred Stock will have the right to that number of votes equal to the number of shares of Common Stock issuable upon conversion of its Series E Preferred Stock at the then applicable conversion price. Until the number of shares of Common Stock issuable upon conversion of the Series E Preferred Stock has been definitively established pursuant to Section 5 of the Stock Purchase Agreement, each share of Series E Preferred Stock shall be deemed to have the number of votes equal to 1.5 shares of Common Stock. The Preferred shall vote with the Common Stock on all matters except as specifically provided herein or as otherwise required by law.

6. Protective Provisions. Changes to  
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the rights, preferences or privileges of a series of Preferred Stock must be approved by the holders of at least 66-2/3% of the affected series of Preferred. Consent of the holders of at least 66-2/3% of each series of Preferred Stock is required to approve any amendment to the Company's articles of incorporation.

B. Registration Rights:

1. Demand Right. Beginning one year  
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after the Company's initial public offering, holders of at least 50% of the Preferred (or Common Stock issued upon conversion of the Preferred or a combination of such Common and Preferred) may request registration by the Company of Common Stock covering at least 20% of their registrable securities, or a lesser percentage if the aggregate offering price would exceed \$2,000,000. Prior to the Company's initial public offering, such holders may request such registration if the aggregate offering price would exceed \$5,000,000. The Company shall not be obligated to effect registration under this demand right provision more than once.

2. Piggy-Back Registration. At any time  
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after the Company's initial public offering, holders of Preferred shall be entitled to "piggy-back" registration rights at the time that the Company has a further registration; subject to the rights, however, of the Company and its underwriters to reduce the number of shares proposed to be registered in view of market conditions.

3. S-3 Rights. Holders of Preferred  
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shall be entitled to an unlimited number of demand registrations on Form S-3 (if available to the Company) so long as each of such registered offerings is in excess of \$500,000; provided, however, that the Company shall only be required to file one Form S-3 Registration Statement on demand every twelve (12) months.



4. Expenses. The Company shall bear

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all registration expenses (including the fees of one counsel for the selling shareholders, but excluding underwriting discounts and commissions) of one demand registration and two piggy-back registrations.

5. Assignability of Rights. The

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registration rights may be assigned to an assignee who agrees in writing to be bound by the terms and conditions of the Amended and Restated Investors' Rights Agreement and who (a) after such transfer owns at least 100,000 shares of Preferred or Common Stock issued upon conversion thereof, (b) is an option holder, (c) is a holder of registrable securities of the Company or a family member of the transferor, or (d) is a trust for the benefit of an option holder or a family member, in a private transaction in which such transferee will own not less than 20,000 shares of Preferred or Common Stock issued upon conversion thereof.

6. Termination of Registration Rights.

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Registration rights shall terminate as to any particular shares of Preferred Stock when such shares may be lawfully sold by the holder pursuant to Rule 144 under the Securities Act of 1933.

7. Other Provisions. The registration

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rights provisions of the Amended and Restated Investors' Rights Agreement contains other customary provisions with respect to registration rights, including cross-indemnification, the Company's ability to delay the filing of demand registrations for a period of at least 150 days, the period of time in which the Registration Statement shall be kept effective, underwriting arrangements and the like.

II. ADDITIONAL INFORMATION

- A. Right of First Refusal: None.  
B. Redemption Rights: None.

November 11, 1996

R. Douglas Armstrong, Ph.D.  
President and Chief Executive Officer  
Aastrom Biosciences, Inc.  
P.O. Box 376  
Ann Arbor, MI 48106

Re: Aastrom Biosciences, Inc.  
Initial Public Offering

Dear Doug:

We understand that Aastrom Biosciences, Inc. (the "Company") has filed a Registration Statement on Form S-1 to register 3,250,000 shares of the Company's Common Stock in connection with its initial public offering (the "IPO"). We hereby acknowledge receipt of a copy of the Registration Statement, as filed with the Securities and Exchange Commission on November 1, 1996.

The purpose of this letter is to set forth the agreement of Cobe Laboratories, Inc. ("Cobe") to purchase \$5,000,000 of the Company's Common Stock directly from the underwriters upon the closing of the IPO, at a purchase price per share equal to the initial public offering price in the IPO. The foregoing agreement to purchase such shares shall be deemed to fully satisfy Cobe's preemptive rights under Section 5.04 of the Stock Purchase Agreement between Cobe and the Company dated October 22, 1993, as amended (the "Agreement"), as to the Common Stock being offered by the Company in the IPO.

We also understand that the Company will not be exercising the Company Option as set forth in Section 5.05 of the Agreement.

Sincerely,

COBE LABORATORIES, INC.

By: /s/ Edward C. Wood, Jr.

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Edward C. Wood, Jr.  
President, COBE BCT

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Name and Title

Agreed to and accepted:

AASTROM BIOSCIENCES, INC.

By: /s/ R. Douglas Armstrong, Ph.D.

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R. Douglas Armstrong, Ph.D.  
President and Chief Executive Officer

AASTROM BIOSCIENCES, INC.

SUBSCRIPTION AGREEMENT

AASTROM Biosciences, Inc.  
Domino's Farms, Lobby L  
24 Frank Lloyd Wright Drive  
P.O. Box 376  
Ann Arbor, MI 48106  
Attention: R. Douglas Armstrong, Ph.D.

Gentlemen:

- 1. Subscription. The undersigned (the "undersigned" or the -----

"Purchaser"), hereby agrees and subscribes to purchase from AASTROM Biosciences, Inc., a Michigan corporation (the "Company"), \_\_\_\_\_ shares (the "Shares") of the Series D Preferred Stock of the Company (the "Series D Stock") at a purchase price of \$4.00 per Share, for an aggregate purchase price of \$\_\_\_\_\_ (the "Purchase Price"). This subscription is submitted to you in accordance with and subject to the terms and conditions described in this Subscription Agreement and the Memorandum (as defined in Section 5.c.) relating to the offering (the "Offering") by the Company of up to 2,500,000 shares of Series D Stock.

- 2. Subscription and Payment. The undersigned is returning to -----

the Company two signed and completed copies of this Subscription Agreement, together with payment of the Purchase Price. Payment of the Purchase Price is being made by delivery to the Company of a check payable to the order of the Company, or by wire transfer of the Purchase Price to the Company. At any time on or after April 14, 1995, upon receipt by the Company of valid subscriptions to purchase at least \$2,000,000 of Series D Stock, the Company will schedule a closing (the "Closing") for the purchase and sale of such shares. As soon as practicable after the Closing, the Company shall issue and deliver to the undersigned a stock certificate or certificates, registered in the name of the undersigned, representing the Shares being purchased. After the Closing, the Company may accept subscriptions for additional shares of Series D Stock as they are received.

- 3. Acceptance of Subscription. The undersigned understands and -----

agrees that the Company in its sole discretion reserves the right to accept or reject this subscription for the Shares. The Company shall have no obligation hereunder until the Company shall execute and deliver to the undersigned an executed copy of this Subscription Agreement. This Subscription Agreement shall continue in full force and effect to the extent this subscription was accepted.

4. Stock Registration Rights. The undersigned shall have the

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stock registration rights as have been granted pursuant to Sections 2.4 through 2.14 of that certain Amended and Restated Investors' Rights Agreement dated April 7, 1992 by and among the Company and certain investors and shareholders of the Company, attached hereto as Exhibit A.

5. Representations and Warranties. In order to induce the

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Company to sell the Shares to the undersigned, the undersigned hereby acknowledges, represents, warrants and agrees as follows:

a. None of the Shares of Series D Stock are (and the shares of common stock issuable upon conversion thereof ("Underlying Common Stock") will not be) registered under the Securities Act of 1933 (as amended, the "Securities Act") or any state securities laws. The undersigned understands that the sale of the Shares is intended to be exempt from registration under Section 4(2) of the Securities Act and/or the provisions of Regulation D promulgated thereunder, based, in part, upon the representations, warranties and agreements contained in this Subscription Agreement;

b. Neither the Securities and Exchange Commission nor any state securities commission has approved any of the Shares or passed upon or endorsed the merits of this transaction;

c. Prior to its execution of this Subscription Agreement, the undersigned has received from the Company (i) the Confidential Private Placement Memorandum of the Company dated April 5, 1995 (together with any exhibits thereto, the "Memorandum"), which supersedes in its entirety the draft Memorandum previously delivered to the undersigned, (ii) a copy of the amendment to the Restated Articles of Incorporation of the Company, for the purpose of creating the Series D Stock, and (iii) the audited financial statements of the Company for the years ended June 30, 1994, 1993 and 1992, the unaudited financial statements of the Company for the month ended January 31, 1995, and the unaudited balance sheet of the Company at February 28, 1995.

d. The undersigned acknowledges that all documents, records and books pertaining to the investment in the Shares, including the Memorandum, have been made available for inspection by the undersigned, or by its attorney, accountant, purchaser representative and/or tax advisor (collectively, the "Advisors") and that the undersigned and/or its Advisors have completed such review as they deem to be necessary to make the decision to purchase the Shares;

e. The undersigned has reviewed the merits and risks of an investment in the Shares. The undersigned and the Advisors have had a reasonable opportunity to ask questions of and receive answers from members of management of the Company concerning the offer and sale of the Shares and all such questions have been answered to the full satisfaction of the undersigned;

f. In evaluating the suitability of an investment in the Company, the undersigned has not relied upon any representation or other information (oral or written) other than as contained in documents or answers to questions so furnished to the undersigned or its Advisors by the Company;

g. No oral or written representations have been made or oral or written information furnished to the undersigned or its Advisors in connection with the Offering which were in any way inconsistent with the information provided to the undersigned or its Advisors, including the Memorandum.

h. The undersigned, together with the Advisors, have such knowledge and experience in financial, tax and business matters so as to enable each of them to utilize the information made available to each of them in connection with the purchase of the Shares to evaluate the merits and risks of an investment in the Shares and to make an informed investment decision with respect thereto;

i. The undersigned is not relying on the Company with respect to the tax and other economic considerations of an investment in the Shares, and the undersigned has relied on the advice, or has consulted with, only its own Advisors concerning tax matters;

j. The undersigned is acquiring the Shares solely for its own account, for investment, and not with a view to or for subdivision, resale or distribution, in whole or in part, and no other person has or will have a direct or indirect beneficial interest in the Shares, other than for any partner or shareholder owners of the undersigned, if any;

k. The undersigned must bear the economic risk of the investment indefinitely because none of the Shares of Series D Stock (or shares of the underlying Common Stock) may be sold, hypothecated or otherwise disposed of unless (i) subsequently registered under the Securities Act and applicable state securities laws, or (ii) an exemption from registration is available. Legends shall be placed on the Shares (and the shares of Underlying Common Stock) to the effect that they have not been registered under the Securities Act or applicable state securities laws and appropriate notations thereon will be made in the Company's stock books;

l. The undersigned has adequate means of providing for the undersigned's current financial needs and foreseeable contingencies and the undersigned can accept the fact that an investment in the Shares will not be liquid;

m. The undersigned is aware that an investment in the Shares involves a number of very significant risks and, in particular, acknowledges that the Company is in the development stage. The undersigned understands that the risks associated with an investment in the Shares could result in, and the undersigned can sustain, a complete loss of its investment;

n. The undersigned is an "accredited investor" as such term is defined in the regulations promulgated under the Securities Act, and has completed and signed the Accredited Investor Certification attached as Exhibit B hereto supporting this conclusion;

o. The undersigned represents that it has full power and authority to execute and deliver this Subscription Agreement and all other related agreements and certificates and to carry out the provisions hereof and thereof and to purchase and hold the Shares, and this Subscription Agreement is a legal, valid and binding obligation of the undersigned. The execution and delivery of this Subscription Agreement will not violate or be in conflict with any order, judgment, injunction, agreement or controlling document to which the undersigned is a party or by which it is bound;

p. The undersigned represents to the Company that the information contained herein is complete and accurate and may be relied upon by the Company in determining the availability of an exemption from registration under federal and state securities laws. The undersigned further represents and warrants that it will notify the Company immediately upon the occurrence of any material change to the information contained herein occurring prior to the Company's issuance of the Shares;

q. The undersigned is unaware of, and in no way relying on, any form of general solicitation or general advertising in connection with the offer and sale of the Shares.

6. Compliance with Regulation D and Applicable State Securities

Laws. The undersigned understands and agrees that the following restrictions

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and limitations are applicable to its purchase of the Shares and any resales, mortgages, pledges, hypothecations, or other transfers thereof, pursuant to Regulation D under the Securities Act and applicable state securities laws:

a. The undersigned agrees that the Shares may not be sold, mortgaged, pledged, hypothecated or otherwise transferred unless the Shares are registered under the Securities Act and applicable state securities laws or are exempt from registration thereunder.

b. A legend in substantially the following form will be placed on the certificate(s) evidencing the Shares:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. THESE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT, AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, MORTGAGED, PLEDGED,

HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, OR UNLESS AN EXEMPTION FROM REGISTRATION UNDER SUCH ACT IS AVAILABLE.

c. FOR CALIFORNIA RESIDENTS ONLY: THE SALE OF THE SECURITIES THAT

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IS THE SUBJECT OF THIS SUBSCRIPTION AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION FOR SUCH SECURITIES PRIOR TO SUCH QUALIFICATION IS UNLAWFUL UNLESS AN EXEMPTION FROM SUCH QUALIFICATION IS AVAILABLE. THE RIGHTS OF ALL PARTIES TO THIS SUBSCRIPTION AGREEMENT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED OR AN EXEMPTION THEREFROM BEING AVAILABLE.

7. Board Observer Rights. The holders of a majority of

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shares of Series D Preferred Stock shall have the right from time to time to designate one representative, who shall be entitled to attend all meetings of the Board of Directors, in a nonvoting observer capacity only. The Company will give such representative copies of all materials that it provides to its directors; provided, however, that such representative shall be reasonably acceptable to the Company and shall enter into a confidentiality agreement acceptable to the Company.

8. Irrevocability; Binding Effect. The undersigned hereby

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acknowledges and agrees that the subscription hereunder is irrevocable by the undersigned, except as required by applicable law, and that this Subscription Agreement shall be binding upon and inure to the benefit of the parties and their respective successors, legal representatives, and permitted assigns.

9. Modification. This Subscription Agreement shall not be

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modified or waived except by an instrument in writing signed by the party against whom any such modification or waiver is sought.

10. Notices. A notice or other communication required or

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permitted to be given hereunder shall be in writing and shall be mailed by certified mail, return receipt requested, or delivered against receipt to the party to whom it is to be given (a) if to the Company, at the address set forth above, or (b) if to the undersigned, at the address set forth on the signature page hereof (or, in either case, to such other address as the party shall have furnished in writing in accordance with the provisions of this Section 10). Any notice or other communication shall be deemed given at the time it is received at the party's address.

11. Assignability. This Subscription Agreement and the

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rights, interests and obligations hereunder are not transferable or assignable by the undersigned, except to an affiliate of the undersigned who qualifies as an "accredited investor," and the undersigned further agrees that the transfer or assignment of the Shares shall be made only in accordance with all applicable laws.

12. Applicable Law. This Subscription Agreement shall be

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governed by and construed in accordance with the internal laws of the state of Michigan without regard to its conflicts of laws principles.

13. Blue Sky Qualification. The undersigned's right to

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purchase Shares under this Subscription Agreement is expressly conditioned upon the exemption from qualification of the offer and sale of the Shares from applicable federal and state securities laws. The Company shall not be required to qualify this transaction under the securities laws of any jurisdiction and, should qualification be necessary, the Company shall be released from any and all obligations to maintain its offer, and may rescind any sale contracted, in the jurisdiction.

14. Confidentiality. The undersigned acknowledges and

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agrees that any information or data it has acquired from or about the Company, not otherwise properly in the public domain, was received in confidence. The undersigned agrees not to divulge, communicate or disclose, except as may be required by law or for the performance of this Subscription Agreement, or use to the detriment of the Company or for the benefit of any other person or persons, or misuse in any way, any confidential information of the Company, including any scientific, technical, trade or business secrets of the Company and any scientific, technical, trade or business materials that are treated by the Company as confidential or proprietary, including, but not limited to, ideas, discoveries, inventions, developments and improvements belonging to the Company and confidential information obtained by or given to the Company about or belonging to third parties.

15. Miscellaneous.

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a. This Subscription Agreement, together with the attached stock registration rights, constitutes the entire agreement between the undersigned and the Company with respect to the subject matter hereof and supersedes all prior oral or written agreements and understandings, if any, relating to the subject matter hereof. The terms and provisions of this Subscription Agreement may be waived, or consent for the departure therefrom granted, only by a written document executed by the party entitled to the benefits of such terms or provisions.

b. The undersigned's representations and warranties made in this Subscription Agreement shall survive the execution and delivery hereof and of the Shares.



c. Each of the parties hereto shall pay its own fees and expenses (including the fees of any attorneys, accountants, appraisers or others engaged by such party) in connection with this Subscription Agreement and the transactions contemplated hereby whether or not the transactions contemplated hereby are consummated.

d. All pronouns and any variations thereof used herein shall be deemed to be to the masculine, feminine, neuter, singular or plural as the identity of the person or persons referred to may require.

e. This Subscription Agreement may be executed in one or more counterparts each of which shall be deemed an original, but all of which shall together constitute one and the same instrument. Signatures may be transmitted by facsimile.

f. Each provision of this Subscription Agreement shall be considered separable and if for any reason any provision or provisions hereof are determined to be invalid or contrary to applicable law, such invalidity shall not impair the operation of or affect the remaining portions of this Subscription Agreement, so long as the material economic benefits remain enforceable.

g. Paragraph titles are for descriptive purposes only and shall not control or alter the meaning of this Subscription Agreement as set forth in the text.

If the purchaser is an INDIVIDUAL, and if purchased INDIVIDUALLY, as JOINT TENANTS, as TENANTS IN COMMON, or as COMMUNITY PROPERTY:

_____	_____
Print Name(s)	Social Security Number(s)
_____	_____
Signature(s) of Purchaser(s)	
_____	_____
Date	Address
	_____

If the purchaser is a PARTNERSHIP, CORPORATION, or TRUST:

_____ Name of Partnership, Corporation or Trust	_____ Federal Taxpayer Identification Number
_____ Date	
By: _____	_____ State of Organization
Name: _____	
Title: _____	_____ Address
	_____

SUBSCRIPTION ACCEPTED AND AGREED  
this \_\_ day of \_\_\_\_\_, 1995

AASTROM BIOSCIENCES, INC.

By: \_\_\_\_\_  
R. Douglas Armstrong, Ph.D., President  
and Chief Executive Officer

Accredited Investor Certification

-----  
(Check the appropriate box(es))

\_\_\_ i. I am a natural person who had individual income of more than \$200,000 in each of the most recent two years or joint income with my spouse in excess of \$300,000 in each of the most recent two years and reasonably expect to reach that same income level for the current year;

\_\_\_ ii. I am a natural person whose individual net worth, or joint net worth with my spouse, will at the time of purchase of the Shares be in excess of \$1,000,000;

\_\_\_ iii. The undersigned is an institutional investor satisfying the requirements of Section 501(a)(1), (2) or (3) of Regulation D promulgated under the Securities Act;

\_\_\_ iv. The undersigned is a trust, which trust has total assets in excess of \$5,000,000, which is not formed for the specific purpose of acquiring the Shares offered hereby and whose purchase is directed by a sophisticated person as described in Rule 506(b)(2)(ii) of Regulation D and who has such knowledge and experience in financial and business matters that it is capable of evaluating the risks and merits of an investment in the Shares;

\_\_\_ v. The undersigned is an entity (other than a trust) in which all of the equity owners meet the requirements of at least one of the above subparagraphs.

\_\_\_\_\_  
By: \_\_\_\_\_

AASTROM BIOSCIENCES, INC.

SUBSCRIPTION AGREEMENT

AASTROM Biosciences, Inc.  
Domino's Farms, Lobby L  
24 Frank Lloyd Wright Drive  
P.O. Box 376  
Ann Arbor, MI 48106

Attention: R. Douglas Armstrong, Ph.D.

Gentlemen:

1. Subscription. The undersigned (the "undersigned" or the "Purchaser"),  
-----

hereby agrees and subscribes to purchase from AASTROM Biosciences, Inc., a Michigan corporation (the "Company"), 62,500 shares (the "Shares") of the Series D Preferred Stock of the Company (the "Series D Stock") at a purchase price of \$4.00 per Share, for an aggregate purchase price of \$250,000 (the "Purchase Price"). This subscription is submitted to you in accordance with and subject to the terms and conditions described in this Subscription Agreement and the Memorandum (as defined in Section 5.c.) relating to the offering (the "Offering") by the Company of up to 2,500,000 shares of Series D Stock.

2. Subscription and Payment. The undersigned is returning to the  
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Company two signed and completed copies of this Subscription Agreement, together with payment of the Purchase Price. Payment of the Purchase Price is being made by delivery to the Company of a check payable to the order of the Company, or by wire transfer of the Purchase Price to the Company. The Company shall issue and deliver to the undersigned a stock certificate or certificates, registered in the name of the undersigned, representing the Shares being purchased.

3. Acceptance of Subscription. The undersigned understands and agrees  
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that the Company in its sole discretion reserves the right to accept or reject this subscription for the Shares. The Company shall have no obligation hereunder until the Company shall execute and deliver to the undersigned an executed copy of this Subscription Agreement. This Subscription Agreement shall continue in full force and effect to the extent this subscription was accepted.

4. Stock Registration Rights. The undersigned shall have the stock  
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registration rights as have been granted pursuant to Sections 2.4 through 2.14 of that certain Amended and Restated Investors' Rights Agreement dated April 7, 1992 by and among the Company and certain investors and shareholders of the Company, attached hereto as Exhibit A.

5. Representations and Warranties of Purchaser. In order to induce the

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Company to sell the Shares to the undersigned, the undersigned hereby acknowledges, represents, warrants and agrees as follows:

a. None of the Shares of Series D Stock are (and the shares of common stock issuable upon conversion thereof ("Underlying Common Stock") will not be) registered under the Securities Act of 1933 (as amended, the "Securities Act") or any state securities laws. The undersigned understands that the sale of the Shares is intended to be exempt from registration under Section 4(2) of the Securities Act and/or the provisions of Regulation D promulgated thereunder, based, in part, upon the representations, warranties and agreements contained in this Subscription Agreement;

b. Neither the Securities and Exchange Commission nor any state securities commission has approved any of the Shares or passed upon or endorsed the merits of this transaction;

c. Prior to its execution of this Subscription Agreement, the undersigned has received from the Company (i) the Confidential Private Placement Memorandum of the Company dated April 5, 1995 (together with any exhibits thereto, the "Memorandum"), which supersedes in its entirety the draft Memorandum previously delivered to the undersigned, (ii) a copy of the amendment to the Restated Articles of Incorporation of the Company, for the purpose of creating the Series D Stock, and (iii) the audited financial statements of the Company for the years ended June 30, 1995, 1994, 1993 and 1992, the unaudited financial statements of the Company for the month ended August 31, 1995, and the unaudited balance sheet of the Company at August 31, 1995.

d. The undersigned acknowledges that all documents, records and books pertaining to the investment in the Shares, including the Memorandum, have been made available for inspection by the undersigned, or by its attorney, accountant, purchaser representative and/or tax advisor (collectively, the "Advisors") and that the undersigned and/or its Advisors have completed such review as they deem to be necessary to make the decision to purchase the Shares. Notwithstanding the foregoing, the parties acknowledge and agree that the Purchaser is relying solely on the representations and warranties set forth in Section 6 hereof, which reference documents set forth in Section 5.c;

e. The undersigned has reviewed the merits and risks of an investment in the Shares. The undersigned and the Advisors have had a reasonable opportunity to ask questions of and receive answers from members of management of the Company concerning the offer and sale of the Shares and all such questions have been answered to the full satisfaction of the undersigned;

f. In evaluating the suitability of an investment in the Company, the undersigned has not relied upon any representation or other information (oral or written) other than as contained in documents or answers to questions so furnished to the undersigned or its Advisors by the Company;

g. No oral or written representations have been made or oral or written information furnished to the undersigned or its Advisors in connection with the Offering which were in any way inconsistent with the information provided to the undersigned or its Advisors, including the Memorandum.

h. The undersigned, together with the Advisors, have such knowledge and experience in financial, tax and business matters so as to enable each of them to utilize the information made available to each of them in connection with the purchase of the Shares to evaluate the merits and risks of an investment in the Shares and to make an informed investment decision with respect thereto;

i. The undersigned is not relying on the Company with respect to the tax and other economic considerations of an investment in the Shares, and the undersigned has relied on the advice, or has consulted with, only its own Advisors concerning tax matters;

j. The undersigned is acquiring the Shares solely for its own account, for investment, and not with a view to or for subdivision, resale or distribution, in whole or in part, and no other person has or will have a direct or indirect beneficial interest in the Shares, other than for any partner or shareholder owners of the undersigned, if any;

k. The undersigned must bear the economic risk of the investment indefinitely because none of the Shares of Series D Stock (or shares of the underlying Common stock) may be sold, hypothecated or otherwise disposed of unless (i) subsequently registered under the Securities Act and applicable state securities laws, or (ii) an exemption from registration is available. Legends shall be placed on the Shares (and the shares of Underlying Common Stock) to the effect that they have not been registered under the Securities Act or applicable state securities laws and appropriate notations thereon will be made in the Company's stock books;

l. The undersigned has adequate means of providing for the undersigned's current financial needs and foreseeable contingencies and the undersigned can accept the fact that an investment in the Shares will not be liquid;

m. The undersigned is aware that an investment in the Shares involves a number of very significant risks and, in particular, acknowledges that the Company is in the development stage. The undersigned understands that the risks associated

with an investment in the Shares could result in, and the undersigned can sustain, a complete loss of its investment;

n. The undersigned is an "accredited investor" as such term is defined in the regulations promulgated under the Securities Act, and has completed and signed the Accredited Investor Certification attached as Exhibit B hereto supporting this conclusion;

o. The undersigned represents that it has full power and authority to execute and deliver this Subscription Agreement and all other related agreements and certificates and to carry out the provisions hereof and thereof and to purchase and hold the Shares, and this Subscription Agreement is a legal, valid and binding obligation of the undersigned. The execution and delivery of this Subscription Agreement will not violate or be in conflict with any order, judgment, injunction, agreement or controlling document to which the undersigned is a party or by which it is bound;

p. The undersigned represents to the Company that the information contained herein is complete and accurate and may be relied upon by the Company in determining the availability of an exemption from registration under federal and state securities laws. The undersigned further represents and warrants that it will notify the Company immediately upon the occurrence of any material change to the information contained herein occurring prior to the Company's issuance of the Shares;

q. The undersigned is unaware of, and in no way relying on, any form of general solicitation or general advertising in connection with the offer and sale of the Shares.

6. Representations and Warranties of the Company  
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The Company represents and warrants to the Purchaser that

6.01 Organization, Qualifications and Corporate Power.  
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The Company is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Michigan and is duly licensed or qualified to transact business as a foreign corporation and is in good standing in each other jurisdiction in which the nature of the business transacted by it or the character of the properties owned or leased by it requires such licensing or qualification. The Company has the corporate power and authority to own and hold its properties and to carry on its business as now conducted and as proposed to be conducted, to execute, deliver and perform this Subscription Agreement, to issue, sell and deliver the Series D Stock, and to issue and deliver the Conversion Shares as provided in the Articles.

6.02 Authorization of Agreement.

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(a) The execution and delivery by the Company of this Subscription Agreement, the performance by the Company of its obligations hereunder, the issuance, sale and delivery of the Series D Stock and the issuance and delivery of the Conversion Shares have been duly authorized by all requisite corporate action and will not violate any provision of law, any order of any court or other agency of government, the Articles or the Bylaws of the Company (the "Bylaws"), or any provision of any indenture, agreement or other instrument to which the Company or any of its properties or assets is bound, or conflict with, result in a breach of or constitute (with due notice or lapse of time or both) a default under any such indenture, agreement or other instrument, or result in the creation or imposition of any lien, charge, restriction, claim or encumbrance of any nature whatsoever upon any of the properties or assets of the Company.

(b) The Series D Stock has been duly authorized and, when issued in accordance with this Subscription Agreement, will be validly issued, fully paid and nonassessable shares of the Company with no personal liability attaching to the ownership thereof and will be free and clear of all liens, charges, restrictions, claims and encumbrances imposed by or through the Company except as set forth herein. The Conversion Shares have been duly reserved for issuance upon conversion of the Series D Stock and, when so issued, will be duly authorized, validly issued, fully paid and nonassessable shares of Common Stock with no personal liability attaching to the ownership thereof and so long as the Series D Stock tendered for conversion is free and clear of liens or encumbrances, will be free and clear of all liens, charges, restrictions, claims and encumbrances imposed by or through the Company except as set forth herein. Neither the issuance, sale or delivery of the Series D Stock nor the issuance or delivery of the Conversion Shares is subject to any preemptive right of stockholders of the Company or to any right of first refusal or other right in favor of any person which right has not been waived.

6.03 Validity.

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This Subscription Agreement has been duly executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company, enforceable in accordance with its terms.

6.04 Authorized Capital Stock.

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(a) The authorized capital stock of the Company consists of (1) 8,540,000 shares of Preferred Stock, and (2) 17,000,000 shares of Common Stock. Immediately prior to the Closing, 2,674,953 shares of Common Stock and 8,040,001 shares of Preferred Stock will be validly issued and outstanding, fully paid and nonassessable with no personal liability attaching to



the ownership thereof. The stockholders of record and holders of subscriptions, warrants, options, convertible securities, and other rights (contingent or other), if any, to purchase or otherwise acquire equity securities of the Company prior to the Closing Date (the "Original Shareholders") and the number of shares of Common Stock and the number of such subscriptions, warrants, options, convertible securities, and other such rights, if any, held by each, are as set forth in the Memorandum. The designations, powers, preferences, rights, qualifications, limitations and restrictions in respect of each class of authorized capital stock of the Company are as set forth in the Articles, a copy of which has previously been delivered to each Purchaser, and all such designations, powers, preferences, rights, qualifications, limitations and restrictions are valid, binding and enforceable and in accordance with all applicable laws. Except as set forth in the attached Schedule 6.04 or in the Memorandum, (a) no person owns of record or is known to the Company to own beneficially any share of Common Stock, (b) no subscription, warrant, option, convertible security, or other right (contingent or other) to purchase or otherwise acquire equity securities of the Company is authorized or outstanding and (c) there is no commitment by the Company to issue shares, subscriptions, warrants, options, convertible securities, or other such rights or to distribute to holders of any of its equity securities any evidence of indebtedness or asset. Except as provided for in the Articles or as set forth herein, the Company has no obligation (contingent or other) to purchase, redeem or otherwise acquire any of its equity securities or any interest therein or to pay any dividend or make any other distribution in respect thereof. Except as set forth herein or in the Memorandum, there are no voting trusts or agreements, stockholders agreements, pledge agreements, buy-sell agreements, rights of first refusal, preemptive rights or proxies relating to any securities of the Company (whether or not the Company is a party thereto). All of the outstanding securities of the Company were issued in compliance with all applicable Federal and state securities laws.

6.05 No Material Adverse Changes. The representations and

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warranties made by the Company in Sections 6.05 through 6.27 of the Aastrom Biosciences, Inc. Subscription Agreement dated April 24, 1995 between Northwest Ohio Venture Fund Limited Partnership and the Company are true and correct in all material respects as if made on the date hereof.

7. Compliance with Regulation D and Applicable State Securities Laws.

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The undersigned understands and agrees that the following restrictions and limitations are applicable to its purchase of the Shares and any resales, mortgages, pledges, hypothecations, or other transfers thereof, pursuant to Regulation D under the Securities Act and applicable state securities laws:

a. The undersigned agrees that the Shares may not be sold, mortgaged, pledged, hypothecated or otherwise transferred unless the Shares are registered under the Securities Act and applicable state securities laws or are exempt from registration thereunder.

b. A legend in substantially the following form will be placed on the certificate(s) evidencing the Shares;

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. THESE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT, AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, MORTGAGED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, OR UNLESS AN EXEMPTION FROM REGISTRATION UNDER SUCH ACT IS AVAILABLE.

c. FOR CALIFORNIA RESIDENTS ONLY: THE SALE OF THE SECURITIES

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THAT IS THE SUBJECT OF THIS SUBSCRIPTION AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION FOR SUCH SECURITIES PRIOR TO SUCH QUALIFICATION IS UNLAWFUL UNLESS AN EXEMPTION FROM SUCH QUALIFICATION IS AVAILABLE. THE RIGHTS OF ALL PARTIES TO THIS SUBSCRIPTION AGREEMENT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED OR AN EXEMPTION THEREFROM BEING AVAILABLE.

8. Board Observer Rights. Purchasers of Series D Preferred Stock who

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were not previously holders of capital stock of the Company ("New Investors") shall have the following rights: a majority in interest of New Investors shall have the right from time to time to designate one representative, who shall be entitled to attend all meetings of the Board of Directors, in a nonvoting observer capacity only. The Company will include such representative in oral reports given by the Board and give such representative copies of all materials that it provides to its directors including but not limited to all materials delivered to directors outside of meetings; provided, however, that such representative shall be reasonably acceptable to the Company and shall enter into a confidentiality agreement acceptable to the Company.

Additionally, the New Investors shall have the rights to information and inspection set forth in Sections 3.1 through 3.3 of the Amended and Restated Investors Rights Agreement dated April 7, 1992 by and among the Company and certain investors and shareholders of the Company.

9. Additional Sales of Series D Preferred Stock. The Company hereby

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agrees that following the completion of the Offering, it will not issue and sell additional shares of Series D Stock at a purchase price per share of less than the applicable conversion price then in effect with respect to the Series D Stock.

10. Irrevocability: Binding Effect. The undersigned hereby acknowledges

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and agrees that the subscription hereunder is irrevocable by the undersigned, except as required by applicable law, and that this Subscription Agreement shall be binding upon and inure to the benefit of the parties and their respective successors, legal representatives, and permitted assigns.

11. Modification. This Subscription Agreement shall not be modified or

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waived except by an instrument in writing signed by the party against whom any such modification or waiver is sought.

12. Notices. A notice or other communication required or permitted to be

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given hereunder shall be in writing and shall be mailed by certified mail, return receipt requested, or delivered against receipt to the party to whom it is to be given (a) if to the Company, at the address set forth above, or (b) if to the undersigned, at the address set forth on the signature page hereof (or, in either case, to such other address as the party shall have furnished in writing in accordance with the provisions of this Section 10). Any notice or other communication shall be deemed given at the time it is received at the party's address.

13. Assignability. This Subscription Agreement and the rights, interests

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and obligations hereunder are not transferable or assignable by the undersigned, except to an affiliate of the undersigned who qualifies as an "accredited investor," and the undersigned further agrees that the transfer or assignment of the Shares shall be made only in accordance with all applicable laws.

14. Applicable Law. This Subscription Agreement shall be governed by and

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construed in accordance with the internal laws of the state of Michigan without regard to its conflicts of laws principles.

15. The Blue Sky Qualification. The undersigned's right to purchase

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Shares under this Subscription Agreement is expressly conditioned upon the exemption from qualification of the offer and sale of the Shares from applicable federal and state securities laws. The Company shall not be required to qualify this transaction under the securities laws of any jurisdiction and, should qualification be necessary, the Company shall be released from any and all obligations to maintain its offer, and may rescind any sale contracted, in the jurisdiction.

16. Confidentiality. The undersigned acknowledges and agrees that any

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information or data it has acquired from or about the Company, not otherwise properly in the public domain, was received in confidence. The undersigned agrees not to divulge, communicate or disclose, except as may be required by law or for the performance of this Subscription Agreement, or use to the detriment of the Company or for the benefit of any other person or persons, or misuse in any way, any confidential information of the Company, including any scientific, technical, trade or business secrets of the Company and any scientific, technical, trade or business materials that are treated by the Company as confidential or proprietary, including, but not limited to, ideas, discoveries, inventions, developments and improvements belonging to the Company and confidential information obtained by or given to the Company about or belonging to third parties.

17. Miscellaneous.

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a. This Subscription Agreement, together with the attached stock registration rights, constitutes the entire agreement between the undersigned and the Company with respect to the subject matter hereof and supersedes all prior oral or written agreements and understandings, if any, relating to the subject matter hereof. The terms and provisions of this Subscription Agreement may be waived, or consent for the departure therefrom granted, only by a written document executed by the party entitled to the benefits of such terms or provisions.

b. The undersigned's representations and warranties made in this Subscription Agreement shall survive the execution and delivery hereof and of the Shares.

c. Each of the parties hereto shall pay its own fees and expenses (including the fees of any attorneys, accountants, appraisers or others engaged by such party) in connection with this Subscription Agreement and the transactions contemplated hereby whether or not the transactions contemplated hereby are consummated.

d. All pronouns and any variations thereof used herein shall be deemed to be to the masculine, feminine, neuter, singular or plural as the identity of the person or persons referred to may require.

e. This Subscription Agreement may be executed in one or more counterparts each of which shall be deemed an original, but all of which shall together constitute one and the same instrument. Signatures may be transmitted by facsimile.

f. Each provision of this Subscription Agreement shall be considered separable and if for any reason any provision or provisions hereof are determined to be invalid or contrary to applicable law, such invalidity shall not impair the operation of

or affect the remaining portions of this Subscription Agreement, so long as the material economic benefits remain enforceable.

g. Paragraph titles are for descriptive purposes only and shall not control or alter the meaning of this Subscription Agreement as set forth in the text.

If the purchaser is an INDIVIDUAL, and if purchased INDIVIDUALLY, as JOINT TENANTS, as TENANTS IN COMMON, or as COMMUNITY PROPERTY:

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Print Name(s) Social Security Number(s)  
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Signature(s) of Purchaser(s)  
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Date Address  
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If the purchaser is a PARTNERSHIP, CORPORATION, or TRUST;

Northwest Ohio Venture Fund Limited Partnership 34-1696375  
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Name of Partnership, Corporation or Trust Federal Taxpayer Identification Number

December 11, 1995  
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Date

By: NOVF General  
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By: /s/ Barry P. Walsh Ohio  
-----  
Name: Barry P. Walsh  
-----  
Title: Managing Partner 300 Madison Ave., Ste. 1525  
Toledo, OH 43604  
-----  
Address

SUBSCRIPTION ACCEPTED AND AGREED  
this 11 day of December, 1995  
--

AASTROM BIOSCIENCES, INC.

By: /s/ R. Douglas Armstrong  
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R. Douglas Armstrong, PhD.,  
President and Chief Executive Officer

Accredited Investor Certification

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(Check the appropriate box(es))

- --- i. I am a natural person who had individual income of more than \$200,000 in each of the most recent two years or joint income with my spouse in excess of \$300,000 in each of the most recent two years and reasonably expect to reach that same income level for the current year;
- --- ii. I am a natural person whose individual net worth, or joint net worth with my spouse, will at the time of purchase of the Shares be in excess of \$1,000,000;
- X  
- --- iii. The undersigned is an institutional investor satisfying the requirements of Section 501(a)(1), (2) or (3) of Regulation D promulgated under the Securities Act;
- --- iv. The undersigned is a trust, which trust has total assets in excess of \$5,000,000, which is not formed for the specific purpose of acquiring the Shares offered hereby and whose purchase is directed by a sophisticated person as described in Rule 506(b)(2)(ii) of Regulation D and who has such knowledge and experience in financial and business matters that it is capable of evaluating the risks and merits of an investment in the Shares;
- --- v. The undersigned is an entity (other than a trust) in which all of the equity owners meet the requirements of at least one of the above subparagraphs.

Northwest Ohio Venture Fund  
By: NOVF General

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By: /s/ Barry P. Walsh

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Its: Managing Partner

AASTROM BIOSCIENCES, INC.

SUBSCRIPTION AGREEMENT

AASTROM Biosciences, Inc.  
Domino's Farms, Lobby L  
24 Frank Lloyd Wright Drive  
P.O. Box 376  
Ann Arbor, MI 48106  
Attention: R. Douglas Armstrong, Ph.D.

Gentlemen:

1. Subscription. The undersigned (the "undersigned" or the "Purchaser"), hereby agrees and subscribes to purchase from AASTROM Biosciences, Inc., a Michigan corporation (the "Company"), 1,250,000 shares (the "Shares") of the Series D Preferred Stock of the Company (the "Series D Stock") at a purchase price of \$4.00 per Share, for an aggregate purchase price of \$5,000,000 (the "Purchase Price"). This subscription is submitted to you in accordance with and subject to the terms and conditions described in this Subscription Agreement, the Memorandum (as defined in Section 5.c.) and the Articles (as defined in Section 5.c.) relating to the offering (the "Offering") by the Company of up to 2,500,000 shares of Series D Stock.

2. Subscription and Payment. The undersigned is returning to the Company two signed and completed copies of this Subscription Agreement, together with payment of the Purchase Price. Payment of the Purchase Price is being made by delivery to the Company of a check payable to the order of the Company, or by wire transfer of the Purchase Price to the Company. Subject to the satisfaction of the conditions in Section 8, a closing (the "Closing") for the purchase and sale of shares of Series D Stock will be held on May 26, 1995. As soon as practicable after the Closing, the Company shall issue and deliver to the undersigned a stock certificate or certificates, registered in the name of the undersigned, representing the Shares being purchased.

3. Acceptance of Subscription. The undersigned understands and agrees that the Company in its sole discretion reserves the right to accept or reject this subscription for the Shares. The Company shall have no obligation hereunder until the Company shall execute and deliver to the undersigned an executed copy of this Subscription Agreement. This Subscription Agreement shall continue in full force and effect to the extent this subscription was accepted.

4. Stock Registration Rights. The undersigned shall have the stock registration rights as have been granted pursuant to Sections 2.4 through 2.14 of that certain Amended and Restated Investors' Rights Agreement dated April 7, 1992 by



and among the Company and certain investors and shareholders of the Company, attached hereto as Exhibit A.

5. Representations and Warranties of Purchaser. In order to

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induce the Company to sell the Shares to the undersigned, the undersigned hereby acknowledges, represents, warrants and agrees as follows:

a. None of the Shares of Series D Stock are (and the shares of common stock, no par value ("Common Stock") issuable upon conversion thereof ("Conversion Shares") will not be) registered under the Securities Act of 1933 (as amended, the "Securities Act") or any state securities laws. The undersigned understands that the sale of the Shares is intended to be exempt from registration under Section 4(2) of the Securities Act and/or the provisions of Regulation D promulgated thereunder, based, in part, upon the representations, warranties and agreements contained in this Subscription Agreement;

b. Neither the Securities and Exchange Commission nor any state securities commission has approved any of the Shares or passed upon or endorsed the merits of this transaction;

c. Prior to its execution of this Subscription Agreement, the undersigned has received from the Company (i) the Confidential Private Placement Memorandum of the Company dated April 5, 1995 (together with any exhibits thereto, the "Memorandum"), which supersedes in its entirety the draft Memorandum previously delivered to the undersigned, (ii) a copy of the amendment to the Restated Articles of Incorporation of the Company (the "Articles"), for the purpose of creating the Series D Stock, and (iii) the audited financial statements of the Company for the years ended June 30, 1994, 1993 and 1992, the unaudited financial statements of the Company for the month ended January 31, 1995 (the "Most Recent Financial Statements"), and the unaudited balance sheet of the Company at February 28, 1995 (collectively, the "Financial Statements").

d. The undersigned acknowledges that all documents, records and books pertaining to the investment in the Shares, including the Memorandum, have been made available for inspection by the undersigned, or by its attorney, accountant, purchaser representative and/or tax advisor (collectively, the "Advisors") and that the undersigned and/or its Advisors have completed such review as they deem to be necessary to make the decision to purchase the Shares. Notwithstanding the foregoing, the parties acknowledge and agree that the Purchaser is relying solely on the representations and warranties set forth in Section 6 hereof, which reference the documents set forth in Section 5.c;

e. The undersigned has reviewed the merits and risks of an investment in the Shares. The undersigned and the Advisors have had a reasonable opportunity to ask questions of and receive answers from members of management

of the Company concerning the offer and sale of the Shares and all such questions have been answered to the full satisfaction of the undersigned;

f. In evaluating the suitability of an investment in the Company, the undersigned has not relied upon any representation or other information (oral or written) other than as contained in documents or answers to questions so furnished to the undersigned or its Advisors by the Company;

g. No oral or written representations have been made or oral or written information furnished to the undersigned or its Advisors in connection with the Offering which were in any way inconsistent with the information provided to the undersigned or its Advisors, including the Memorandum.

h. The undersigned, together with the Advisors, have such knowledge and experience in financial, tax and business matters so as to enable each of them to utilize the information made available to each of them in connection with the purchase of the Shares to evaluate the merits and risks of an investment in the Shares and to make an informed investment decision with respect thereto;

i. The undersigned is not relying on the Company with respect to the tax and other economic considerations of an investment in the Shares, and the undersigned has relied on the advice, or has consulted with, only its own Advisors concerning tax matters;

j. The undersigned is acquiring the Shares solely for its own account, for investment, and not with a view to or for subdivision, resale or distribution, in whole or in part, and no other person has or will have a direct or indirect beneficial interest in the Shares, other than for any partner or shareholder owners of the undersigned, if any;

k. The undersigned must bear the economic risk of the investment indefinitely because none of the Shares of Series D Stock (or Conversion Shares) may be sold, hypothecated or otherwise disposed of unless (i) subsequently registered under the Securities Act and applicable state securities laws, or (ii) an exemption from registration is available. Legends shall be placed on the Shares (and the Conversion Shares) to the effect that they have not been registered under the Securities Act or applicable state securities laws and appropriate notations thereon will be made in the Company's stock books;

l. The undersigned has adequate means of providing for the undersigned's current financial needs and foreseeable contingencies and the undersigned can accept the fact that an investment in the Shares will not be liquid;

m. The undersigned is aware that an investment in the Shares involves a number of very significant risks and, in particular, acknowledges that the Company is in the development stage. The undersigned understands that the risks

associated with an investment in the Shares could result in, and the undersigned can sustain, a complete loss of its investment;

n. The undersigned is an "accredited investor" as such term is defined in the regulations promulgated under the Securities Act;

o. The undersigned represents that it has full power and authority to execute and deliver this Subscription Agreement and all other related agreements and certificates and to carry out the provisions hereof and thereof and to purchase and hold the Shares, and this Subscription Agreement is a legal, valid and binding obligation of the undersigned. The execution and delivery of this Subscription Agreement will not violate or be in conflict with any order, judgment, injunction, agreement or controlling document to which the undersigned is a party or by which it is bound;

p. The undersigned represents to the Company that the information contained herein may be relied upon by the Company in determining the availability of an exemption from registration under federal and state securities laws. The undersigned further represents and warrants that it will notify the Company immediately upon the occurrence of any material change to the information contained herein occurring prior to the Company's issuance of the Shares;

q. The undersigned is unaware of, and in no way relying on, any form of general solicitation or general advertising in connection with the offer and sale of the Shares.

6. REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company represents and warrants to the Purchaser that:

6.01 Organization, Qualifications and Corporate Power.  
-----

The Company is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Michigan and is duly licensed or qualified to transact business as a foreign corporation and is in good standing in each other jurisdiction in which the nature of the business transacted by it or the character of the properties owned or leased by it requires such licensing or qualification. The Company has the corporate power and authority to own and hold its properties and to carry on its business as now conducted and as proposed to be conducted, to execute, deliver and perform this Subscription Agreement, to issue, sell and deliver the Series D Stock, and to issue and deliver the Conversion Shares as provided in the Articles.

6.02 Authorization of Agreement.  
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(a) The execution and delivery by the Company of this Subscription Agreement, the performance by the Company of its obligations hereunder, the issuance, sale and delivery of the Series D Stock and the issuance and delivery of the Conversion Shares have been duly authorized by all requisite corporate action and will not violate any provision of law, any order of any court or other agency of government, the Articles or the Bylaws of the Company (the "Bylaws"), or any provision of any indenture, agreement or other instrument to which the Company or any of its properties or assets is bound, or conflict with, result in a breach of or constitute (with due notice or lapse of time or both) a default under any such indenture, agreement or other instrument, or result in the creation or imposition of any lien, charge, restriction, claim or encumbrance of any nature whatsoever upon any of the properties or assets of the Company.

(b) The Series D Stock has been duly authorized and, when issued in accordance with this Subscription Agreement, will be validly issued, fully paid and nonassessable shares of the Company with no personal liability attaching to the ownership thereof and will be free and clear of all liens, charges, restrictions, claims and encumbrances imposed by or through the Company except as set forth herein. The Conversion Shares have been duly reserved for issuance upon conversion of the Series D Stock and, when so issued, will be duly authorized, validly issued, fully paid and nonassessable shares of Common Stock with no personal liability attaching to the ownership thereof and so long as the Series D Stock tendered for conversion is free and clear of liens or encumbrances, will be free and clear of all liens, charges, restrictions, claims and encumbrances imposed by or through the Company except as set forth herein. Neither the issuance, sale or delivery of the Series D Stock nor the issuance or delivery of the Conversion Shares is subject to any preemptive right of stockholders of the Company or to any right of first refusal or other right in favor of any person which right has not been waived.

6.03 Validity.  
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This Subscription Agreement has been duly executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company, enforceable in accordance with its terms.

6.04 Authorized Capital Stock.  
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The authorized capital stock of the Company consists of 8,540,000 shares of Preferred Stock, and 17,000,000 shares of Common Stock. Immediately prior to the Closing, 2,592,610 shares of Common Stock and 6,790,001 shares of Preferred Stock will be validly issued and outstanding, fully paid and nonassessable with no personal liability attaching to the ownership thereof. The stockholders of record and holders of subscriptions, warrants, options, convertible securities, and other rights (contingent or other), if any, to purchase or otherwise acquire equity

securities of the Company prior to the Closing Date (the "Original Shareholders") and the number of shares of Common Stock and the number of such subscriptions, warrants, options, convertible securities, and other such rights, if any, held by each, are as set forth in the Memorandum. The designations, powers, preferences, rights, qualifications, limitations and restrictions in respect of each class of authorized capital stock of the Company are as set forth in the Articles, a copy of which has previously been delivered to each Purchaser, and all such designations, powers, preferences, rights, qualifications, limitations and restrictions are valid, binding and enforceable and in accordance with all applicable laws. Except as set forth in the attached Schedule 6.04 or in the Memorandum, (a) no person owns of record or is known to the Company to own beneficially any share of Common Stock, (b) no subscription, warrant, option, convertible security, or other right (contingent or other) to purchase or otherwise acquire equity securities of the Company is authorized or outstanding and (c) there is no commitment by the Company to issue shares, subscriptions, warrants, options, convertible securities, or other such rights or to distribute to holders of any of its equity securities any evidence of indebtedness or asset. Except as provided for in the Articles or as set forth herein, the Company has no obligation (contingent or other) to purchase, redeem or otherwise acquire any of its equity securities or any interest therein or to pay any dividend or make any other distribution in respect thereof. Except as set forth herein or in the Memorandum, there are no voting trusts or agreements, stockholders agreements, pledge agreements, buy-sell agreements, rights of first refusal, preemptive rights or proxies relating to any securities of the Company (whether or not the Company is a party thereto). All of the outstanding securities of the Company were issued in compliance with all applicable Federal and state securities laws.

6.05    Litigation.  
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(a) The Company is aware of a possible claim against it by Software Publishers Association, relating to the alleged use of unregistered software on the Company's PCs. The Company is in negotiations with such association and believes the matter can be resolved without material adverse consequence to the Company. Except for such action, there is no (a) action, suit, claim, proceeding or investigation pending or, to the best of the Company's knowledge, threatened against or affecting the Company or its directors, officers, or management, at law or in equity, or before or by any Federal, state, municipal or other governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, (b) arbitration proceeding relating to the Company pending under collective bargaining agreements or otherwise or (c) governmental inquiry pending or, to the best of the Company's knowledge, threatened against or affecting the Company (including without limitation any inquiry as to the qualification of the Company to hold or receive any license or permit), and, to the best knowledge of the Company, there is no basis for any of the foregoing. Without waiving any applicable attorney-client privilege, the Company has not received any opinion or memorandum or legal advice from legal counsel to the effect that it is exposed, from a legal standpoint, to any liability or disadvantage

which may be material to its business, prospects, financial condition, operations, property or affairs. To the best knowledge of the Company, the Company is not in default with respect to any order, writ, injunction or decree known to or served upon the Company of any court or of any Federal, state, municipal or other governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign.

(b) The Company has written letters to a former employee, Richard M. Schwartz, Ph.D. and Dr. Schwartz's new employer, SyStemix, (i) reminding them of Dr. Schwartz's duty to maintain strict confidentiality as to the Company's trade secrets; and (ii) asking if there has been any breach of this confidentiality obligation; and (iii) commenting that a new invention by Systemix's appears to be derived from the Company's trade secrets. Systemix and Dr. Schwartz have denied any use of the Company's trade secrets. The Company has reserved its rights in this matter, but does not presently contemplate pursuing this potential claim in the near future.

6.06 Financial Statements.  
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The Company has furnished to the Purchasers the Financial Statements. The Financial Statements are true and correct in all material respects and have been prepared in accordance with generally accepted accounting principles. The balance sheets included in the respective Financial Statements accurately reflects the financial condition and all assets and liabilities of the Company at the times referred to therein. The statements of income and cash flows accurately reflect the operations of the Company for the periods referred to therein. There are no undisclosed liabilities in the Financial Statements.

6.07 No Convictions.  
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During the past ten (10) years, none of the directors, officers, or management of the Company have been arrested or convicted of any material crime, including any felony (whether material or not), have been indicted, have been bankrupt or an officer or director of a bankrupt company (except for directors designated by venture capital investors), nor have any of them been restricted in any way from bidding on contracts with the government of the United States.

6.08 Brokers.  
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Except for a fee payable to Key Investments, Inc., an affiliate of Society Bank of Michigan, the Company has no knowledge of any brokerage or finders fee due in conjunction with the transactions contemplated by this Subscription Agreement.

6.09 Subsidiaries.  
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The Company has no subsidiaries. The Company does not (i) own of record or beneficially, directly or indirectly: (A) any shares of capital stock or securities convertible into capital stock of any corporation; or (B) any participating interest in any partnership, joint venture or other non-corporate business enterprise; or (ii) control, directly or indirectly, any other entity.

6.10 Directors and Officers.  
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The Memorandum sets forth the names of the directors and officers of the Company, together with the title of each such person.

6.11 No Material Adverse Change.  
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Since the date of the Most Recent Financial Statements, (a) there has been no change in the assets, liabilities or financial condition of the Company from that reflected in the Most Recent Financial Statements, except for changes in the ordinary course of business which in the aggregate have not been materially adverse and (b) none of the business, prospects, financial condition, operations, property or affairs of the Company has been materially adversely affected by any occurrence or development, individually or in the aggregate, whether or not insured against.

6.11 Taxes.  
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The Company has filed all tax returns, Federal, state, county and local, required to be filed by it, and the Company has paid all taxes shown to be due by such returns as well as all other taxes, assessments and governmental charges which have become due or payable, including without limitation all taxes which the Company is obligated to withhold from amounts owing to employees, creditors and third parties. All such taxes with respect to which the Company has become obligated pursuant to elections made by the Company in accordance with generally accepted practice have been paid and adequate reserves have been established for all taxes accrued but not yet payable. The Federal income tax returns of the Company have never been audited by the Internal Revenue Service. No deficiency assessment with respect to or proposed adjustment of the Company's Federal, state, county or local taxes is pending or, to the best of the Company's knowledge, threatened. There is no tax lien, whether imposed by any Federal, state, county or local taxing authority, outstanding against the assets, properties or business of the Company. Neither the Company nor, to the Company's knowledge, any of its stockholders, has ever filed consent pursuant to Section 341(f) of the Code, relating to collapsible corporations.

6.13 Employee Benefit Plans.  
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To the knowledge of the Company, each of the Company's employee benefit plans (and each related trust or insurance contract) complies in form and in operation in all respects with the applicable requirements of the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code of 1986, as amended. To the knowledge of the Company, all required reports and descriptions have been filed or distributed appropriately with respect to each employee benefit plan. There have been no prohibited transactions with respect to any employee benefit plan. No fiduciary has any liability for breach of fiduciary duty or any other failure to act or comply in connection with the administration or investment of the assets of any employee benefit plans. No charge, complaint, action, suit, proceeding, hearing, investigation, claim, or demand with respect to the administration or the investment of the assets of any employee benefit plan (other than routine claims for benefits) is pending or, to the Company's knowledge, threatened. The Company and its directors and officers (and employees with responsibility for employee benefits matters) have no knowledge of any basis for any such charge, complaint, action, suit, proceeding, hearing, investigation, claim, or demand.

6.14 Title to Properties.  
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The Company has good and marketable title to its properties and assets reflected in the Financial Statements or acquired by its since the date of the Financial Statements (other than properties and assets disposed of in the ordinary course of business since the date of the Financial Statements), and all such properties and assets are free and clear of mortgages, pledges, security interests, liens, charges, claims, restrictions and other encumbrances, except for liens to secure payment of obligations reflected in the Financial Statements and for current taxes not yet due and payable and minor imperfections of title, if any, not material in nature or amount and not materially detracting from the value or impairing the use of the property subject thereto or impairing the operations or proposed operations of the Company.

6.15 Leasehold Interests.  
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Each lease or agreement to which the Company is a party under which it is a lessee of any property, real or personal is a valid and enforceable agreement without any material default of the Company thereunder and, to the best of the Company's knowledge, without any default by the Company of any material term thereunder; the Company has not been notified of any default and has no reason to believe that it is in default of any term thereunder. To the best of the Company's knowledge, no other party to any such lease or agreement is in default of a material term thereunder. No event has occurred and is continuing which, with due notice or lapse of time or both, would constitute a default or event of default by the Company under any such lease or agreement or, to the best of the Company's



knowledge, by any other party thereto. The Company's possession of such property has not been disturbed and, to the best of the Company's knowledge, no claim has been asserted against the Company adverse to its rights in such leasehold interests.

6.16 Insurance.  
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The Company maintains as to its properties and business, with financially sound and reputable insurers, insurance against such casualties and contingencies and of such types and in such amounts as is customary for companies similarly situated.

6.17 Other Agreements.  
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With respect to each material contract to which the Company is a party, the Company and, to the best of the Company's knowledge, each other party thereto, have in all material respects performed all the obligations required to be performed by them to date, have received no notice of default and are not in default (with due notice or lapse of time or both) under any material lease, agreement or contract now in effect to which the Company is a party or by which it or its property may be bound. The Company has no present expectation or intention of not fully performing all its obligations under each such material lease, contract or other agreement and the Company has no knowledge of any breach or anticipated breach by the other party to any contract or commitment to which the Company is a party.

6.18 Patents, Trademarks, Etc.  
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(a) Schedule 6.18, attached hereto, accurately sets forth all material patents, patent rights, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names and copyrights, and all material applications for such which are in the process of being prepared, owned by or registered in the name of the Company, or of which the Company is a licensor or licensee or in which the Company has any right, and in each case a brief description of the nature of such right. The Memorandum contains an accurate and complete description of all material licenses. The Company is in compliance in all material respects with each of such licenses. The Company owns or possesses adequate licenses or other rights to use all patents, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names, copyrights, manufacturing processes, formulae, trade secrets and know how (collectively, "Intellectual Property") necessary to the conduct of its business as conducted, and no claim is pending or, to the best of the Company's knowledge, threatened to the effect that the operations of the Company infringe upon or conflict with the asserted rights of any other person under any Intellectual Property, and, to the best knowledge of the Company, there is no basis for any such claim (whether or not pending or threatened). No claim is pending or threatened to the effect that any such Intellectual Property owned or licensed by the Company, or which the

Company otherwise has the right to use, is invalid or unenforceable by the Company, or that the Company is not in compliance with any term or condition of a license, and there is no basis for any such claim (whether or not pending or threatened). The Company has not granted or assigned to any other person or entity any right to manufacture, have manufactured, assemble or sell the products or proposed products or to provide the services or proposed services of the Company except as set forth in the Memorandum and Schedule 6.18.

(b) The Company has taken reasonable security measures to protect the secrecy, confidentiality, and value of the Company's trade secrets; any of their employees and any other persons who, either alone or in concert with others, developed, invented, discovered, derived, programmed, or designed these secrets, or who have knowledge of or access to information relating to them, have entered into agreements protecting the confidentiality thereof.

6.19 Proprietary Information of Third Parties.  
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Except as set forth herein and in Section 6.05, to the best of the Company's knowledge, no third party has claimed or has reason to claim that any person employed by or affiliated with the Company has (a) violated or may be violating any of the terms or conditions of his employment, non-competition or nondisclosure agreement with such third party, (b) disclosed or may be disclosing or utilized or may be utilizing any trade secret or proprietary information or documentation of such third party or (c) interfered or may be interfering in the employment relationship between such third party and any of its present or former employees. No third party has requested information from the Company which suggests that such a claim might be contemplated. To the best of the Company's knowledge, no person employed by or affiliated with the Company has employed or proposes to employ any trade secret or any information or documentation proprietary to any former employer, and to the best of the Company's knowledge, no person employed by or affiliated with the Company has violated any confidential relationship which such person may have had with any third party, in connection with the development, manufacture or sale of any product or proposed product or the development or sale of any service or proposed service of the Company, and the Company has no reason to believe there will be any such employment or violation. To the best of the Company's knowledge, none of the execution or delivery of this Subscription Agreement, or the carrying on of the business of the Company as officers, employees or agents by any officer, director or key employee of the Company, or the conduct or proposed conduct of the business of the Company, will conflict with or result in a breach of the terms, conditions or provisions of or constitute a default under any contract, covenant or instrument under which any such person is obligated.

6.20 Compliance With Law.

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The Company has complied with all laws, rules, regulations and orders applicable to its business, operations, properties, assets, products and services, the violation of which would have a material adverse effect upon the Company, and the Company has all necessary permits, licenses and other authorizations required to conduct its business as it is now conducted. There is no existing law, rule, regulation or order, and the Company after due inquiry is not aware of any proposed law, rule, regulation or order, whether Federal or state, which would prohibit or restrict the Company from, or otherwise materially adversely affect the Company in, conducting its business, in which it is now conducting business or in which it proposes to conduct business, other than the customary governmental approvals required for medical products. Without limiting the foregoing in any manner, the Company has complied in all material respects with all applicable laws relating to the employment of labor, including provisions relating to wages, hours, equal opportunity, collective bargaining and the payment of Social Security and other taxes, with the Employee Retirement Income Security Act of 1974, as amended, with the Occupational Health and Safety Act, and with the Americans With Disabilities Act. The Company is in full compliance with the Immigration Reform and Control Act of 1986, as amended, and, to the best of the Company's knowledge, all key employees who are not United States citizens are currently authorized under United States immigration laws to hold United States employment and will continue to have such employment authorization throughout the term of the Series D Stock investment, and are otherwise in compliance with United States immigration laws.

6.21 Loans and Advances.

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The Company does not have any outstanding loans or advances to any person and is not obligated to make any such loans or advances, except as reflected on the Financial Statements, and except, in each case, for advances to employees of the Company in respect of reimbursable business expenses anticipated to be incurred by them in connection with their performance of services for the Company.

6.22 Assumptions, Guaranties, Etc. of Indebtedness of

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Other Persons.

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Except as disclosed in the Financial Statements, the Company has not assumed, guaranteed, endorsed or otherwise become directly or contingently liable on any indebtedness of any other person (including, without limitation, liability by way of agreement, contingent or otherwise, to purchase, to provide funds for payment, to supply funds to or otherwise invest in the debtor, or otherwise to assure the creditor against loss), except for guaranties by endorsement of negotiable instruments for deposit or collection in the ordinary course of business.

6.23 Governmental Approvals.

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Subject to the accuracy of the representations and warranties of the Purchaser set forth in Section 5, no registration or filing with, or consent or approval of or other action by, any Federal, state or other governmental agency or instrumentality is or will be necessary for the valid execution, delivery and performance by the Company of this Agreement, the issuance, sale and delivery of the Series D Stock or, upon conversion of the Series D Stock, the issuance and delivery of the Conversion Shares, other than (a) filings pursuant to state securities laws (all of which filings have been or will be made by the Company) in connection with the sale of the Series D Stock and (b) with respect to the Registration Rights as set forth in Exhibit A, the registration of the shares covered thereby with the Commission and filings pursuant to state securities laws.

6.24 Disclosure.

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The Company's Private Placement Memorandum dated April 5, 1995 with respect to the Series D Stock (the "Memorandum"), contains only true and accurate facts and representations, and does not contain any untrue information and does not omit any material fact necessary to make the statements contained therein not misleading. Neither this Subscription Agreement, nor any Schedule or Exhibit to this Agreement, contains an untrue statement of a material fact or omits a material fact necessary to make the statements contained herein or therein not misleading. None of the statements, documents, certificates or other items prepared or supplied by the Company with respect to the transactions contemplated hereby contains an untrue statement of a material fact or omits a material fact necessary to make the statements contained therein not misleading. As of the date hereof, no facts have come to the attention of the Company which would, in its opinion, require the Company to revise or amplify the Memorandum.

6.25 Offering of Shares.

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The Offering is being made by the Company pursuant to an exemption from the registration requirements of the Securities Act.

6.26 Transactions With Affiliates.

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Except as set forth in the Memorandum, no director, officer, employee or stockholder of the Company, or member of the family of any such person, or any corporation, partnership, trust or other entity in which any such person, or any member of the family of any such person, has a substantial interest in or is an officer, director, trustee, partner or holder of more than 5% of the outstanding capital stock thereof, is a party to any transaction with the Company, including any contract, agreement or other arrangement providing for the employment of, furnishing of services by, rental of real or personal property from or otherwise requiring payments to any such person or firm.

6.27 Obsolescence.

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To the best of the Company's knowledge, there are no new products, inventions, procedures, or methods of manufacturing or processing that any competitors or other third parties have developed and which reasonably could be expected to supersede or make obsolete any of the Company's products or processes.

7. Compliance with Regulation D and Applicable State Securities

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Laws. The undersigned understands and agrees that the following restrictions

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and limitations are applicable to its purchase of the Shares and any resales, mortgages, pledges, hypothecations, or other transfers thereof, pursuant to Regulation D under the Securities Act and applicable state securities laws:

a. The undersigned agrees that the Shares may not be sold, mortgaged, pledged, hypothecated or otherwise transferred unless the Shares are registered under the Securities Act and applicable state securities laws or are exempt from registration thereunder.

b. A legend in substantially the following form will be placed on the certificate(s) evidencing the Shares:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. THESE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT, AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, MORTGAGED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, OR UNLESS AN EXEMPTION FROM REGISTRATION UNDER SUCH ACT IS AVAILABLE.

c. FOR CALIFORNIA RESIDENTS ONLY: THE SALE

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OF THE SECURITIES THAT IS THE SUBJECT OF THIS SUBSCRIPTION AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION FOR SUCH SECURITIES PRIOR TO SUCH QUALIFICATION IS UNLAWFUL UNLESS AN EXEMPTION FROM SUCH QUALIFICATION IS AVAILABLE. THE RIGHTS OF ALL PARTIES TO THIS SUBSCRIPTION AGREEMENT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED OR AN EXEMPTION THEREFROM BEING AVAILABLE.

8. Conditions to Obligations of the Purchasers. The

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following conditions have been satisfied:

a. The Restated Articles of Incorporation of the Company, in the form previously delivered to each Purchaser, have been filed with the Secretary of State of the State of Michigan;

b. The Company has received from other Purchasers \$5,000,004 for the purchase of Series D Shares;

c. The Company has delivered to the Purchaser the opinion of counsel attached hereto as Exhibit B.

9. Board Observer Rights. Purchasers of Series D Preferred

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Stock who were not previously holders of capital stock of the Company ("New Investors") shall have the following rights: a majority in interest of New Investors shall have the right from time to time to designate one representative, who shall be entitled to attend all meetings of the Board of Directors, in a nonvoting observer capacity only. The Company will include such representative in oral reports given by the Board and give such representative copies of all materials that it provides to its directors including but not limited to all materials delivered to directors outside of meetings; provided, however, that such representative shall be reasonably acceptable to the Company and shall enter into a confidentiality agreement acceptable to the Company.

Additionally, the New Investors shall have the rights to information and inspection set forth in Sections 3.1 through 3.3 of the Amended and Restated Investors Rights Agreement dated April 7, 1992 by and among the Company and certain investors and shareholders of the Company.

10. Additional Sales of Series D Preferred Stock. The Company

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hereby agrees that following the completion of the Offering, it will not issue and sell additional shares of Series D Stock at a purchase price per share of less than the applicable conversion price then in effect with respect to the Series D Stock.

11. Irrevocability; Binding Effect. The undersigned hereby

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acknowledges and agrees that the subscription hereunder is irrevocable by the undersigned, except as required by applicable law, and that this Subscription Agreement shall be binding upon and inure to the benefit of the parties and their respective successors, legal representatives, and permitted assigns.

12. Modification. This Subscription Agreement shall not be

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modified or waived except by an instrument in writing signed by the party against whom any such modification or waiver is sought.

13. Notices. A notice or other communication required or

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permitted to be given hereunder shall be in writing and shall be mailed by certified mail,

return receipt requested, or delivered against receipt to the party to whom it is to be given (a) if to the Company, at the address set forth above, or (b) if to the undersigned, at the address set forth on the signature page hereof (or, in either case, to such other address as the party shall have furnished in writing in accordance with the provisions of this Section 13). Any notice or other communication shall be deemed given at the time it is received at the party's address.

14. Assignability. This Subscription Agreement and the rights,  
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interests and obligations hereunder are not transferable or assignable by the undersigned, except to an affiliate of the undersigned who qualifies as an "accredited investor," and the undersigned further agrees that the transfer or assignment of the Shares shall be made only in accordance with all applicable laws.

15. Applicable Law. This Subscription Agreement shall be  
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governed by and construed in accordance with the internal laws of the state of Michigan without regard to its conflicts of laws principles.

16. Blue Sky Qualification. The undersigned's right to purchase  
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Shares under this Subscription Agreement is expressly conditioned upon the exemption from qualification of the offer and sale of the Shares from applicable federal and state securities laws. The Company shall not be required to qualify this transaction under the securities laws of any jurisdiction and, should qualification be necessary, the Company shall be released from any and all obligations to maintain its offer, and may rescind any sale contracted, in the jurisdiction.

17. Confidentiality. The undersigned acknowledges and agrees  
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that any information or data it has acquired from or about the Company, not otherwise properly in the public domain, was received in confidence. The undersigned agrees not to divulge, communicate or disclose, except as may be required by law or for the performance of this Subscription Agreement, or use to the detriment of the Company or for the benefit of any other person or persons, or misuse in any way, any confidential information of the Company, including any scientific, technical, trade or business secrets of the Company and any scientific, technical, trade or business materials that are treated by the Company as confidential or proprietary, including, but not limited to, ideas, discoveries, inventions, developments and improvements belonging to the Company and confidential information obtained by or given to the Company about or belonging to third parties.

18. Miscellaneous.  
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a. This Subscription Agreement, together with the Supplemental Agreement dated March 29, 1995, and the Articles and the attached stock registration rights, constitutes the entire agreement between the undersigned and the Company with respect to the purchase and sale of the Series D Shares, and supersedes all prior oral or written agreements and understandings, if any, relating thereto. The terms and provisions of this Subscription agreement may be waived, or

consent for the departure therefrom granted, only by a written document executed by the party entitled to the benefits of such terms or provisions.

b. The undersigned's representations and warranties made in this Subscription Agreement shall survive the execution and delivery hereof and of the Shares.

c. Each of the parties hereto shall pay its own fees and expenses (including the fees of any attorneys, accountants, appraisers or others engaged by such party) in connection with this Subscription Agreement and the transactions contemplated hereby whether or not the transactions contemplated hereby are consummated.

d. All pronouns and any variations thereof used herein shall be deemed to be to the masculine, feminine, neuter, singular or plural as the identity of the person or persons referred to may require.

e. This Subscription Agreement may be executed in one or more counterparts each of which shall be deemed an original, but all of which shall together constitute one and the same instrument. Signatures may be transmitted by facsimile.

f. Each provision of this Subscription Agreement shall be considered separable and if for any reason any provision or provisions hereof are determined to be invalid or contrary to applicable law, such invalidity shall not impair the operation of or affect the remaining portions of this Subscription Agreement, so long as the material economic benefits remain enforceable.

g. Paragraph titles are for descriptive purposes only and shall not control or alter the meaning of this Subscription Agreement as set forth in the text.

IN WITNESS WHEREOF, the parties have executed and delivered this Subscription Agreement.

COBE Laboratories, Inc.,  
a Colorado Corporation  
1185 Oak Street  
Lakewood, CO 80215  
Fed. Taxpayer Identification No: 952403584  
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Dated: May 26, 1995

By: /s/ Ed Wood

Name: Ed Wood

Title: President, COBE BCT



SUBSCRIPTION ACCEPTED AND AGREED  
this 30 day of May, 1995

AASTROM BIOSCIENCES, INC.

By: /s/ R. Douglas Armstrong

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R. Douglas Armstrong, Ph.D.,  
President and Chief Executive Officer

TERMINATION AGREEMENT

This Agreement is entered into as of November 14, 1996, by and between Aastrom Biosciences, Inc., a Michigan corporation ("ABI"), and Rhone-Poulenc Rorer Inc., a Pennsylvania corporation ("RPR"), with respect to the following facts:

A. As of September 15, 1995, RPR and ABI entered into that certain Governance Agreement, License Agreement, Supply Agreement, and Stock Purchase Agreement, each dated as of September 15, 1995.

B. Pursuant to the terms of the Governance Agreement, RPR and ABI also contemplated entered into, at future dates, a Research and Development Collaboration Agreement, and an Arbitration Agreement. The parties never signed or entered into these additional agreements.

C. Pursuant to the terms of the Governance Agreement, RPR had the right to elect to proceed or not proceed with the "Third Option Events", as specified in the Governance Agreement, and if RPR elected not to proceed with said Third Option Events, then the Governance Agreement, License Agreement and Supply Agreement were to terminate, and the \$3.5 million previously paid by RPR to ABI were to be credited to the purchase of ABI's preferred stock at \$17.00 per share.

D. By letter dated September 6, 1996, RPR notified ABI of RPR's election to not proceed with the Third Option Events, and to thereby terminate the applicable agreements. The purpose of this Termination Agreement is to set forth the implementing details for said termination.

WHEREFORE, the parties hereto, intending to be bound, mutually agree as follows:

1. Definitions. The defined terms in the above-referenced  
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agreements shall have the same meaning in this Agreement.

2. Termination. Except as expressly set forth in this Termination  
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Agreement and in a new Stock Purchase Agreement of even date, the parties acknowledge and mutually agree that the following agreements are terminated, with neither party having any further rights or obligations thereunder:

- Governance Agreement, dated September 15, 1995
- License Agreement, dated September 15, 1995
- Stock Purchase Agreement, dated September 15, 1995
- Supply Agreement, dated September 15, 1995

3. Stock Purchase. Pursuant to the terms of the new Stock Purchase

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Agreement of even date, RPR is purchasing, and ABI is selling, 205,882 shares of ABI's Series E preferred stock, at \$17 per share, for an aggregate purchase price of \$3.5 million, cash payment of which has already been paid by RPR to ABI in the form of the First Option Payment (\$1.5 million) and the Second Option Payment (\$2.0 million).

4. Confidentiality. The rights and obligations of the parties

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pursuant to the previously agreed to confidentiality provisions shall survive and remain in full force and effect for all disclosures made up through the date hereof, notwithstanding the termination of the other agreements. Without limiting the generality of the foregoing, the following confidentiality provisions shall remain in full force and effect:

a. Mutual Confidentiality Agreement dated originally January 9 and 13, 1995, between RPR, ABI, Rhone-Poulenc Rorer Pharmaceuticals, Inc., and Applied Immune Sciences ("AIS");

b. Modification of Mutual Confidentiality Agreement, which modification was dated February 8 and 9, 1995.

c. Letter related to the Mutual Confidentiality Agreement, which letter was dated October 18 and 20, 1995;

d. The confidentiality provisions set forth in Section 16 of the License Agreement.

e. The confidentiality provisions set forth in Section 13 of the Governance Agreement.

Any information disclosed after the date hereof shall not be covered by said confidentiality provisions, unless the parties otherwise expressly agree in writing.

5. Indemnity. The indemnity provisions set forth in Section 12 of

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the License Agreement shall remain in full force and effect.

6. Return of CPS and Other Matters.

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a. By the date hereof, RPR shall return to ABI all units and components of the ABI Cell Production System ("CPS"), together with all related materials, samples, parts, documents, manuals, instructions and other materials concerning the CPS. By the date hereof, ABI shall come to RPR's facility in Santa Clara, California (the Gencell AIS facility) where the CPS units are located, and ABI shall package the CPS units for shipment to ABI. The cost for such packaging and shipment shall be borne by RPR.

b. By the date hereof, RPR shall return to ABI all copies of all ABI confidential information in the possession of RPR.

c. By the date hereof, ABI shall return to RPR all copies of RPR's confidential information in the possession of ABI, including RPR's Standard Operating Procedures ("SOPs").

d. With respect to the written materials which are returned to each party, the receiving party agrees to maintain custody of said written materials for at least five years. If the party returning the written materials has a reasonable need to review the returned materials, the receiving party shall allow such review, subject to the reviewing party complying with its confidentiality obligations.

e. Notwithstanding any other provision of this Section 6 to the contrary, RPR shall be entitled to retain, in files marked "Confidential", one copy of the documents listed in Exhibit A attached hereto. For the avoidance of doubt, the information contained in such documents shall remain subject to confidentiality provisions of Section 4 hereof.

7. Research Reports.  
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ABI and RPR shall each prepare its respective final reports on its research activities which have been conducted pursuant to the parties' prior relationship, and each party shall furnish to the other party such final research reports.

8. Intellectual Property Rights. As specified in Section 3.7(iv) of  
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the Governance Agreement, all technology and other intellectual property rights conceived and/or developed solely by ABI shall remain the sole property of ABI, with RPR having no rights therein. As specified in Section 18.6 of the License Agreement, RPR shall have no right to develop, manufacture or market Licensed Product. The above-referenced Sections shall remain in full force and effect.

9. Cost Budget Reconciliation. Prior to the date hereof, ABI has  
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furnished to RPR a report and reconciliation as to the costs incurred by ABI and funded by RPR for activities pursuant to the Second Option Period R&D Budget, as contemplated by Section 3.7 of the Governance Agreement. It is agreed that RPR shall have no further obligation to ABI relating to the First Option Period R&D Budget or the Second Option Period R&D Budget. Within thirty (30) days after execution hereof, ABI shall refund to RPR the sum of \$52,000, representing all of the surplus funds which were advanced to ABI under the Letter of Intent.

10. Patent Costs. It is agreed the aggregate sum of the patent costs  
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which RPR is responsible for reimbursing ABI pursuant to Section 9 of the License Agreement is \$16,093. ABI shall deduct such amount from the sum payable to RPR pursuant to the last sentence of Section 9 of this Agreement.

11. Gencell Membership. In order to continue to maintain good lines

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of communication between ABI and RPR, in hopes of furthering some renewed collaboration, ABI shall continue as a participant at the Gencell membership meetings, so long as both parties find such continued participation to be mutually beneficial.

12. Arbitration. Any controversy or claim arising out of or relating

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to this Agreement or any of the other referenced agreements, or the breach thereof, shall be settled by binding arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("AAA"), with the forum for the arbitration proceedings to be held in Detroit, Michigan if RPR commences the arbitration, and with the forum for the arbitration proceedings to be held in Philadelphia, Pennsylvania if ABI commences the arbitration.

13. Public Announcement. The provisions of Section 9 of the

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Governance Agreement shall remain in full force and effect.

14. General Provisions. All of the general provisions from Section

-----

14 of the Governance Agreement shall be applicable to this Agreement.

IN WITNESS WHEREOF, the parties have executed and delivered this Agreement as of the date set forth above.

ABI:

Aastrom Biosciences, Inc.,  
a Michigan corporation

By: /s/ R. DOUGLAS ARMSTRONG

-----  
R. Douglas Armstrong, Ph.D.,  
President

RPR:

Rhone-Poulenc Rorer Inc.,  
a Delaware corporation

By: /s/ K. R. PINA

-----  
K. R. Pina

STOCK PURCHASE AGREEMENT  
(Series E Preferred)

Between

AASTROM BIOSCIENCES, INC.

and

RHONE-POULENC RORER INC.

STOCK PURCHASE AGREEMENT

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EXHIBITS:

- A Form of Opinion of Counsel, Termination Closing
- B Summary of Series E Preferred Stock



STOCK PURCHASE AGREEMENT

This Stock Purchase Agreement (this "Agreement") is made as of November 14, 1996, by and between AASTROM Biosciences, Inc., a Michigan corporation (the "Company"), and Rhone-Poulenc Rorer Inc., a Delaware corporation (the "Purchaser"), with respect to the factual recitals set forth below.

Certain terms used in this Agreement are defined in Section 1 of this Agreement.

RECITALS

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A. The Company and the Purchaser have entered into a Governance Agreement dated as of September 15, 1995 (the "Governance Agreement"), setting forth, among other things, the terms and conditions of a preliminary research collaboration between the parties concerning the development and sale of the CPS for Lymphoid Cell Applications.

B. As specified in the Governance Agreement, certain option payments paid by the Purchaser to the Company in connection with the parties' collaboration shall be applied toward the purchase by the Purchaser of shares of the capital stock of the Company.

C. As specified in the Governance Agreement, if the Purchaser elects not to exercise the Third Option, then the Purchaser is obligated to purchase \$3.5 million of the preferred stock of the Company, at \$17.00 per share, for a total of 205,882 shares.

D. The Company has previously furnished to the Purchaser (i) a copy of the Memorandum, (ii) a copy of the Articles, and (iii) a copy of the Bylaws (collectively, the "Series D Documents"). The Company has also furnished to the Purchaser a copy of the Form S-1 Registration Statement filed by the Company on November 1, 1996 with the Securities and Exchange Commission.

1. Definitions.

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"Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Articles" means the Company's Amended and Restated Articles of Incorporation, as amended to the date hereof, including the Company's Amended and Restated Articles of Incorporation filed on November 1, 1996, with the State of Michigan Corporation and Securities Bureau.

"Bylaws" means the Company's Amended and Restated Bylaws, as amended to the date hereof.

"Commission" means the United States Securities and Exchange Commission.

"Common Stock" means shares of Common Stock of the Company, no par value per share.

"Conversion Shares" means the shares of Common Stock or other securities which are issuable upon conversion of any Preferred Stock which may be purchased hereunder.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"First Option Payment" has the meaning provided in the Governance Agreement.

"Governance Agreement" means the Governance Agreement, dated as of September 15, 1995, setting forth, among other things, the terms and conditions of a preliminary research collaboration between the parties.

"Memorandum" means the Company's Private Placement Memorandum, dated April 5, 1995, relating to an offering of the Company's Series D Preferred Stock, which sets forth relevant information concerning the Company.

"Preferred Stock" means shares of Series E Preferred Stock of the Company, no par value per share, having the rights, privileges and preferences set forth on Exhibit B to this Agreement.

"Second Option Payment" has the meaning provided in the Governance Agreement.

"Series D Documents" means the Memorandum, the Articles and the Bylaws.

"Shares" means the shares of the Company's Series E Preferred Stock to be purchased by Purchaser hereunder.

"Termination Closing" means the closing for the purchase and sale of the Termination Shares, as contemplated by Section 6.2 hereof.

"Termination Shares" means the shares of the Company's Series E Preferred Stock to be purchased by Purchaser pursuant to Section 4 hereof.

"Third Option" has the meaning provided in the Governance Agreement.

"1934 Act Registration Statement" means a registration statement filed pursuant to the requirements of Section 12 of the Exchange Act or pursuant to any equivalent provision of any similar federal law then in effect.

2. [omitted]

3. [omitted]

4. Purchase of Termination Shares. Since the Purchaser has elected not to

-----  
exercise the Third Option, the Company shall, at the Termination Closing, issue and sell to the Purchaser 205,882 Shares of Series E Preferred Stock having an aggregate value of \$3.5 million, at a purchase price per Share of \$17.00. The shares purchased pursuant to this Section 4 are referred to herein as the "Termination Shares."

5. [omitted]

6. Closing Dates; Delivery. The closing for the purchase and sale of the

-----  
Termination Shares (the "Termination Closing") shall occur on November 14, 1996. At the Termination Closing, the parties shall deliver the documents, instruments and certificates specified in Section 14 hereof.

7. [omitted]

8. [omitted]

9. Representations and Warranties of the Company. The Company hereby

-----  
represents and warrants to the Purchaser as of the date hereof, the following:

9.1 to 9.3 [omitted]

9.4 Authorization. All corporate action on the part of the Company, its

-----  
officers, directors and shareholders necessary for the authorization, execution and delivery of this Agreement, and the performance of the Company's obligations under this Agreement, has been taken. At or prior to the Termination Closing, all corporate action on the part of the Company, its officers, directors and shareholders necessary for the authorization, issuance, sale and delivery of the Shares (and the Conversion Shares) will have been taken. This Agreement, when

executed and delivered by the Company and the Purchaser, shall constitute the valid and legally binding obligation of the Company, enforceable in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors.

9.5 Validity of the Shares. The sale of the Shares (including any

-----  
Conversion Shares) is not and will not be subject to any preemptive rights or rights of first refusal that have not been waived. When issued, sold and delivered in compliance with the provisions of this Agreement, the Shares will be validly issued, fully paid and nonassessable, and will be free of any liens, encumbrances or, except as set forth in the immediately following sentence, restrictions. The Shares may be subject to restrictions on transfer under state and/or federal securities laws as set forth herein or as otherwise required by such laws at the time a transfer is proposed. The voting rights, designations, preferences, limitations and special rights of the Shares (including the Conversion Shares), when issued, shall be as fully set forth in the Articles and Exhibit B attached hereto. The Company has reserved a sufficient number of shares of its Common Stock for issuance upon conversion of any Preferred Stock issued and sold hereunder and such shares of Common Stock, when issued in accordance with the terms of such Preferred Stock, will be duly authorized, validly issued, fully paid, non-assessable and free and clear of all encumbrances, liens or restrictions, except for restrictions on transfer imposed by applicable securities laws.

9.6 to 9.12 [omitted]

9.13 Compliance with Other Instruments. The Company is not in violation

-----  
of any term of its Articles or Bylaws or, to the best of the Company's knowledge, any material mortgage, indenture, contract, agreement, instrument, judgment, decree, order, statute, rule or regulation applicable to the Company, except for violations which, in the aggregate, are not material. The execution, delivery and performance of and compliance with this Agreement, and the issuance and sale of the Shares pursuant hereto, will not with or without the giving of notice or the passage of time, or both, result in any such violation, or be in conflict with or constitute a default under any such term, result in the creation of any mortgage, pledge, lien, encumbrance or charge upon any of the properties or assets of the Company or cause the Company to lose the benefit of any right or privilege it presently enjoys.

9.14 to 9.18 [omitted]

9.19 Governmental Consents. All consents, approvals, orders or

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authorizations of, or registrations, qualifications, designations, declarations or filings with, any governmental authority, required on the part of the Company in connection with the valid execution and delivery of this Agreement, the offer, sale or issuance of the Shares, or the consummation of any other transaction contemplated by this Agreement, have been obtained, or will be obtained prior to

the applicable closing, excepting only for routine blue sky law notices to be filed with certain state and federal securities commissions after the applicable closing, which notices or filings will be filed on a timely basis.

9.20 Offering. Assuming the accuracy of the representations and

-----  
warranties of the Purchaser contained in Section 10 hereof, the offer, issuance and sale of the Shares (including any Conversion Shares) are and will be exempt from the registration and prospectus delivery requirements of the Act and are exempt from registration and qualification under the registration, permit or qualification requirements of all applicable state securities laws.

9.21 [omitted]

10. Representations and Warranties of the Purchaser.

-----  
The Purchaser hereby represents and warrants to the Company as follows:

10.1 Legal Power. It has the requisite legal power to enter into this

-----  
Agreement, to purchase the Shares hereunder and to carry out and perform its obligations under the terms of this Agreement.

10.2 [omitted]

10.3 Investment Representations.

-----  
(a) The Purchaser will be acquiring the Shares for its own account, not as nominee or agent, for investment and not with a view to, or for resale in connection with, any distribution or public offering thereof within the meaning of the Act.

(b) The Purchaser understands that (i) the Shares have not been registered under the Act by reason of a specific exemption therefrom, that they must be held by it indefinitely, and that it must, therefore, bear the economic risk of such investment indefinitely, unless a subsequent disposition thereof is registered under the Act or is exempt from such registration; (ii) each certificate representing the Shares will be endorsed with the following legend:

"THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED, OR OTHERWISE TRANSFERRED UNLESS (A) COVERED BY AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR (B) THE COMPANY HAS BEEN FURNISHED WITH AN OPINION OF COUNSEL ACCEPTABLE TO THE COMPANY TO THE EFFECT THAT NO REGISTRATION IS LEGALLY REQUIRED FOR SUCH TRANSFER."

and (iii) the Company will instruct any transfer agent not to register the transfer of any of the Shares unless the conditions specified in the foregoing legend are satisfied.

(c) The Purchaser has been furnished with such materials and has been given access to such information relating to the Company as the Purchaser has requested, and it has been afforded the opportunity to ask questions regarding the Company and the Shares, all as it has found necessary to make an informed investment decision.

(d) By reason of its business or financial experience, it has the capacity to protect its own interests in connection with this transaction.

(e) The Purchaser is a corporation, having assets in excess of \$5,000,000, it was not formed for the purpose of acquiring the Shares, and it is an "accredited investor" as defined in Rule 501 promulgated under the Act.

10.4 [omitted]

11. Covenants of the Company. From and after the Termination Closing, the

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Company covenants and agrees with the Purchaser as follows:

11.1 to 11.5 [omitted]

11.6 Notification of Registration Under the Exchange Act. The Company

-----  
will give the holder of record of the Shares prompt written notice of the effectiveness of any registration statement filed pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or pursuant to any equivalent provision of any similar federal law then in force (a "1934 Act Registration Statement") relating to the Common Stock, and the number of shares of such class of equity securities outstanding at the time such registration statement becomes effective. If the Company has filed a 1934 Act Registration Statement or a registration statement on any form other than Form S-8 (or any successor form serving the same general purpose) pursuant to the requirements of the Act, the Company further covenants that it will file all reports required to be filed by it under the Act or the Exchange Act and the rules and regulations thereunder or, if the Company is not required to file such reports, it will, upon the request of the holder of record of the Shares, make publicly available such information as will enable it to sell the Shares without a registration statement, and will take such further action as such holder may request, all to the extent required from time to time to enable such holder to sell the Shares, without registration within the limitations of the exemptions provided by (i) Rule 144 and Rule 144A adopted by the Commission under the Act, as such rules may be amended from time to time, or (ii) any similar rule or regulation hereafter adopted by the Commission.

11.7 Reservation of Shares. The Company shall at all times reserve and  
-----  
keep available, free from preemptive rights, out of its authorized and unissued  
Common Stock the number of shares of Common Stock issuable upon conversion of  
the Preferred Shares.

11.8 Repurchase, Redemption and Other Actions. The Company will give  
-----  
the Purchaser at least thirty calendar days notice of any action, whether by  
repurchase or redemption of its securities or otherwise, which would cause the  
percentage of outstanding voting securities of the Company owned by the  
Purchaser to exceed 19.9% of the outstanding voting securities of the Company,  
on a fully diluted, as converted basis.

11.9 to 11.11 [omitted]

11.12 Removal of Restrictive Legend. The Company shall remove the  
-----  
legend set forth in Section 10.3 from any stock certificate issued to the  
Purchaser by delivery of substitute certificate(s) without such legend if the  
Purchaser shall have delivered to the Company an opinion of counsel in form and  
substance reasonably satisfactory to the Company to the effect that such legend  
is not required for purposes of compliance with the Act.

12. Stock Registration Rights; Market Stand-off Restrictions; Information  
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Rights.  
-----

By its execution and delivery of this Agreement, the Purchaser shall  
have the stock registration rights as have been granted by the Company pursuant  
to Sections 2.4 through 2.15 of that certain Amended and Restated Investors'  
Rights Agreement dated April 7, 1992 by and among the Company and certain  
investors and shareholders of the Company, a copy of which has been delivered to  
the Purchaser. The Purchaser shall abide by a 180-day "market stand-off"  
restriction on the sale of the Shares following the Company's public stock  
offering, as applicable to all other holders of the Company's preferred stock,  
and/or as required by Section 2.12 of said Investors' Rights Agreement.

13. [omitted]

14. Termination Closing. The Termination Closing shall not be subject to  
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any conditions other than as set forth in this Section 14, and the Company shall  
have no obligation to make any representations or warranties as of the date of,  
and in connection with, the Termination Closing, except as set forth in Section  
9. At the Termination Closing, the following shall occur:

14.1 Opinion of the Company's Counsel. The Company shall deliver to  
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the Purchaser an opinion of counsel to the Company (which counsel shall be  
reasonably acceptable to the Purchaser), substantially in the form attached  
hereto as Exhibit A, which opinion shall be addressed to the Purchaser and dated

the date of the Termination Closing. In rendering the opinion called for under this Section 14.1, counsel may rely as to factual matters on certificates of public officials, officers of the Company, and officers of the Purchaser.

14.2 Credit for Purchase Price. At the Termination Closing, the

-----  
Company shall credit in full payment of the purchase price for the Termination Shares, the amounts of the First Option Payment (\$1.5 million) and the Second Option Payment (\$2.0 million).

14.3 Delivery of Stock Certificates and Other Documents. The Company

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shall deliver to Purchaser (i) a stock certificate representing the Termination Shares, and (ii) a copy of the Articles, certified by the Corporations and Securities Bureau of the Department of Commerce of the State of Michigan, (iii) a copy of the Bylaws, certified by the Secretary of the Company, and (iv) evidence reasonably satisfactory to the Purchaser of the adoption by the Board of actions duly approving this Agreement and the transactions contemplated hereby.

15. [omitted]

16. Miscellaneous.

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16.1 Governing Law. This Agreement shall be governed by and construed

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under the laws of the State of Michigan as applied to agreements among Michigan residents, made and to be performed entirely within the State of Michigan.

16.2 Survival. The representations, warranties, covenants and

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agreements made herein shall survive any investigation made by the Purchaser and the closing of the transactions contemplated hereby. All statements as to factual matters contained in any certificate or other instrument delivered by or on behalf of the Company pursuant hereto or in connection with the transactions contemplated hereby shall be deemed to be representations and warranties by the Company hereunder as of the date of such certificate or instrument.

16.3 Successors and Assigns. Except as otherwise expressly provided

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herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto.

16.4 Entire Agreement. This Agreement, the Exhibits hereto, the

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Memorandum, and the other documents delivered pursuant hereto constitute the full and entire understanding and agreement among the parties with regard to the subjects hereof and no party shall be liable or bound to any other party in any manner by any representations, warranties, covenants or agreements except as specifically set forth herein or therein. Nothing in this Agreement, express or



implied, is intended to confer upon any party, other than the parties hereto and their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

16.5 Separability. In case any provision of this Agreement shall be

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invalid, illegal or unenforceable, it shall, to the extent practicable, be modified so as to make it valid, legal and enforceable and to retain as nearly as practicable the intent of the parties, and the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

16.6 Amendment and Waiver. Any term of this Agreement may be amended

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and the observance of any term of this Agreement may be waived (either generally or, in a particular instance, either retroactively or prospectively, and either for a specified period of time or indefinitely), with the written consent of the Company and the Purchaser. Any amendment or waiver effected in accordance with this Section 16.6 shall be binding upon each holder of any securities purchased under this Agreement at the time outstanding (including securities into which such securities have been converted), each future holder of all such securities, and the Company. Upon the effectuation of each such amendment or waiver, the Company shall promptly give written notice thereof to the record holders of the Shares (including the Conversion Shares) who have not previously consented thereto in writing.

16.7 Delays or Omissions. No delay or omission to exercise any right,

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power or remedy accruing to the Company or the Purchaser upon any breach, default or noncompliance of the Purchaser or the Company under this Agreement shall impair any such right, power or remedy, nor shall it be construed to be a waiver of any such breach, default or noncompliance, or any acquiescence therein, or of any similar breach, default or noncompliance thereafter occurring. It is further agreed that any waiver, permit, consent or approval of any kind or character on the Purchaser's part of any breach, default or noncompliance under this Agreement, or any waiver on the Company's or the Purchaser's part of any provisions or conditions of this Agreement must be in writing and shall be effective only to the extent specifically set forth in such writing, and that all remedies, either under this Agreement, the Series D Documents, by law, or otherwise afforded to the Company and the Purchaser, shall be cumulative and not alternative.

16.8 Notices. All notices and other communications required or

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permitted hereunder shall be in writing, shall specifically refer to this Agreement, and shall be sent by (i) hand delivery, (ii) registered mail, return receipt requested, (iii) overnight delivery services, or (iv) telefacsimile transmission, and shall be sent or delivered to the respective addresses and telefacsimile numbers set forth below, unless subsequently changed by written notice to the other party:

If to the  
Company, to: AASTROM Biosciences, Inc.  
P.O. Box 376  
Ann Arbor, MI 48106  
Attention: President  
Fax: (313) 930-5546

With a copy to: T. Knox Bell, Esq.  
Gray Cary Ware & Freidenrich  
4365 Executive Drive, Ste. 1600  
San Diego, CA 92121  
Fax: (619) 677-1477

If to the  
Purchaser, to: RPR GENCELL  
Cell and Gene Therapy Division  
Rhone-Poulenc Rorer Inc.  
500 Arcola Road  
P.O. Box 5093  
Collegeville, PA 19426-0107  
Attention: President and General Counsel  
Fax: (610) 454-8984 and 454-3808

16.9 Finder's Fees.  
-----

(a) The Company (i) represents and warrants that it has retained no finder or broker in connection with the transactions contemplated by this Agreement, and (ii) hereby agrees to indemnify and to hold the Purchaser harmless of and from any liability for any commission or compensation in the nature of a finder's fee to any broker or other person or firm (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its employees or representatives is responsible.

(b) The Purchaser (i) represents and warrants that it has retained no finder or broker in connection with the transactions contemplated by this Agreement, and (ii) hereby agrees to indemnify and to hold the Company harmless of and from any liability for any commission or compensation in the nature of a finder's fee to any broker or other person or firm (and the costs and expenses of defending against such liability or asserted liability) for which the Purchaser or any of its employees or representatives are responsible.

16.10 Fees and Expenses. Each party shall bear all of its own fees,  
-----  
costs and expenses relating to the negotiation and preparation of this Agreement and the consummation of the transactions contemplated hereby. If legal action is brought by the Company or by the Purchaser to enforce or interpret

this Agreement, the prevailing party shall be entitled to recover its attorneys' fees and legal costs in connection therewith.

16.11 Information Confidential. The parties shall continue to abide by

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all confidentiality agreements and provisions which were previously agreed to between the parties.

16.12 Titles and Subtitles. The titles of the paragraphs and

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subparagraphs of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

16.13 Counterparts. This Agreement may be executed in counterparts,

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including by facsimile, each of which shall be deemed an original, but all of which together shall constitute one instrument.

16.14 Arbitration. Any controversy or claim arising out of or relating

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to this Agreement, or the breach thereof, shall be settled by binding arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association, with the forum for the arbitration proceedings to be held in Detroit, Michigan if RPR commences the arbitration, and with the forum for the arbitration proceedings to be held in Philadelphia, Pennsylvania if the Company commences the arbitration.

17. Termination of Existing Stock Purchase Agreement. The parties agree

-----  
that the Stock Purchase Agreement entered into by the parties as of September 15, 1995 is hereby terminated, with the exception that the representations and warranties set forth in Sections 9 and 10 thereof shall remain in full force and effect as of the date thereof.

IN WITNESS WHEREOF, this Agreement is hereby executed as of the date set forth on page 1 of this Agreement.

The Company:

AASTROM BIOSCIENCES, INC.  
Domino's Farms, Lobby L  
24 Frank Lloyd Wright Drive  
Ann Arbor, MI 48105

The Purchaser:

RHONE-POULENC RORER INC.  
500 Arcola Road  
Collegeville, PA 19426-0107

By: /s/ R. DOUGLAS ARMSTRONG

-----  
Title: President  
Name: R. Douglas Armstrong, Ph.D.

By: /s/ K.R. PINA

-----  
Title: Vice President  
Print Name: K.R. Pina

EXHIBIT A

FORM OF OPINION OF COUNSEL  
TERMINATION CLOSING

[LETTERHEAD OF GRAY CARY WARE FREIDENRICH]

November \_\_\_\_, 1996

Rhone-Poulenc Rorer Inc.  
Attn: Robert Werner, Esq.  
500 Arcola Road  
P. O. Box 5093  
Collegeville, PA 19421-0107

Ladies and Gentlemen:

We have acted as counsel for Aastrom Biosciences, Inc., a Michigan corporation (the "Company"), in connection with the issuance and sale of shares of its Series E Preferred Stock pursuant to the Stock Purchase Agreement (Series E Preferred) dated November \_\_\_\_, 1996 (the "Agreement") by and between the Company and Rhone-Poulenc Rorer Inc., a Pennsylvania corporation (the "Purchaser"). This opinion is being rendered to the Purchaser pursuant to Section 14.1 of the Agreement in connection with the closing of the sale of shares of the Company's Series E Preferred Stock (the "Shares") thereunder. Capitalized terms not otherwise defined in this opinion have the meaning given them in the Agreement.

In connection with the opinions expressed herein, we have made such examination of matters of law and of fact as we considered appropriate or advisable for purposes hereof. As to factual matters, subject to the further limitations on the scope of our review and inquiry set forth below, we have relied solely upon certificates of public officials (as to which we have assumed the accuracy, completeness and genuineness) and of officers of the Company, written representations made by the Company, written and oral representations made to us by officers of the Company, an inquiry of all attorneys within our firm who regularly perform services for the Company, and an examination of our files regarding the Company and of documents made available to us by the Company. We have not undertaken to independently verify the accuracy of the facts set forth

Rhone-Poulenc Rorer Inc.  
November \_\_, 1996  
Page 2

in such certificates and representations; nothing, however, has come to our attention which would lead us to believe that such certificates or representations are inaccurate.

With respect to our opinion in Paragraph 1 as to the qualification of the Company to do business and good standing, we have relied upon certificates of public officials of the State of Michigan and upon written representations made to us by officers of the Company as to the jurisdictions in which the Company's ownership or lease of the property or conduct of its business requires such qualification, except for those jurisdictions in which the failure to qualify the Company to do business would not have a material adverse effect on the Company.

With respect to our opinion in Paragraph 3 that all issued and outstanding shares of capital stock of the Company are fully paid, we have relied upon the representation concerning receipt by the Company of consideration for such shares made to us in a certificate executed by officers of the Company.

In rendering our opinion in Paragraph 5, to the extent that such opinion relates to laws, rules and regulations, we have not conducted any special investigation of laws, rules or regulations and our opinion with respect thereto is limited to such United States and California laws, rules and regulations as in our experience are normally applicable to transactions of the type contemplated by the Agreement. We have assumed, for purposes of this letter and our opinions set forth herein, that the substantive laws of the State of Michigan are the same as the substantive laws of the State of California.

With respect to our opinion in Paragraph 6 concerning pending legal or governmental proceedings, we have relied upon written representations made to us by officers of the Company, an inquiry of attorneys within our firm who regularly perform legal services for the Company, and an examination of our files regarding the Company and of documents made available to us by the Company; we have not, however, made any examination of public records (including, without limitation, the plaintiff or defendant indices of any state or federal courts).

In providing our opinion in Paragraph 8 hereof, we have relied upon representations in a certificate executed by officers of the Company with respect

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to certain factual information relating to the suitability of offerees of the Shares. In addition, with respect to our opinion in Paragraph 8, as such opinion relates to the securities laws of the Commonwealth of Pennsylvania, we have based our opinion solely upon our examination of such laws of the Commonwealth of Pennsylvania and the rules and regulations of the authorities administering such laws, all as reported in unofficial compilations.

Where we render our opinion "to our knowledge" or concerning an item "known to us" or our opinion otherwise refers to our knowledge, it is based solely upon certificates of public officials (as to which we have assumed the accuracy, completeness and genuineness) and of officers of the Company, written and oral representations made to us by officers of the Company, an inquiry of all attorneys within our firm who regularly perform services for the Company, and an examination of our files regarding the Company. Except as set forth herein, we have not undertaken any independent investigation to determine the existence or absence of any fact and no inference as to our knowledge of the existence or absence of any such fact should be drawn merely from our general representation of the Company with respect to other matters or the rendering of the opinions set forth below. Subject to the foregoing, nothing has come to our attention which would lead us to believe that such representations of officers of the Company or certificates of public officials are inaccurate.

In addition, we have assumed that the representations and warranties as to factual matters made by the Company and the Purchaser in the Agreement are true and correct.

We have assumed (i) the genuineness and authenticity of all documents submitted to us as originals, (ii) the conformity to genuine, authentic originals of all documents submitted to us as copies, (iii) the competence of all individuals executing documents, (iv) the due execution and delivery of the Agreement by the Purchaser when due execution and delivery are a prerequisite to the effectiveness thereof, and (v) that the Agreement is a binding obligation of the Purchaser.

We are admitted to practice law only in the State of California, and, except with respect to our opinion in Paragraph 8, we express no opinion concerning any law other than the law of the State of California and the federal law of the United States. We have not examined the question of what law would govern the interpretation or enforcement of the Agreement and our

Rhone-Poulenc Rorer Inc.  
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opinion is based on the assumption that the internal laws of the State of California and federal law would govern the provisions of the Agreement and the transactions contemplated thereby. We express no opinion with respect to any questions of choice of law, choice of venue or conflict of laws.

We express no opinion with respect to (i) the availability of equitable remedies, including specific performance of any of the provisions of the Agreement, (ii) the enforceability of any indemnification and contribution provisions, (iii) the effect of bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally, (iv) the compliance or noncompliance with the antifraud provisions of state and federal laws, rules and regulations concerning the issuance of securities, or (v) the enforceability of any choice of law provisions.

Based upon our examination of the foregoing, in reliance thereon and subject thereto, and except as set forth in the Agreement, the Memorandum and the Company's Form S-1 Registration Statement dated November 1, 1996, we are of the opinion that:

1. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Michigan and has all necessary corporate power to own, operate or lease the properties and assets now owned, operated or leased by it, and to carry on the business of the Company as it has been and as it is currently conducted. The Company is not qualified to do business as a foreign corporation in any jurisdiction, and the Company has represented to us that it has no assets or employees in any state other than Michigan.

2. The Company has all requisite corporate power to sell the Shares, and to carry out and perform its other obligations under the terms of the Agreement. The Agreement has been duly authorized, executed and delivered, and is a valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

3. The authorized capital stock of the Company consists of 21,500,000 shares of common stock and 12,200,000 shares of preferred stock (of which 2,500,000 shares have been designated as Series A Preferred Stock, 3,030,000 shares have been designated as Series B Preferred Stock,



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10,000 shares have been designated as Series C Preferred Stock, 3,000,000 shares have been designated as Series D Preferred Stock, and 1,617,647 shares have been designated as Series E Preferred Stock. The Company (i) has issued the shares of Common Stock and shares of its preferred stock, and (ii) has granted the stock options and warrants and (iii) has reserved for issuance the Common Stock and shares of its preferred stock, all as represented by the Company in the Schedule attached hereto. All previously issued and outstanding shares have been duly authorized and validly issued, and are fully paid and nonassessable. To the best of our knowledge, there are no outstanding rights, options, warrants, conversion rights or agreements for the purchase or acquisition from the Company of any shares of its capital stock, other than as referenced above.

4. The Shares, when issued, sold and delivered in compliance with the provisions of the Agreement, will be duly authorized, validly issued, fully paid, and nonassessable, and will be free of any liens or encumbrances, except that the Shares are subject to restrictions on transfer under state and/or federal securities laws. The issuance of the Shares is not subject to any preemptive rights or, to the best of our knowledge, rights of first refusal which have not been waived. The shares of Common Stock issuable upon conversion of the Preferred Shares (i) have been duly and validly reserved, (ii) are not subject to any preemptive rights or, to the best of our knowledge, rights of first refusal, and (iii) upon conversion of the Preferred Shares in accordance with the Articles and cancellation of the Preferred Shares, will be duly authorized, validly issued, fully paid, and nonassessable.

5. Neither the performance of the Company's obligations under the Agreement, nor the issuance of the Preferred Shares, nor the issuance of the Common Stock issuable upon conversion of the Preferred Shares, will violate any term of the Articles or Bylaws; and such transactions will not, in any material respect, violate or conflict with or constitute a default under the provisions of any material contract to our knowledge.

6. Except as disclosed in the Memorandum or the Form S-1 Registration Statement, to the best of our knowledge, no action, suit, proceeding or investigation is pending or threatened against the Company or its properties or questions the validity of the Agreement or any action to be taken in connection therewith.

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7. All consents, approvals and authorizations of and filings with any federal or state governmental authority required on the part of the Company, if any, in connection with the consummation of the transactions contemplated by the Agreement have been obtained or made, except for the filings which the Company is making after the Termination Closing as specified under the Securities Act of 1933, as amended (the "Securities Act") and any state securities laws.

8. Subject to the accuracy of the Purchaser's representations and warranties set forth in Section 10 of the Agreement, the offer and sale of the Shares in conformity with the terms of the Agreement are exempt from the registration requirements of Section 5 of the Securities Act, as amended and in compliance with applicable state securities laws.

This opinion is furnished solely to the Purchaser for its benefit in connection with the purchase of the Shares, and may not be relied upon by, nor copies delivered to, any other person or for any other purpose without our prior written consent.

Very truly yours,

GRAY CARY WARE & FREIDENRICH  
A Professional Corporation

TKB/cf  
6009466

EXHIBIT B

SUMMARY OF SERIES E PREFERRED STOCK

SUMMARY OF  
SERIES E PREFERRED STOCK OF  
AASTROM BIOSCIENCES, INC.

I. TERMS OF PREFERRED STOCK  
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The terms of the Series E Preferred Stock will be substantially the same as the terms of the Series D Preferred, except as noted herein. The Series A, B, C, and D Preferred Stock together with the Series E Preferred Stock, when treated jointly are referred to herein as the "Preferred." The following are the principal terms of the Series E Preferred Stock:

A. Rights, Preferences,

Privileges and  
Restrictions of  
Series E Preferred  
Stock:

1. Dividend Provisions. A holder of  
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Series E Preferred Stock will be entitled to receive preference to Series A, B, C, and D Preferred Stock and to Common Stock, dividends at the rate of 8% per annum on the liquidation preference amount when and as declared by the Board, if funds are legally available. If dividends are declared on the Common Stock, the holders of Preferred shall be entitled to receive concurrently a dividend of an equal amount per share. Dividends on the Series E Preferred Stock will be noncumulative. No dividends have been paid on the Preferred, and no dividends are likely to be paid in the next few years.

2. Liquidation Preference. In the event  
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of any liquidation, dissolution or winding up of the Company, a holder of Series E Preferred Stock will be entitled to receive, in preference to the holders of the Series A, B, C, and D Preferred Stock and Common Stock, an amount equal to \$4.25 per share, plus any declared but unpaid dividends on the Series E Preferred Stock.

3. Voluntary Conversion. A holder of Series E

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Preferred Stock will have the right to convert the Series E Preferred Stock, at the option of the holder, at any time, into shares of Common Stock. The total number of shares of Common Stock into which Series E Preferred Stock may be converted will be determined by dividing the liquidation preference (\$4.25) by the conversion price. The initial conversion price will be \$4.25, resulting in a one-for-one conversion, unless and until there is a change in the conversion price.

4. Automatic Conversion. Series E Preferred

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Stock will be converted automatically into Common Stock, at the then applicable conversion price, immediately upon the closing of a firm commitment underwritten public offering of shares of the Common Stock of the Company at a public offering price per share (prior to underwritings, commissions and offering expenses) equal to or exceeding \$6.50 per share in an offering resulting in gross proceeds to the Company which exceed \$12,500,000.

5. Anti-Dilution. Series E Preferred Stock

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has weighted average antidilution rights if the Company sells additional stock in the future for less than \$4.25 per share, subject to certain exceptions.

6. Voting Rights. A holder of Series E

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Preferred Stock will have the right to that number of votes equal to the number of shares of Common Stock issuable upon conversion of its Series E Preferred Stock at the then applicable conversion price. The Preferred shall vote with the Common Stock on all matters except as specifically provided herein or as otherwise required by law.

7. Protective Provisions. Changes to the  
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rights, preferences or privileges of a series of Preferred Stock must be approved by the holders of at least 66-2/3% of the affected series of Preferred. Consent of the holders of at least 66-2/3% of each series of Preferred Stock is required to approve any amendment to the Company's articles of incorporation. Additionally, consent of 51% of the Series E Preferred Stock is required for stock redemptions, sale or merger, liquidation, amendment to Articles, and alter rights of Preferred Stock.

B. Registration Rights:

1. Demand Right. Beginning one year after  
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the Company's initial public offering, holders of at least 50% of the Preferred (or Common Stock issued upon conversion of the Preferred or a combination of such Common and Preferred) may request registration by the Company of Common Stock covering at least 20% of their registrable securities, or a lesser percentage if the aggregate offering price would exceed \$2,000,000. Prior to the Company's initial public offering, such holders may request such registration if the aggregate offering price would exceed \$5,000,000. The Company shall not be obligated to effect registration under this demand right provision more than once.

2. Piggy-Back Registration. At any time  
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after the Company's initial public offering, holders of Preferred shall be entitled to "piggy-back" registration rights at the time that the Company has a further registration; subject to the rights, however, of the Company and its underwriters to reduce the number of shares proposed to be registered in view of market conditions.

3. S-3 Rights. Holders of Preferred

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shall be entitled to an unlimited number of demand registrations on Form S-3 (if available to the Company) so long as each of such registered offerings is in excess of \$500,000; provided, however, that the Company shall only be required to file one Form S-3 Registration Statement on demand every twelve (12) months.

4. Expenses. The Company shall bear

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all registration expenses (including the fees of one counsel for the selling shareholders, but excluding underwriting discounts and commissions) of one demand registration and two piggy-back registrations.

5. Assignability of Rights. The

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registration rights may be assigned to an assignee who agrees in writing to be bound by the terms and conditions of the Amended and Restated Investors' Rights Agreement and who (a) after such transfer owns at least 100,000 shares of Preferred or Common Stock issued upon conversion thereof, (b) is an option holder, (c) is a holder of registrable securities of the Company or a family member of the transferor, or (d) is a trust for the benefit of an option holder or a family member, in a private transaction in which such transferee will own not less than 20,000 shares of Preferred or Common Stock issued upon conversion thereof.

6. Termination of Registration Rights.

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Registration rights shall terminate as to any particular shares of Preferred Stock when such shares may be lawfully sold by the holder pursuant to Rule 144 under the Securities Act of 1933.

7. Other Provisions. The registration

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rights provisions of the Amended and Restated Investors' Rights Agreement contains other customary provisions with respect to registration rights, including cross-indemnification, the Company's ability to delay the filing of demand registrations for a period of at least 150 days, the period of time in which the Registration Statement shall be kept effective, underwriting arrangements and the like.

II. ADDITIONAL INFORMATION

- A. Right of First Refusal: None.  
B. Redemption Rights: None.



CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the inclusion in this registration statement on Form S-1 (File No. 333-15415) of our report dated October 31, 1996, on our audits of the financial statements of Aastrom Biosciences, Inc. We also consent to the reference to our firm under the caption "Experts."

/s/ COOPERS & LYBRAND L.L.P.

Detroit, Michigan  
November 14, 1996

CONSENT OF  
OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT  
PATENT COUNSEL

We consent to the reference of our firm under the caption "Experts" regarding patents and pending patent applications either owned by or licensed to Aastrom Biosciences, Inc. ("Aastrom") relating to aspects of Aastrom's product and process technology as set forth in the Registration Statement on Form S-1 and related Prospectus of Aastrom, and any amendments thereto, which we have reviewed and approved under the captions "Risk Factors-Uncertainty Regarding Patents and Proprietary Rights" and "Business-Patents and Proprietary Rights", and the other references therein concerning such patents and patent applications.

/s/ OBLON SPIVAK MCCLELLAND  
MAIER & NEUSTADT

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OBLON SPIVAK MCCLELLAND  
MAIER & NEUSTADT

Arlington, Virginia  
November 13, 1996