AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JANUARY 7, 1997
REGISTRATION NO. 333-15415

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

AMENDMENT NO. 3
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.	RICHARD R. PLUMRIDGE, ESQ.
DOUGLAS J. REIN, ESQ.	MICHAEL A. CONZA, ESQ.
MATT KIRMAYER, ESQ.	BROBECK, PHLEGER & HARRISON LLP
DAYNA J. PINEDA, ESQ.	1633 BROADWAY
GRAY CARY WARE & FREIDENRICH	NEW YORK, NEW YORK 10019
4365 EXECUTIVE DRIVE, SUITE 1600	
SAN DIEGO, CALIFORNIA 92121	

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.

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+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 January 7, 1997

3,250,000 Shares

[LOGO OF AASTROM BIOSCIENCES INC]

Common Stock

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."

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

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."

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 , 1997.

COWEN & COMPANY J.P. MORGAN & CO.

, 1997

[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. The Company also believes that the Aastrom CPS can be modified to produce a wide variety of other cell types for new, emerging therapies being developed by others. Prior to commencement of multiple-site pivotal trials, the Company is conducting a limited pre-pivotal trial of the Aastrom CPS under an Investigational Device Exemption for use in 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 genetic manipulation of cells outside of the body for use in therapy, the Company is developing proprietary processes and the Aastrom CPS to enable high efficiency genetic modification and production of cells, respectively.

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. According to an industry source, approximately 32,000 stem cell therapy procedures were completed worldwide in 1995. 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, which the Company believes may ultimately be addressed by the Aastrom CPS.

The Company believes that the Aastrom CPS will offer significant advantages over traditional stem cell collection methods. The Aastrom CPS is intended to be used to produce cells used for therapy from a small starting volume of bone marrow cells. 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 also permit higher and more frequent doses of chemotherapy to be administered to cancer patients by enabling the production of multiple doses of cells from patient samples taken at the initial collection.

Aastrom is currently conducting a pre-pivotal 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 chemotherapy which has destroyed cells of the blood and immune systems. Pending a positive 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 Europe, the results of which, if positive, are expected to be used for the CE Mark registration necessary to market the Aastrom CPS in Europe. The Company may not market the Aastrom CPS unless and until FDA and other necessary regulatory approvals are received.

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 and 58% to 62% of all revenue generated by Cobe BCT's sale of the Aastrom CPS, subject to the Company's obligation to make certain royalty payments. 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 outstanding after this offering	13,235,734 shares(2)
Use of proceeds	For clinical trials, the development and manufacture of the Aastrom 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
STATEMENT OF OPERATIONS DATA:							
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)					$ (.98)		$ (.32)
Pro forma weighted average number of shares outstanding(3)					10,103,000		10,107,000

	SEPTEMBER 30, 1996	
	ACTUAL	AS ADJUSTED(4)
BALANCE SHEET DATA:		
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

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(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 numbers 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, reliability 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 manufacture of its product candidates and their components, including certain cytokines, serum and media, with third parties, and expects to continue to do so in the foreseeable future. The Company has entered into collaborative product development and supply agreements with SeaMED Corporation ("SeaMED"), Ethox Corporation ("Ethox") and Anchor Advanced Products Inc., Mid-State Plastics Division ("MSP") for the collaborative development and manufacture of certain components of the Aastrom CPS and is dependent upon those suppliers to manufacture its products. The Company is also dependent upon Immunex Corporation ("Immunex"), Life Technologies, Inc. and Biowhittaker for the supply of certain cytokines, serum and media to be used in conjunction with 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, MSP 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, Ethox and MSP, 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 until late 1998. 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 development of the Company's products for the expansion of additional cell types will require the Company to raise additional funds or to seek collaborative partners, or both, to finance related research and development activities.

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 45% of the Common Stock (approximately 43% 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

Aastrom was incorporated in Michigan in March 1989 under the name Ann Arbor Stromal, Inc. In 1991, the Company changed its name to Aastrom 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. Aastrom(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 Company currently intends to use approximately $16,000,000 of the net proceeds from the offering to fund product and clinical development activities for the Aastrom CPS, including pre-pivotal and pivotal clinical trials and approximately $7,000,000 for other research activities with the remaining amount being used 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%.

Based on its current operating plan, 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 until late 1998. 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

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(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
	NUMBER	PERCENTAGE	AMOUNT	PERCENTAGE	PER SHARE
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%	

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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 30, 1994, 1995 and 1996, for the period from Inception to June 30, 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, for the period from Inception to September 30, 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,					INCEPTION TO JUNE 30,
	1992	1993	1994	1995	1996	1996
STATEMENT OF OPERATIONS DATA:						
Revenues:						
Research and development agreements....	$ --	$ --	$ 49,000	$ 396,000	$ 1,342,000	$ 1,787,000
Grants.....	--	784,000	823,000	121,000	267,000	1,995,000
Total revenues.	--	784,000	872,000	517,000	1,609,000	3,782,000
Costs and expenses:						
Research and development...	1,090,000	2,600,000	5,627,000	4,889,000	10,075,000	25,075,000
General and administrative.	272,000	1,153,000	1,565,000	1,558,000	2,067,000	7,089,000
Total costs and expenses..	1,362,000	3,753,000	7,192,000	6,447,000	12,142,000	32,164,000
Loss before other income and expense....	(1,362,000)	(2,969,000)	(6,320,000)	(5,930,000)	(10,533,000)	(28,382,000)
Other income (expense):						
Interest income.....	94,000	148,000	245,000	279,000	678,000	1,576,000
Interest expense.....	--	(26,000)	(65,000)	(66,000)	(62,000)	(219,000)
Net loss.....	$(1,268,000)	$(2,847,000)	$(6,140,000)	$(5,717,000)	$ (9,917,000)	$(27,025,000)
Pro forma net loss per share(1).....					$ (.98)	
Pro forma weighted average number of shares outstanding(1).					10,103,000	

	THREE MONTHS ENDED SEPTEMBER 30,		INCEPTION TO SEPTEMBER 30,
	1995	1996	1996
STATEMENT OF OPERATIONS DATA:			
Revenues:			
Research and development agreements....	$ 172,000	$ 195,000	$ 1,982,000
Grants.....	39,000	29,000	2,024,000
Total revenues.	211,000	224,000	4,006,000
Costs and expenses:			
Research and development...	1,195,000	3,160,000	28,235,000
General and			

administrative.	446,000	452,000	7,541,000
Total costs and expenses..	1,641,000	3,612,000	35,776,000
Loss before other income and expense....	(1,430,000)	(3,388,000)	(31,770,000)
Other income (expense):			
Interest income.....	149,000	126,000	1,702,000
Interest expense.....	(18,000)	(11,000)	(230,000)
Net loss.....	$(1,299,000)	$(3,273,000)	$(30,298,000)
Pro forma net loss per share(1).....		$ (.32)	
Pro forma weighted average number of shares outstanding(1).		10,107,000	

	JUNE 30,					SEPTEMBER 30,
	1992	1993	1994	1995	1996	1996
BALANCE SHEET DATA:						
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
Long-term capital lease obligations.....	--	311,000	425,000	412,000	189,000	147,000
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

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(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 cash payments and revenues, if any, will be subject to significant fluctuations, based in part on the success of the Company's research activities, the timing of the achievement of certain milestones and the extent to which associated costs are reimbursed under grant or other arrangements. Substantially all of the Company's revenues from product sales, if any, will be subject to the Company's obligation to make aggregate royalty payments of up to 5% to certain licensors of its technology. Further, under the Company's Distribution Agreement with Cobe, Cobe will perform marketing and distribution activities and in exchange will receive approximately 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 fluctuated 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, to the extent that such associated costs are reimbursed 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, and are recorded on a cost-reimbursement basis. 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. On December 10, 1996, the Company issued to Cobe a notice to sell to Cobe 500,000 shares of Series F Preferred Stock for an aggregate purchase price of $3,000,000. Such sale is scheduled to close on March 19, 1997. In the event that this offering closes prior to March 19, 1997, Cobe's obligation to purchase Series F Preferred Stock under the equity commitment will terminate. In the event that this offering closes after March 19, 1997, Cobe's participation in this offering will be reduced by $3,000,000, the amount of its purchase of Series F Preferred Stock pursuant to the equity commitment.

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, grants 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 until late 1998. 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 evaluation, has determined that the impact on the Company's financial condition and results of operations is not significant for the period ended September 30, 1996.

BUSINESS

OVERVIEW

Aastrom 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. The Company also believes that the Aastrom CPS can be modified to produce a wide variety of other cell types for new, emerging therapies being developed by others. Prior to commencement of multiple-site pivotal trials, the Company is conducting a limited "pre-pivotal" trial of the Aastrom CPS under an Investigational Device Exemption for use in 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. Additionally, Aastrom 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.

According to an industry source, approximately 32,000 stem cell therapy procedures were completed worldwide in 1995, and, according to another industry source, the number of such procedures utilizing donor-derived and patient-derived cells has been growing annually by approximately 15% and 20%, respectively. 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. 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 UCB banking institutions have been established to date, and the group is growing in both number and size. The establishment of these UCB banking institutions is an initial step which may lead to a coordinated UCB banking system.

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."

Aastrom Cell Culture Chamber

Aastrom 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 Aastrom 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

Aastrom has developed proprietary processes and device technology that may enable increased efficiency of vector-mediated gene transfer into cells as compared to conventional procedures. This directed-motion gene transfer or gene loading technology is being pursued by the Company for application in most cell and tissue types and most vector technologies. The Company intends to develop products based upon its gene loading technology. Development of additional products will require the Company to raise additional funds or to seek collaborative partners, or both, to finance related research and development activities, as to which there can be no assurance. Furthermore, due to the uncertainties involved, the Company is unable to estimate the length of time such development may take. If successfully developed into products, the Company believes that such products would 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 "Aastrom Product Candidates For Ex Vivo Gene Therapy."

THE AASTROM CPS

The Aastrom CPS is the Company's lead product under development for multiple cell therapy applications, including stem cell therapy. The Aastrom 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 Aastrom's stem cell growth process as well as processes for the production of other cell types.

The Aastrom 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 Aastrom 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 Aastrom CPS are currently being used in a clinical trial and ongoing development activities are directed at completing other production level components of the Aastrom CPS.

The Aastrom 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 Aastrom process is a blood-bag container with the cell product. The control and documentation features of the Aastrom 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. 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 taken from the patient at the initial visit. 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.

Potential Advantages of Aastrom CPS

The Company believes that the Aastrom CPS, if approved for commercial sale by the FDA and foreign regulatory agencies, may provide certain 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 conducted by the Company of 11 stem cell transplant physicians at different transplant institutions throughout the United States, compares estimated patient care episodes, procedure time and needle sticks for currently established cell collection and infusion techniques with the Aastrom CPS method of cell procurement:

CELL SOURCE	CARE EPISODES(1)	PROCEDURE TIME (HOURS)(1)	NEEDLE STICKS(2)
Bone Marrow Harvest(3).....	8	16	103
PBPC Mobilization and Collection(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) Projections, based on data accumulated during the Company's pre-clinical research and 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 submitted to 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 patients 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 bone 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 bone marrow. As of the date of this Prospectus, patient data from this site provides further evidence that the hematopoietic recovery endpoints specified for the trial are achievable. Following review by the FDA, the IDE was recently amended to expand the trial to a third site. As of the date of this Prospectus, patient accrual in this trial is ongoing.

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 in breast cancer. Provided that these pre-pivotal trials provide further evidence of feasibility and safety of the cells produced in the Aastrom CPS, the Company anticipates initiating a pivotal clinical trial at multiple sites no earlier than mid-1997, with the patient enrollment typical to support a PMA filing, although this schedule is subject to numerous risks and uncertainties. See "Risk Factors--Uncertainties Related to Preclinical and Clinical Testing."

Aastrom, in partnership with Cobe, intends to initiate a clinical trial in Europe by mid-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 emerging 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. Other than a limited application of chondrocyte therapy, novel cell therapies are still in early stages of development by third parties and no assurance can be given that such other cell therapies will be successfully developed. 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 specialized, 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. 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 successfully developed by other companies or approved by applicable regulatory authorities, or that the Company's processes or product candidates will find successful application in such therapies. See "--Business Strategy" and "--Clinical Development," "Use of Proceeds," and "Risk Factors--Future Capital Needs; Uncertainty of Additional Funding."

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 the Company anticipates that many of these procedures will 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.

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 may have the potential to reduce costs associated with the cell production procedure and, if successfully developed by the Company for this application, 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 by third parties 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 and may pursue development of its products for application in such therapy in the future.

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. Successful development of the Company's processes and product candidates for application in ex vivo gene therapy will require substantial additional research and development, including clinical testing, and will be subject to the Company's ability to finance such activities on acceptable terms, if at all. See "Risk Factors--Future Capital Needs; Uncertainty of Additional Funding."

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 may 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 enhance the efficiency and reliability of the transfer of new therapeutic genes, which are carried by vectors, into the target cell. This process, which is typically inefficient in many human cells inhibits many ex vivo gene therapies from moving forward in the clinic. The Aastrom Gene Loader is being designed to incorporate the Company's proprietary directed motion gene transfer technology. Complete product development is expected to require additional funding sources or collaborations with others, or both.

The Company believes that these issues represent a general bottleneck for other companies pursuing ex vivo gene therapy clinical applications. The Company's technology under development 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"). Under the terms of the Company's Distribution Agreement with Cobe, other than with respect to sales to affiliates, the Company is precluded from selling the Aastrom CPS to customers for stem cell therapy applications. The Company has, however, reserved the right to sell the Aastrom CPS for: (i) all diagnostic or other non-therapeutic clinical applications; (ii) all gene therapy or gene transfer applications, including those for stem cells; (iii) all non-human applications; (iv) certain permitted clinical research applications; and (v) all applications that are labeled not for human use. The Company has also reserved the unconditional right to sell other products under development, including but not limited to products based upon its gene loading technology. 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 58% to 62% of the net sales price at which Cobe ultimately sells the Aastrom CPS for Stem Cell Therapy Applications, subject to certain negotiated discounts and volume-based adjustments and subject to the obligation of the Company to make aggregate royalty payments of up to 5% to certain licensors of its technology. 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 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 renewal payments equal to $1,000,000 per year during the term of the agreement in addition to payment for supplies purchased by the Company. Unless earlier terminated or renewed by the Company for an additional 5 year term, the agreement will expire in April 2001. The agreement may be terminated by either party effective immediately upon written notice of termination to the other party in the event that such party materially breaches the agreement and such breach continues unremedied after notice and expiration of a specified cure period or in the event that a bankruptcy proceeding is commenced against a party and is not dismissed or stayed within a 45 day period. In addition, Immunex has the right to cease the supply to the Company of cytokines and ancillary materials if the Company fails to purchase a minimum amount of its forecasted annual needs from Immunex after notice to the Company and expiration of a specified cure period. The Company also has the right to terminate the agreement at any time subject to the payment to Immunex of a specified amount for liquidated damages. In the event that Immunex elects to cease to supply to the Company cytokines and ancillary materials or is prevented from supplying such materials to the Company by reason of force majeure, limited manufacturing rights will be transferred to the Company under certain circumstances. There is, however, no assurance that the Company could successfully manufacture the compounds itself or identify others that could manufacture these compounds to acceptable quality standards and costs, if at all.

On December 16, 1996, the Company entered into a Collaborative Supply Agreement with Anchor Advanced Products, Inc., Mid-State Plastics Division ("MSP"). Under this agreement, MSP will conduct both pre-production manufacturing development and commercial manufacturing and assembly of the cell cassette component of the Aastrom CPS for the Company. During the initial phase of the seven-year agreement, the

Company will pay MSP for its development activities on a time and materials basis. Upon reaching certain commercial manufacturing volumes, MSP will be paid by the Company on a per unit basis for cell cassettes delivered to the Company under a pricing formula specified in the agreement. Throughout the term of this agreement, the Company has agreed to treat MSP as its preferred supplier of cell cassettes, using MSP as its supplier of at least 60% of its requirements for cell cassettes.

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 earlier terminated, the License Agreement will continue in effect until the latest expiration date of the patents to which the License Agreement applies, which latest expiration date is currently August 2009. The License Agreement may be terminated by either party upon default by the other party of any of its obligations under the agreement without cure after expiration of a 30-day notice period. The Company also has the right to terminate the License Agreement at any time without cause upon 30 days prior written notice to Dr. Cremonese.

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 November 30, 1996, the Company employed approximately 65 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.

DIRECTORS AND EXECUTIVE OFFICERS

The following table provides information concerning directors and executive officers of the Company as of November 30, 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).....	52	Director

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

All directors hold office until the next election of the class for which such directors have been chosen 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 Geneic 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 SALARY ($)	BONUS ($)	OTHER ANNUAL COMPENSATION ($)	ALL OTHER COMPENSATION ($)
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	--	--

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(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

	INDIVIDUAL GRANTS				POTENTIAL REALIZED VALUE AT ASSUMED ANNUAL RATES OF STOCK PRICE APPRECIATION FOR OPTION TERM(1)	
NAME	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..	6,667	4.3%	1.20	02/14/06	5,000	12,734
Walter C. Ogier.....	6,667	4.3%	1.20	02/14/06	5,000	12,734

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(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

			NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT FY-END (#)		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT FY-END ($)(1)	
NAME	SHARES ACQUIRED ON EXERCISE (#)	VALUE REALIZED($)	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

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(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, who served as President and Chief Executive Officer of the Company until 1991 and currently serves as its Chairman of the Board, 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. On April 30, 1996, a new Compensation Committee was appointed by the Board of Directors, and the members of such committee are Mr. Kunze and Albert B. Deisseroth, M.D., Ph.D.

CERTAIN TRANSACTIONS

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 941,177 shares for a total purchase price of $4,000,002. Upon the closing of this offering, each outstanding 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 1993, the Company issued and sold 10,000 shares of Series C Preferred Stock to Cobe at a purchase price of $1,000 per share. Upon the closing of this offering, each outstanding share of Series C Preferred Stock will be converted into 166 and two-thirds shares of Common Stock.

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.

On December 10, 1996, the Company issued to Cobe a notice to sell to Cobe 500,000 shares of Series F Preferred Stock for an aggregate purchase price of $3,000,000 under the Equity Commitment. Such sale is scheduled to close on March 19, 1997. In the event that this offering closes prior to March 19, 1997, Cobe's obligation to purchase Series F Preferred Stock under the Equity Commitment will terminate. In the event that this offering closes after March 19, 1997, Cobe's participation in this offering will be reduced by $3,000,000, the amount of its purchase of Series F Preferred Stock pursuant to the Equity Commitment.

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 September 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 December 31, 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.

	SHARES BENEFICIALLY OWNED BEFORE THE OFFERING(1)		SHARES BENEFICIALLY OWNED AFTER THE OFFERING(1)	
BENEFICIAL OWNER	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)...	834,888	8.1%	834,888	6.2%
Albert B. Deisseroth, M.D., Ph.D.	25,000	*	25,000	*
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).....	20,000	*	20,000	*
Walter C. Ogier(11).....	24,583	*	24,583	*
Horst R. Witzel, Dr.-Ing.(12)....	9,077	*	9,077	*
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).....	5,583,334	53.7%	6,138,890	45.0%

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* 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) Includes 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 December 31, 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 20,000 shares issuable upon exercise of options held by Dr. Muller that are exercisable within the 60-day period following December 31, 1996.

(11) Includes 19,583 shares issuable upon exercise of options held by Mr. Ogier that are exercisable within the 60-day period following December 31, 1996.

(12) Includes 3,077 shares issuable upon exercise of options held by Dr. Witzel that are exercisable within the 60-day period following December 31, 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 415,161 shares issuable upon exercise of options that are exercisable within the 60-day period following December 31, 1996.

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 set forth in the Company's Restated Articles of Incorporation, which Articles may be amended by the holders of at least two-thirds of the outstanding shares of Common Stock. The rights of the holders of Common Stock are also 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 Stock Purchase Agreement dated October 22, 1993 by and between Cobe and the Company (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 this 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 reallot, 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)

INDEX TO FINANCIAL STATEMENTS

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)
ASSETS				
CURRENT ASSETS:				
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	
LIABILITIES AND SHAREHOLDER'S EQUITY				
CURRENT LIABILITIES:				
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)				
SHAREHOLDERS' EQUITY:				
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,	THREE MONTHS ENDED SEPTEMBER 30,		MARCH 24, 1989 (INCEPTION) TO SEPTEMBER 30,
	1994	1995	1996	1996	1995	1996	1996
					(UNAUDITED)		(UNAUDITED)
REVENUES:							
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
COSTS AND EXPENSES:							
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)
OTHER INCOME (EXPENSE):							
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			$ (.98)			$ (.32)	
Pro forma weighted average number of common and common equivalent shares outstanding			10,103,000			10,107,000	

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

AASTROM BIOSCIENCES, INC.
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF SHAREHOLDERS' EQUITY

	PREFERRED STOCK		COMMON STOCK		DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE	SHAREHOLDER NOTES RECEIVABLE	STOCK PURCHASE RIGHTS	UNREALIZED GAINS (LOSSES) ON INVESTMENTS
	SHARES	AMOUNT	SHARES	AMOUNT				
Balance, March 24, 1989 (Inception)....	--	$ --	--	$ --	$ --	$ --	$ --	$ --
Non-cash issuance of Common Stock...			454,545	--				
Issuance of Series A Preferred Stock at $1.00 per share in August 1989.....	1,500,000	1,500,000						
Net loss.....					(500,000)			
Balance, June 30, 1990.....	1,500,000	1,500,000	454,545	--	(500,000)	--	--	--
Issuance of Series A Preferred Stock in March 1991 at $1.00 per share, net of issuance costs of $5,000.....	1,000,000	995,000						
Net loss.....					(636,000)			
Balance, June 30, 1991.....	2,500,000	2,495,000	454,545	--	(1,136,000)	--	--	--
Issuance of Series B Preferred Stock in April 1992 at $2.00 per share, net of issuance costs of $46,000.....	3,030,000	6,014,000						
Net loss.....					(1,268,000)			
Balance, June 30, 1992.....	5,530,000	8,509,000	454,545	--	(2,404,000)	--	--	--
Issuance of Common Stock for services...			33,333	10,000				
Exercise of stock option...			6,873	1,000				
Net loss.....					(2,847,000)			
Balance, June 30, 1993.....	5,530,000	8,509,000	494,751	11,000	(5,251,000)	--	--	--
Issuance of Series C Preferred Stock in October 1993 at $1,000 per share, net of issuance costs of $175,000....	10,000	9,825,000						
Exercise of stock options..			1,222,609	229,000		(198,000)		
Net loss.....					(6,140,000)			
Balance, June 30, 1994.....	5,540,000	18,334,000	1,717,360	240,000	(11,391,000)	(198,000)	--	--
Issuance of Series D Preferred Stock in April and May 1995 at $4.00 per share, net of issuance costs of $81,000.....	2,500,001	9,919,000						
Exercise of 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,	THREE MONTHS ENDED SEPTEMBER 30,		MARCH 24, 1989 (INCEPTION) TO SEPTEMBER 30,
	1994	1995	1996	1996	1995	1996	1996
					(UNAUDITED)		(UNAUDITED)
OPERATING ACTIVITIES:							
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)
INVESTING ACTIVITIES:							
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)
FINANCING ACTIVITIES:							
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
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	2,678,000	(3,083,000)	8,287,000	10,967,000	2,433,000	(5,059,000)	5,908,000
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	3,085,000	5,763,000	2,680,000	--	2,680,000	10,967,000	--
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$ 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--Aastrom 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 hematopoetic 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 49% and 28% 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. One of these companies accounted for 42% 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 accounted for 45% 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.

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

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 evaluation, has determined that the impact on the Company's financial condition and results of operations is not significant for the period ended September 30, 1996.

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
September 30, 1996 (Unaudited):				
U.S. Government Securities	$1,200,000	$ --	$ --	$1,200,000

3. PROPERTY

Property consists of the following:

	JUNE 30, 1995	JUNE 30, 1996	SEPTEMBER 30, 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).

4. SHAREHOLDERS' EQUITY:

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

	SHARES AUTHORIZED	SHARES ISSUED AND OUTSTANDING			LIQUIDATION PREFERENCE AT	
	SEPTEMBER 30, 1996	JUNE 30, 1995	JUNE 30, 1996	SEPTEMBER 30, 1996	JUNE 30, 1996	SEPTEMBER 30, 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

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.

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

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 and for the period from Inception to June 30, 1996, respectively, which amounts are included in research and development expense in the accompanying Statements of Operations. 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.

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.

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,

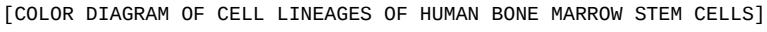
the Company may sell up to $5,000,000 of preferred stock at $6.00 per share during a funding period that extends from January 1997 to December 1997. The conversion rights of such preferred stock will be adjusted to provide for a conversion at 80% of the per share price in the Company's next financing, 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.

On December 10, 1996, the Company issued to Cobe a notice to sell to Cobe 500,000 shares of Series F Preferred Stock for an aggregate purchase price of $3,000,000 under the Equity Commitment. Such sale is scheduled to close on March 19, 1997. In the event that the IPO closes prior to March 19, 1997, Cobe's obligation to purchase Series F Preferred Stock under the Equity Commitment will terminate. In the event that the IPO closes after March 19, 1997, Cobe's participation in this offering will be reduced by $3,000,000, the amount of its purchase of Series F Preferred Stock pursuant to the Equity Commitment. The Equity Commitment and the Convertible Loan Commitment expire upon the closing of the IPO.

Inside back cover page of Prospectus



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.

TABLE OF CONTENTS

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.

, 1997

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.

In October 1996, the Company issued warrants to Michigan to purchase 69,444 shares of Common Stock as consideration for 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.

(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.

10.18** Employee Proprietary Information and Invention Agreement effective June 1, 1991 between the Company and R. Douglas Armstrong.

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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.

10.28** Stock Purchase Commitment Agreement dated October 29, 1996 between Cobe Laboratories, Inc. and the Company.

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, Limited Partnership).
10.37**	Subscription Agreement dated December 11, 1995 between the Company and Northwest Ohio Venture Fund Limited Partnership.
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10.40**	Stock Purchase Agreement dated November 14, 1996 between the Company and Rhone-Poulenc Rorer Inc.
10.41**+	Collaborative Supply Agreement dated December 16, 1996 between the Company and Anchor Advanced Products, Inc., Mid-State Plastics Division.
11.1**	Statement re computation of pro forma net loss per share.
23.1	The consent of Coopers & Lybrand, L.L.P.
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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27.6**	Financial Data Schedule.

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**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.

The undersigned Registrant hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreements certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

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 7th day of January, 1997.

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
/s/ R. Douglas Armstrong R. Douglas Armstrong, Ph.D.	President, Chief Executive Officer, and Director (Principal Executive Officer)	January 7, 1997
Todd E. Simpson* Todd E. Simpson	Vice President, Finance & Administration and Chief Financial Officer (Principal Financial and Accounting Officer)	January 7, 1997
Robert J. Kunze* Robert J. Kunze	Chairman of the Board and Director	January 7, 1997
Albert B. Deisseroth* Albert B. Deisseroth, M.D., Ph.D.	Director	January 7, 1997
Stephen G. Emerson* Stephen G. Emerson, M.D., Ph.D.	Director	January 7, 1997
G. Bradford Jones* G. Bradford Jones	Director	January 7, 1997
Horst R. Witzel* Horst R. Witzel, Dr.-Ing.	Director	January 7, 1997
Edward C. Wood* Edward C. Wood, Jr.	Director	January 7, 1997

*By: /s/ R. Douglas Armstrong
R. Douglas Armstrong
Attorney-in-Fact

EXHIBIT INDEX

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

EXHIBIT 1.1

SUBJECT TO APPROVAL
OF THE UNDERWRITERS

3,250,000 Shares
AASTROM BIOSCIENCES, INC.
COMMON STOCK
UNDERWRITING AGREEMENT

, 1997

COWEN & COMPANY
J.P. MORGAN & COMPANY
As Representatives of the several Underwriters

c/o Cowen & Company
Financial Square
New York, New York 10005

Dear Sirs:

1. Introductory. Aastrom Biosciences, Inc., a Michigan corporation (the "Company"), proposes to issue and sell, pursuant to the terms of this Agreement, to the several underwriters named in Schedule A hereto (the "Underwriters," or, each, an "Underwriter"), an aggregate of 3,250,000 shares of Common Stock, no par value (the "Common Stock") of the Company. The aggregate of 3,250,000 shares so proposed to be sold is hereinafter referred to as the "Firm Stock". The Company also proposes to sell to the Underwriters, upon the terms and conditions set forth in Section 3 hereof, up to an additional 487,500 shares of Common Stock (the "Optional Stock"). The Firm Stock and the Optional Stock are hereinafter collectively referred to as the "Stock." Cowen & Company ("Cowen") and J.P. Morgan & Company are acting as representatives of the several Underwriters and in such capacity are hereinafter referred to as the "Representatives."

2. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with, the several Underwriters that:

(a) A registration statement on Form S-1 (File No. 333-15415) in the form in which it became or becomes effective and also in such form as it may be when any post-effective amendment thereto shall become effective with respect

to the Stock, including any preeffective prospectuses included as part of the registration statement as originally filed or as part of any amendment or supplement thereto, or filed pursuant to Rule 424 under the Securities Act of 1933, as amended (the "Securities Act"), and the rules and regulations (the "Rules and Regulations") of the Securities and Exchange Commission (the "Commission") thereunder, copies of which have heretofore been delivered to you, has been carefully prepared by the Company in conformity with the requirements of the Securities Act and has been filed with the Commission under the Securities Act; one or more amendments to such registration statement, including in each case an amended preeffective prospectus, copies of which amendments have heretofore been delivered to you, have been so prepared and filed. If it is contemplated, at the time this Agreement is executed, that a post-effective amendment to the registration statement will be filed and must be declared effective before the offering of the Stock may commence, the term "Registration Statement" as used in this Agreement means the registration statement as amended by said post-effective amendment. [MATT--your fax was garbled here; what was your comment?] The term "Registration Statement" as used in this Agreement shall also include any registration statement relating to the Stock that is filed and declared effective pursuant to Rule 462(b) under the Securities Act. The term "Prospectus" as used in this Agreement means the prospectus in the form included in the Registration Statement, or, (A) if the prospectus included in the Registration Statement omits information in reliance on Rule 430A under the Securities Act and such information is included in a prospectus filed with the Commission pursuant to Rule 424(b) under the Securities Act, the term "Prospectus" as used in this Agreement means the prospectus in the form included in the Registration Statement as supplemented by the addition of the Rule 430A information contained in the prospectus filed with the Commission pursuant to Rule 424 (b) and (B) if prospectuses that meet the requirements of Section 10(a) of the Securities Act are delivered pursuant to Rule 434 under the Securities Act, then (i) the term "Prospectus" as used in this Agreement means the "prospectus subject to completion" (as such term is defined in Rule 434(g) under the Securities Act) as supplemented by (a) the addition of Rule 430A information or other information contained in the form of prospectus delivered pursuant to Rule 434(b)(2) under the Securities Act or (b) the information contained in the term sheets described in Rule 434(b)(3) under the Securities Act, and (ii) the date of such prospectuses shall be deemed to be the date of the term sheets. The term "Preeffective Prospectus" as used in this Agreement means the prospectus subject to completion in the form included in the Registration Statement at the time of the initial filing of the Registration Statement with the Commission, and as such prospectus shall have been amended from time to time prior to the date of the Prospectus.

(b) The Commission has not issued or threatened to issue any order preventing or suspending the use of any Preeffective Prospectus, and, at its date of issue, each Preeffective Prospectus conformed in all material respects with the requirements of the Securities Act and did not include any untrue statement of a material fact or omit to state a material fact required to be stated therein or

necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; and, when the Registration Statement becomes effective and at all times subsequent thereto up to and including the Closing Dates, the Registration Statement and the Prospectus and any amendments or supplements thereto contained and will contain all material statements and information required to be included therein by the Securities Act and conformed and will conform in all material respects to the requirements of the Securities Act and neither the Registration Statement nor the Prospectus, nor any amendment or supplement thereto, included or will include any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; provided, however, that the foregoing representations, warranties and agreements shall not apply to information contained in or omitted from any Preeffective Prospectus or the Registration Statement or the Prospectus or any such amendment or supplement thereto in reliance upon, and in conformity with, written information furnished to the Company by or on behalf of any Underwriter, directly or through you, specifically for use in the preparation thereof; there is no franchise, lease, contract, agreement or document required to be described in the Registration Statement or Prospectus or to be filed as an exhibit to the Registration Statement which is not described or filed therein as required; and all descriptions of any such franchises, leases, contracts, agreements or documents contained in the Registration Statement are accurate and complete descriptions of such documents in all material respects.

(c) Subsequent to the respective dates as of which information is given in the Registration Statement and Prospectus, and except as set forth or contemplated in the Prospectus, the Company has not incurred any material liabilities or obligations, direct or contingent, nor entered into any material transactions (in all cases other than in the ordinary course of business), and there has not been any material adverse change in the condition (financial or otherwise), properties, business, management, prospects, net worth or results of operations of the Company or any change in the capital stock, short-term or long-term debt of the Company.

(d) The financial statements, together with the related notes and schedules, set forth in the Prospectus and elsewhere in the Registration Statement fairly present, on the basis stated in the Registration Statement, the financial position and the results of operations and changes in financial position of the Company at the respective dates or for the respective periods therein specified. Such statements and related notes and schedules have been prepared in accordance with generally accepted accounting principles applied on a consistent basis except as may be set forth in the Prospectus.

(e) Coopers & Lybrand L.L.C., who have expressed their opinions on the audited financial statements and related schedules included in the Registration

Statement and the Prospectus are independent public accountants as required by the Securities Act and the Rules and Regulations.

(f) The Company has been duly organized and is validly existing and in good standing as a corporation under the laws of the state of Michigan, with power and authority (corporate and other) to own or lease its properties and to conduct its business as described in the Prospectus; except as otherwise described in the Prospectus, the Company is in possession of and operating in compliance with all franchises, grants, authorizations, licenses, permits, easements, consents, certificates and orders required for the conduct of its business, all of which are valid and in full force and effect, expect for such franchises, grants, authorizations, licenses, permits, easements, consents, certificates or orders the absence of which, alone or in the aggregate, do not or would not have a material adverse effect on the Company; and the Company is duly qualified to do business and in good standing as a foreign corporation in all other jurisdictions where its ownership or leasing of properties or the conduct of its business requires such qualification. The Company has all requisite power and authority, and all necessary consents, approvals, authorizations, orders, registrations, qualifications, licenses and permits of and from all public regulatory or governmental agencies and bodies to own, lease and operate its properties and conduct its business as now being conducted and as described in the Registration Statement and the Prospectus, and no such consent, approval, authorization, order, registration, qualification, license or permit contains a materially burdensome restriction not adequately disclosed in the Registration Statement and the Prospectus. The Company does not own or control, directly or indirectly, any other corporations, associations or other entities.

(g) The Company's authorized and outstanding capital stock is on the date hereof, and will be on the Closing Dates, as set forth under the caption "Capitalization" in the Prospectus (adjusted, in the case of the Option Closing Date, as set forth under the heading "Pro Forma As Adjusted" under such caption); the outstanding shares of common stock (including the outstanding shares of Stock) of the Company conform to the description thereof in the Prospectus and have been duly authorized and validly issued and are fully paid and nonassessable; and have been issued in compliance with all federal and state securities laws and were not issued in violation of or subject to any preemptive rights or similar rights to subscribe for or purchase securities. Except as disclosed in and or contemplated by the Prospectus and the financial statements of the Company and related notes thereto included in the Prospectus, the Company does not have outstanding any options or warrants to purchase, or any preemptive rights or other rights to subscribe for or to purchase any securities or obligations convertible into, or any contracts or commitments to issue or sell, shares of its capital stock or any such options, rights, convertible securities or obligations, except for options granted subsequent to the date of information provided in the Prospectus pursuant to the Company's employee and stock option plans as disclosed in the Prospectus. The description of the Company's stock option and other stock plans or arrangements, and the options or other rights

granted or exercised thereunder, as set forth in the Prospectus, accurately and fairly presents in all material respects the information required to be shown with respect to such plans, arrangements, options and rights.

(h) The Stock to be issued and sold by the Company to the Underwriters hereunder has been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued, fully paid and nonassessable and free of any preemptive or similar rights and will conform to the description thereof in the Prospectus.

(i) Except as set forth in the Prospectus, there are no legal or governmental proceedings pending to which the Company is a party or of which any property of the Company is subject, which, if determined adversely to the Company might individually or in the aggregate (i) prevent or adversely affect the transactions contemplated by this Agreement, (ii) suspend the effectiveness of the Registration Statement, (iii) prevent or suspend the use of the Preeffective Prospectus in any jurisdiction or (iv) result in a material adverse change in the condition (financial or otherwise), properties, business, management, prospects, net worth or results of operations of the Company; and to the best of the Company's knowledge no such proceedings are threatened or contemplated against the Company by governmental authorities or others. The Company is not a party nor subject to the provisions of any material injunction, judgment, decree or order of any court, regulatory body or other governmental agency or body. The description of the Company's litigation under the heading "Legal Proceedings" in the Prospectus is true and correct and complies with the Rules and Regulations.

(j) The execution, delivery and performance of this Agreement and the consummation of the transactions herein contemplated will not result in a breach or violation of any of the terms or provisions of or constitute a default under any indenture, mortgage, deed of trust, note or other agreement or instrument to which the Company is a party or by which it or any of its properties is or may be bound other than any such indenture, mortgage, deed of trust, note or other agreement or instrument which, alone or in the aggregate, is material to the Company, the Articles of Incorporation, By-laws or other organizational documents of the Company, or any law, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties, other than any such law, order, rule or regulation which, alone or in the aggregate, is material to the Company, or will result in the creation of a lien.

(k) No consent, approval, authorization or order of any court or governmental agency or body is required for the consummation by the Company of the transactions contemplated by this Agreement, except such as may be required by the National Association of Securities Dealers, Inc. (the "NASD") or under the Securities Act or the securities or "Blue Sky" laws of any jurisdiction in connection with the purchase and distribution of the Stock by the Underwriters, all of which requirements have been satisfied in all material respects.

(l) The Company has the full corporate power and authority to enter into this Agreement and to perform its obligations hereunder (including to issue, sell and deliver the Stock), and this Agreement has been duly and validly authorized, executed and delivered by the Company and is a valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, except to the extent that rights to indemnity and contribution hereunder may be limited by federal or state securities laws or the public policy underlying such laws and except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting creditors' rights generally or by general equitable principles;

(m) The Company is in all material respects in compliance with, and conducts its businesses in conformity with, all applicable federal, state, local and foreign laws, rules and regulations or any court or governmental agency or body; to the knowledge of the Company, otherwise than as set forth in the Registration Statement and the Prospectus, no prospective change in any of such federal or state laws, rules or regulations has been adopted which, when made effective, would have a material adverse effect on the operations of the Company.

(n) The Company has filed all necessary federal, state, local and foreign income, payroll, franchise and other tax returns and has paid all taxes shown as due thereon or with respect to any of its properties, and there is no tax deficiency that has been, or to the knowledge of the Company is likely to be, asserted against the Company or any of its properties or assets that would materially adversely affect the financial position, business or operations of the Company.

(o) Except as disclosed in the Registration Statement, the Company is in compliance with all applicable existing federal, state, local and foreign laws and regulations relating to the protection of human health or the environment or imposing liability or requiring standards of conduct concerning any Hazardous Materials ("Environmental Laws"), except for such instances of noncompliance which, either singly or in the aggregate, would not have a material adverse effect. The term "Hazardous Material" means (i) any "hazardous substance" as defined by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, (ii) any "hazardous waste" as defined by the Resource Conservation and Recovery Act, as amended, (iii) any petroleum or petroleum product, (iv) any polychlorinated biphenyl and (v) any pollutant or contaminant or hazardous, dangerous or toxic chemical, material, waste or substance regulated under or within the meaning of any other Environment Law.

(p) No person or entity has the right to require registration, as part of the Registration Statement, of shares of Common Stock or other securities of the Company because of the filing or effectiveness of the Registration Statement or otherwise, except for persons and entities who have expressly waived such right or who have been given proper notice and have failed to exercise such right within the time or times required under the terms and conditions of such right.

(q) Neither the Company nor any of its officers, directors or affiliates has taken or will take, directly or indirectly, any action designed or intended to stabilize or manipulate the price of any security of the Company, or which caused or resulted in, or which might in the future reasonably be expected to cause or result in, stabilization or manipulation of the price of any security of the Company.

(r) The Company has provided you with all financial statements since June 30, 1992 to the date hereof that are available to the officers of the Company.

(s) The Company owns or possesses license rights to all patents, trademarks, trademark registrations, service marks, service mark registrations, tradenames, copyrights, licenses, inventions, trade secrets and rights as described in the Prospectus as being owned or licensed by it, as being proprietary to the Company or as necessary for the conduct of its business as presently conducted or contemplated by the Prospectus, and the Company is not aware of any claim to the contrary or any challenge by any other person to the rights of the Company with respect to the foregoing. Without limiting the foregoing, each of the license agreement between the Company and Joseph G. Cremonese dated July [__], 1992 and relating to [Patent nos. __] and the license agreement between the Company and the University of Michigan dated March 13, 1992, as amended, and relating to U.S. Patent No. 4,839,292, is a valid and binding agreement of Joseph G. Cremonese and of the University of Michigan, respectively, enforceable in accordance with its terms; and the Company is not in material breach or violation of any of the terms or provisions of either such agreement, and no default exists under either such agreement. The Company's business as now conducted and as proposed to be conducted does not and will not infringe or conflict with in any material respect patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses or other intellectual property or franchise right of any person. Except as described in the Prospectus, no claim has been made against the Company alleging the infringement by the Company of any patent, trademark, service mark, tradename, copyright, trade secret, license in or other intellectual property right or franchise right of any person.

(t) The Company has performed all material obligations currently required to be performed by it under all contracts required by Item 601(b)(10) of Regulation S-K under the Securities Act to be filed as exhibits to the Registration Statement, and neither the Company nor, to the Company's knowledge, any other party to such contract is in default under or in breach of any such obligations. The Company has not received any notice of such default or breach.

(u) The Company is not involved in any labor dispute nor is any such dispute threatened. The Company is not aware that (A) any executive, key employee or significant group of employees of the Company plans to terminate employment with the Company or (B) any such executive or key employee is subject to any noncompete, nondisclosure, confidentiality, employment, consulting or similar agreement that would be violated by the present or proposed business

activities of the Company. The Company does not have or expect to have any liability for any prohibited transaction or funding deficiency or any complete or partial withdrawal liability with respect to any pension, profit sharing or other plan which is subject to the "Employee Retirement Income Security Act of 1974, as amended ("ERISA"), to which the Company makes or ever has made a contribution and in which any employee of the Company is or has ever been a participant. With respect to such plans, the Company is in compliance in all material respects with all applicable provisions of ERISA.

(v) The Company has obtained the written agreement described in Section 8(o) of this Agreement from each of its officers and directors.

(w) The Company has and the Company as of the Closing Dates will have, good and marketable title in fee simple to all real property and good and marketable title to all personal property owned or proposed to be owned by it which is material to the business of the Company, in each case free and clear of all liens, encumbrances and defects except such as are described the Prospectus or such as would not have a material adverse effect on the Company; and any real property and buildings held under lease by the Company or proposed to be held after giving effect to the transactions described in the Prospectus are, or will be as of the Closing Dates, held by it under valid, subsisting and enforceable leases with such exceptions as would not have a material adverse effect on the Company, in each case except as described in or contemplated by the Prospectus.

(x) The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are customary in the businesses in which it is engaged or proposes to engage after giving effect to the transactions described in the Prospectus; and the Company does not have any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not materially and adversely affect the condition, financial or otherwise, or the earnings, business or operations of the Company except as described in or contemplated by the Prospectus.

(y) Other than as contemplated by this Agreement, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any of the transactions contemplated by this Agreement.

(z) The Company has complied with all provisions of Section 517.075 Florida Statutes (Chapter 92-198; Laws of Florida).

(aa) The Company maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in

conformity with generally accepted accounting principles and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(ab) To the Company's knowledge, neither the Company nor any employee or agent of the Company has made any payment of funds of the Company or received or retained any funds in violation of any law, rule or regulation, which payment, receipt or retention of funds is of a character required to be disclosed in the Prospectus.

(ac) The Company is not an "investment company" or an entity "controlled" by an "investment company" as such terms are defined in the Investment Company Act of 1940, as amended.

(ad) Each certificate signed by any officer of the Company and delivered to the Underwriters or counsel for the Underwriters shall be deemed to be a representation and warranty by the Company as to the matters covered thereby.

3. Purchase by, and Sale and Delivery to, Underwriters -- Closing Dates. The Company agrees to sell to the Underwriters the Firm Stock, and on the basis of the representations, warranties, covenants and agreements herein contained, but subject to the terms and conditions herein set forth, the Underwriters agree, severally and not jointly, to purchase the Firm Stock from the Company, the number of shares of Firm Stock to be purchased by each Underwriter being set opposite its name in Schedule A, subject to adjustment in accordance with Section 12 hereof.

The purchase price per share to be paid by the Underwriters to the Company will be $ [_____] per share (the "Purchase Price").

The Company will deliver the Firm Stock to the Representatives for the respective accounts of the several Underwriters in the form of definitive certificates, issued in such names and in such denominations as the Representatives may direct by notice in writing to the Company given at or prior to 12:00 Noon, New York Time, on the second full business day preceding the First Closing Date (as defined below) or, if no such direction is received, in the names of the respective Underwriters or in such other names as Cowen may designate (solely for the purpose of administrative convenience) and in such denominations as Cowen may determine, against payment of the aggregate Purchase Price therefor by certified or official bank check or checks in Clearing House funds (next day funds), payable to the order of the Company, all at the offices of Brobeck, Phleger & Harrison LLP, 1633 Broadway, New York, New York 10019. The time and date of the delivery and closing shall be at 10:00 A.M., New York Time, on [_____], 1997, in accordance with Rule 15c6-1 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The time and date of such payment and delivery are herein referred to as the "First Closing Date." The First Closing Date and the location of delivery of, and the form of payment for, the Firm Stock may be varied by agreement between the Company and Cowen. The First Closing Date may be postponed pursuant to the provisions of Section 12.

The Company shall make the certificates for the Stock available to the Representatives for examination on behalf of the Underwriters not later than 10:00 A.M., New York Time, on the business day preceding the First Closing Date at the offices of [Cowen & Company, Financial Square,] New York, New York 10005.

It is understood that Cowen, individually and not as a Representative of the several Underwriters, may (but shall not be obligated to) make payment to the Company on behalf of any Underwriter or Underwriters, for the Stock to be purchased by such Underwriter or Underwriters. Any such payment by Cowen shall not relieve such Underwriter or Underwriters from any of its or their other obligations hereunder.

The several Underwriters agree to make an initial public offering of the Firm Stock at the initial public offering price as soon after the effectiveness of the Registration Statement as in their judgment is advisable. The Representatives shall promptly advise the Company of the making of the initial public offering.

For the purpose of covering any over-allotments in connection with the distribution and sale of the Firm Stock as contemplated by the Prospectus, the Company hereby grants to the Underwriters an option to purchase up to 487,500 shares of Optional Stock. The price per share to be paid for the Optional Stock shall be the Purchase Price. The option granted hereby may be exercised as to all or any part of the Optional Stock at any time, and from time to time, not more than thirty (30) days subsequent to the effective date of this Agreement. No Optional Stock shall be sold and delivered unless the Firm Stock previously has been, or simultaneously is, sold and delivered. The right to purchase the Optional Stock or any portion thereof may be surrendered and terminated at any time upon notice by the Underwriters to the Company.

The option granted hereby may be exercised by the Underwriters by giving written notice from Cowen to the Company setting forth the number of shares of the Optional Stock to be purchased by them and the date and time for delivery of and payment for the Optional Stock. Each date and time for delivery of and payment for the Optional Stock (which may be the First Closing Date, but not earlier) is herein called the "Option Closing Date," and shall in no event be earlier than two (2) business days nor later than ten (10) business days after written notice is given. The Option Closing Date and the First Closing Date are herein called the "Closing Dates." All purchases of Optional Stock from the Company shall be made on a pro rata basis. Optional Stock shall be purchased for the account of each Underwriter in the same proportion as the number of shares of Firm Stock set forth opposite such Underwriter's name in Schedule A hereto bears to the total number of shares of Firm Stock (subject to adjustment by the Underwriters to eliminate odd lots). Upon exercise of the option by the Underwriters, the Company agrees to sell to the Underwriters the number of shares of Optional Stock set forth in the written notice of exercise and the Underwriters agree, severally and not jointly and subject to the terms and conditions herein set forth, to purchase the number of such shares determined as aforesaid.

The Company will deliver the Optional Stock to the Underwriters (in the form of definitive certificates, issued in such names and in such denominations as the Representatives

may direct by notice in writing to the Company given at or prior to 12:00 Noon, New York Time, on the second full business day preceding the Option Closing Date or, if no such direction is received, in the names of the respective Underwriters or in such other names as Cowen may designate (solely for the purpose of administrative convenience) and in such denominations as Cowen may determine, against payment of the aggregate Purchase Price therefor by certified or official bank check-or checks in Clearing House funds (next day funds), payable to the order of the Company all at the offices of Brobeck, Phleger & Harrison LLP, 1633 Broadway, New York, New York 10019. The Company shall make the certificates for the Optional Stock available to the Underwriters for examination not later than 10:00 A.M., New York Time, on the business day preceding the Option Closing Date at the offices of Cowen & Company, Financial Square, New York, New York 10005. The Option Closing Date and the location of delivery of, and the form of payment for, the Option Stock may be varied by agreement between the Company and Cowen. The Option Closing Date may be postponed pursuant to the provisions of Section 12.

4. Covenants and Agreements of the Company. The Company covenants and agrees with the several Underwriters that:

(a) The Company will (i) if the Company and the Representatives have determined not to proceed pursuant to Rule 430A, use its best efforts to cause the Registration Statement to become effective, (ii) if the Company and the Representatives have determined to proceed pursuant to Rule 430A, use its best efforts to comply with the provisions of and make all requisite filings with the Commission pursuant to Rule 430A and Rule 424 of the Rules and Regulations and (iii) if the Company and the Representatives have determined to deliver Prospectuses pursuant to Rule 434 of the Rules and Regulations, to use its best efforts to comply with all the applicable provisions thereof. The Company will advise the Representatives promptly as to the time at which the Registration Statement becomes effective, will advise the Representatives promptly of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of the institution of any proceedings for that purpose, and will use its best efforts to prevent the issuance of any such stop order and to obtain as soon as possible the lifting thereof, if issued. The Company will advise the Representatives promptly of the receipt of any comments of the Commission or any request by the Commission for any amendment of or supplement to the Registration Statement or the Prospectus or for additional information and will not at any time file any amendment to the Registration Statement or supplement to the Prospectus which shall not previously have been submitted to the Representatives a reasonable time prior to the proposed filing thereof or to which the Representatives shall reasonably object in writing or which is not in compliance with the Securities Act and the Rules and Regulations.

(b) The Company will prepare and file with the Commission, promptly upon the request of the Representatives, any amendments or supplements to the Registration Statement or the Prospectus which in the reasonable opinion of the Representatives may be necessary to enable the several Underwriters to continue

the distribution of the Stock and will use its best efforts to cause the same to become effective as promptly as possible.

(c) If at any time after the effective date of the Registration Statement when a prospectus relating to the Stock is required to be delivered under the Securities Act, including under the Rules and Regulations, any event relating to or affecting the Company occurs as a result of which the Prospectus or any other prospectus as then in effect would include an untrue statement of a material fact, or omit to state any material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, or if it is necessary at any time to amend the Prospectus to comply with the Securities Act, the Company will promptly notify the Representatives thereof and will prepare an amended or supplemented prospectus which will correct such statement or omission; and in case any Underwriter is required to deliver a prospectus relating to the Stock nine (9) months or more after the effective date of the Registration Statement, the Company upon the request of the Representatives and at the expense of such Underwriter will prepare promptly such prospectus or prospectuses as may be necessary to permit compliance with the requirements of Section 10(a)(3) of the Securities Act.

(d) The Company will deliver to the Representatives, at or before the Closing Dates, signed copies of the Registration Statement, as originally filed with the Commission, and all amendments thereto including all financial statements and exhibits thereto and will deliver to the Representatives such number of copies of the Registration Statement, including such financial statements but without exhibits, and all amendments thereto, as the Representatives may reasonably request. The Company will deliver or mail to or upon the order of the Representatives, from time to time until the effective date of the Registration Statement, as many copies of the Preeffective Prospectus as the Representative(s) may reasonably request. The Company will deliver or mail to or upon the order of the Representatives on the date of the initial public offering, and thereafter from time to time during the period when delivery of a prospectus relating to the Stock is required under the Securities Act, including under the Rules and Regulations, as many copies of the Prospectus, in final form or as thereafter amended or supplemented as the Representatives may reasonably request; provided, however, that the expense of the preparation and delivery of any prospectus required for use nine (9) months or more after the effective date of the Registration Statement shall be borne by the Underwriters required to deliver such prospectus.

(e) The Company will make generally available to its shareholders as soon as practicable, but not later than fifteen (15) months after the effective date of the Registration Statement, an earnings statement which will be in reasonable detail (but which need not be audited) and which will comply with Section 11(a) of the Securities Act, covering a period of at least twelve (12) months beginning after the "effective date" (as defined in Rule 158 under the Securities Act) of the Registration Statement.

(f) The Company will cooperate with the Representatives to enable the Stock to be registered or qualified for offering and sale by the Underwriters and by dealers under the securities laws of such jurisdictions as the Representatives may reasonably designate and at the request of the Representatives will make such applications and furnish such consents to service of process or other documents as may be required of it as the issuer of the Stock for that purpose; provided, however, that the Company shall not be required to qualify to do business or to file a general consent (other than that arising out of the offering or sale of the Stock) to service of process in any such jurisdiction where it is not now so subject. The Company will, from time to time, prepare and file such statements and reports as are or may be required of it as the issuer of the Stock to continue such qualifications in effect for so long a period as the Representative(s) may reasonably request for the distribution of the Stock. The Company will advise the Representatives promptly after the Company becomes aware of the suspension of the qualifications or registration of (or any such exception relating to) the Common Stock of the Company for offering, sale or trading in any jurisdiction or of any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any orders suspending such qualifications, registration or exception, the Company will, with the cooperation of the Representatives use its best efforts to obtain the withdrawal thereof.

(g) The Company will furnish to its shareholders annual reports containing financial statements certified by independent public accountants and will make available to its shareholders quarterly summary financial information in reasonable detail which may be unaudited. During the period of five (5) years from the date hereof, the Company will deliver to the Representatives and, upon request, to each of the other Underwriters, as soon as they are available, copies of each annual report of the Company and each other report furnished by the Company to its shareholders and will deliver to the Representatives, (i) as soon as they are available, copies of any other reports (financial or other) which the Company shall publish or otherwise make available to any of its shareholders generally, (ii) as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange and (iii) from time to time such other information concerning the Company as you may reasonably request.

(h) The Company will use its best efforts to list the Stock, subject to official notice of issuance, on the NASDAQ National Market System ("NASDAQ").

(i) The Company will maintain a transfer agent and registrar for its Common Stock.

(j) Prior to filing its quarterly statements on Form 10-Q, the Company will have its independent auditors perform a limited quarterly review of its quarterly numbers.

(k) Without the prior written consent of Cowen, the Company will not offer, sell, assign, transfer, encumber, contract to sell, grant an option to purchase or otherwise dispose of, directly or indirectly, any shares of Common Stock or securities convertible into or exercisable or exchangeable for Common Stock or warrants or other rights to purchase Common Stock (including, without limitation, Common Stock of the Company which may be deemed to be beneficially owned by the undersigned in accordance with the Rules and Regulations) during the 180 days following the date on which the price of the Common Stock to be purchased by the Underwriters is set, other than the Company's sale of Common Stock hereunder and the Company's issuance of Common Stock upon the exercise of warrants or stock options, or pursuant to contractual rights, in each case which are presently outstanding and described in the Prospectus or subsequently granted as contemplated by the Prospectus.

(l) The Company will apply the net proceeds from the sale of the Stock as set forth in the description under "Use of Proceeds" in the Prospectus, which description complies in all respects with the requirements of Item 504 of Regulation S-K.

(m) The Company will supply you with copies of all correspondence to and from, and all documents issued to and by, the Commission in connection with the registration of the Stock under the Securities Act.

(n) Prior to the Closing Dates the Company will furnish to you, as soon as they have been prepared, copies of any unaudited interim consolidated financial statements of the Company for any periods subsequent to the periods covered by the financial statements appearing in the Registration Statement and the Prospectus.

(o) Prior to the Closing Date the Company will issue no press release or other communications directly or indirectly and hold no press conference with respect to the Company, the financial condition, results of operation, business, prospects, assets or liabilities of the Company, or the offering of the Stock, without your prior written consent.

5. Payment of Expenses. (a) The Company will pay (directly or by reimbursement) all costs, fees and expenses incurred in connection with expenses incident to the performance of its obligations under this Agreement and in connection with the transactions contemplated hereby, including but not limited to (i) all expenses and taxes incident to the issuance and delivery of the Stock to the Representatives; (ii) all expenses incident to the registration of the Stock under the Securities Act; (iii) the costs of preparing stock certificates (including printing and engraving costs); (iv) all fees and expenses of the registrar and transfer agent of the Stock; (v) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Stock to the Underwriters; (vi) fees and expenses of the Company's counsel and the Company's independent accountants; (vii) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement, each Preeffective Prospectus and the Prospectus (including all exhibits and financial

statements) and all amendments and supplements provided for herein, or in connection with the printing, filing, shipping and distribution of the "Agreement Among Underwriters" between the Representatives and the Underwriters, the Master Selected Dealers, Agreement, the Underwriters Questionnaire and the Blue Sky memoranda and this Agreement; (viii) all filing fees, attorneys fees, and expenses incurred by the Company or the Underwriters in connection with exemptions from the qualifying or registering (or obtaining qualification or registration of) all or any part of the Stock for offer and sale and determination of its eligibility for investment under the Blue Sky or other securities laws of such jurisdictions as the Representatives may reasonably designate; (ix) all fees and expenses paid or incurred in connection with filings made with the NASD; and (x) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section.

(b) In addition to its other obligations under Section 6(a) hereof, the Company agrees that, as an interim measure during the pendency of any claim, action, investigation, inquiry or other proceeding arising out of, or based upon, (i) any statement or omission or any alleged statement or omission or (ii) any breach or inaccuracy in its representations and warranties, it will reimburse each Underwriter on a quarterly basis for all reasonable legal or other expenses incurred in connection with investigating or defending any such claim, action, investigation, inquiry or other proceeding, notwithstanding the absence of a judicial determination as to the propriety and enforceability of the Company's obligation to reimburse each Underwriter for such expenses and the possibility that such payments might later be held to have been improper by a court of competent jurisdiction. To the extent that any such interim reimbursement payment is so held to have been improper, each Underwriter shall promptly return it to the Company together with interest, compounded daily, determined on the basis of the prime rate (or other commercial lending rate for borrowers of the highest credit standing) announced from time to timed by The Chase Manhattan Bank, New York, New York (the "Prime Rate"). Any such interim reimbursement payments which are not made to an Underwriter in a timely manner as provided below shall bear interest at the Prime Rate from the due date for such reimbursement. This expense reimbursement agreement will be in addition to any other liability which the Company may otherwise have. The request for reimbursement will be sent to the Company.

(c) In addition to its other obligations under Section 6(b) hereof, each Underwriter severally agrees that, as an interim measure during the pendency of any claim, action, investigation, inquiry or other proceeding arising out of or based upon any statement or omission, or any alleged statement or omission, described in Section 6(b) hereof which relates to information furnished to the Company pursuant to Section 6(d) hereof, it will reimburse the Company (and, to the extent applicable, each officer, director or controlling person) on a quarterly basis for all reasonable legal or other expenses incurred in connection with investigating or defending any such claim, action, investigation, inquiry or other proceeding, notwithstanding the absence of a judicial determination as to the propriety and enforceability of the Underwriters, obligation to reimburse the Company (and, to the extent applicable, each officer, director or controlling person) for such expenses and the possibility that such payments might later be held to have been improper by a court of competent jurisdiction. To the extent that any such interim reimbursement payment is so held to have been improper, the Company (and, to the extent applicable, each officer, director or controlling person) shall promptly return it to the Underwriters together with interest, compounded daily, determined on the basis of the

Prime Rate. Any such interim reimbursement payments which are not made to the Company within thirty (30) days of a request for reimbursement shall bear interest at the Prime Rate from the date of such request. This indemnity agreement will be in addition to any liability which such Underwriter may otherwise have.

(d) It is agreed that any controversy arising out of the operation of the interim reimbursement arrangements set forth in paragraph (b) and/or (c) of this Section 5, including the amounts of any requested reimbursement payments and the method of determining such amounts, shall be settled by arbitration conducted under the provisions of the Constitution and Rules of the Board of Governors of the New York Stock Exchange, Inc. or pursuant to the Code of Arbitration Procedure of the NASD. Any such arbitration must be commenced by service of a written demand for arbitration or written notice of intention to arbitrate, therein electing the arbitration tribunal. In the event the party demanding arbitration does not make such designation of an arbitration tribunal in such demand or notice, then the party responding to said demand or notice is authorized to do so. Such an arbitration would be limited to the operation of the interim reimbursement provisions contained in paragraph (b) and/or (c) of this Section 5, as the case may be, and would not resolve the ultimate propriety or enforceability of the obligation to reimburse expenses which is created by the provisions of Section 6.

6. Indemnification and Contribution. (a) The Company agrees to indemnify
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and hold harmless each Underwriter and each person, if any, who controls such Underwriter within the meaning of the Securities Act and the respective officers, directors, partners, employees, representatives and agents of each such Underwriter (collectively, the "Underwriter Indemnified Parties" and, each, an "Underwriter Indemnified Party"), against any losses, claims, damages, liabilities or expenses (including the reasonable cost of investigating and defending against any claims therefor and counsel fees incurred in connection therewith), joint or several, which may be based upon the Securities Act, or any other statute or at common law, on the ground or alleged ground that any Preeffective Prospectus, the Registration Statement or the Prospectus (or any Preeffective Prospectus, the Registration Statement or the Prospectus as from time to time amended or supplemented) includes or allegedly includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, unless such statement or omission was made in reliance upon, and in conformity with, written information furnished to the Company by any Underwriter, directly or through the Representatives, specifically for use in the preparation thereof and, provided,
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that the indemnity agreement provided in this Section 6(a) with respect to any Preeffective Prospectus shall not inure to the benefit of any Underwriter from whom the person asserting any losses, claims, damages, liabilities or expenses based upon any untrue statement or alleged untrue statement of material fact or omission or alleged omission to state therein a material fact purchased Common Stock, if a copy of the Prospectus in which such untrue statement or alleged untrue statement or omission or alleged omission was corrected had not been sent or given to such person within the time required by the Securities Act and the Rules and Regulations, unless such failure is the result of noncompliance by the Company with Section 4(d) hereof. The Company will be entitled to participate at its own expense in the defense or, if it so elects, to assume the defense of any suit brought to enforce any such liability, but if the Company elects to assume the defense, such defense shall be conducted by counsel chosen by it. In the event the Company elects to assume the defense of any such suit and retain such counsel, any Underwriter

Indemnified Parties, defendant or defendants in the suit, may retain additional counsel but shall bear the fees and expenses of such counsel unless (i) the Company shall have specifically authorized the retaining of such counsel or (ii) the parties to such suit include any such Underwriter Indemnified Parties, and the Company and such Underwriter Indemnified Parties at law or in equity have been advised by counsel to the Underwriters that one or more legal defenses may be available to it or them which may not be available to the Company, in which case the Company shall not be entitled to assume the defense of such suit notwithstanding its obligation to bear the fees and expenses of such counsel. This indemnity agreement is not exclusive and will be in addition to any liability which the Company might otherwise have and shall not limit any rights or remedies which may otherwise be available at law or in equity to each Underwriter Indemnified Party.

(b) Each Underwriter severally agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who have signed the Registration Statement and each person, if any, who controls the Company within the meaning of the Securities Act (collectively, the "Company Indemnified Parties"), against any losses, claims, damages, liabilities or expenses (including, unless the Underwriter or Underwriters elect to assume the defense, the reasonable cost of investigating and defending against any claims therefor and counsel fees incurred in connection therewith), joint or several, which arise out of or are based in whole or in part upon the Securities Act, the Exchange Act or any other federal, state, local or foreign statute or regulation, or at common law, on the ground or alleged ground that any Preeffective Prospectus, the Registration Statement or the Prospectus (or any Preeffective Prospectus, the Registration Statement or the Prospectus, as from time to time amended and supplemented) includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances in which they were made, not misleading, but only insofar as any such statement or omission was made in reliance upon, and in conformity with, written information furnished to the Company by such Underwriter, directly or through the Representatives, specifically for use in the preparation thereof; provided, however, that in no case is such Underwriter to be liable with respect to any claims made against any Company Indemnified Party against whom the action is brought unless such Company Indemnified Party shall have notified such Underwriter in writing within a reasonable time after the summons or other first legal process giving information of the nature of the claim shall have been served upon the Company Indemnified Party, but failure to notify such Underwriter of such claim shall not relieve it from any liability which it may have to any Company Indemnified Party otherwise than on account of its indemnity agreement contained in this paragraph. Such Underwriter shall be entitled to participate at its own expense in the defense, or, if it so elects, to assume the defense of any suit brought to enforce any such liability, but, if such Underwriter elects to assume the defense, such defense shall be conducted by counsel chosen by it. In the event that any Underwriter elects to assume the defense of any such suit and retain such counsel, the Company Indemnified Parties and any other Underwriter or Underwriters or controlling person or persons, defendant or defendants in the suit, shall bear the fees and expenses of any additional counsel retained by them, respectively, unless (i) the Underwriters shall have specifically authorized the retaining of such counsel or (ii) the parties to such suit include any such Company Indemnified Parties, and the Underwriters and such Company Indemnified Parties at law or in equity have been advised by counsel to the Company that one or more legal defenses may be available to it or them which conflict with the defenses of the Underwriters, in which case the indemnified party

or parties shall have the right to select a single separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. The Underwriter against whom indemnity may be sought shall not be liable to indemnify any person for any settlement of any such claim effected without such Underwriter's consent. This indemnity agreement is not exclusive and will be in addition to any liability which such Underwriter might otherwise have and shall not limit any rights or remedies which may otherwise be available at law or in equity to any Company Indemnified Party.

(c) If the indemnification provided for in this Section 6 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages, liabilities or expenses (or actions in respect thereof) referred to herein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages, liabilities or expenses (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Stock. If however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above. The amount paid or payable by an indemnified party as a result of the losses, claims, damages, liabilities or expenses (or actions in respect thereof) referred to above shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating, defending, settling or compromising any such claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the shares of the Stock underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. The Underwriters' obligations to contribute are several in proportion to their respective underwriting obligations and not joint. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(d) The information set forth in the last paragraph on the front cover page (insofar as such information relates to the Underwriters), on the inside front cover concerning stabilization and over-allotment by the Underwriters, and under the third and eighth paragraphs under the caption "Underwriting" in any Preeffective Prospectus and in the Prospectus constitutes the only information furnished by the Underwriters to the Company for inclusion in any Preeffective Prospectus, the Prospectus or the Registration Statement.

(e) No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened proceeding in respect of which any indemnified party is or could have been a party and indemnification could have been sought hereunder by such indemnified party, unless such settlement includes an unconditional release of such indemnified party from all liability on all claims that are the subject matter of such proceeding.

7. Survival of Indemnities, Representations, Warranties, etc. The respective indemnities, covenants, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by them respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter, the Company or any of its officers or directors or any controlling person, and shall survive delivery of and payment for the Stock.

8. Conditions of Underwriters, Obligations. The respective obligations of the several Underwriters hereunder shall be subject to the accuracy, at and (except as otherwise stated herein) as of the date hereof and at and as of the Closing Dates, of the representations and warranties made herein by the Company, to compliance at and as of the Closing Dates by the Company with its covenants and agreements herein contained and other provisions hereof to be satisfied at or prior to the Closing Dates, and to the following additional conditions:

(a) The Registration Statement shall have become effective and no stop order suspending the effectiveness thereof shall have been issued and no proceedings for that purpose shall have been initiated or, to the knowledge of the Company or the Representatives, shall be threatened by the Commission, and any request for additional information on the part of the Commission (to be included in the Registration Statement or the Prospectus or otherwise) shall have been complied with to the reasonable satisfaction of the Representatives. Any filings of the Prospectus, or any supplement thereto, required pursuant to Rule 424 (b) or Rule 434 of the Rules and Regulations, shall have been made in the manner and within the time period required by Rule 424(b) and Rule 434 of the Rules and Regulations, as the case may be.

(b) The Representatives shall have been satisfied that there shall not have occurred any change prior to the Closing Dates in the condition (financial or otherwise) properties, business, management, prospects, net worth or results of operations of the Company or any change in the capital stock, short-term or long-term debt of the Company, such that (i) the Registration Statement or the Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact which, in the opinion of the Representatives, is material, or

omits to state a fact which, in the opinion of the Representatives is required to be stated therein or is necessary to make the statements therein not misleading, or (ii) it is impracticable in the reasonable judgment of the Representatives to proceed with the public offering or purchase the Stock as contemplated hereby.

(c) The Representatives shall be satisfied that no legal or governmental action, suit or proceeding affecting the Company which is material and adverse to the Company or which affects or may affect the Company's ability to perform its obligations under this Agreement shall have been instituted or threatened and there shall have occurred no material adverse development in any existing such action, suit or proceeding.

(d) At the time of execution of this Agreement, the Representatives shall have received from Coopers & Lybrand L.L.P., independent certified public accountants, a letter, dated the date hereof, in form and substance satisfactory to the Underwriters.

(e) The Representatives shall have received from Coopers & Lybrand L.L.P., independent certified public accountants, a letter, dated the Closing Dates, to the effect that such accountants reaffirm, as of the Closing Dates, and as though made on the Closing Dates, the statements made in the letter furnished by such accountants pursuant to paragraph (d) of this Section 8.

(f) The Representatives shall have received from Gray Cary Ware & Freidenrich, counsel for the Company, an opinion, dated the Closing Dates, to the effect set forth in Exhibit I hereto.

(g) The Representatives shall have received from Pepper, Hamilton & Scheetz, counsel for the Company, an opinion, dated the Closing Dates, to the effect set forth in Exhibit II hereto.

(h) The Representatives shall have received from Oblon, Spivak, McClelland, Maier & Neustadt, P.C., patent counsel for the Company, an opinion, dated the Closing Dates, to the effect set forth in Exhibit III hereto.

(i) The Representatives shall have received from Pretty, Schroeder, Brueggemann & Clark, P.C., patent counsel for the Company, an opinion, dated the Closing Dates, to the effect set forth in Exhibit IV hereto.

(j) The Representatives shall have received from Campbell & Flores, patent counsel for the Company, an opinion, dated the Closing Dates, to the effect set forth in Exhibit V hereto.

(k) The Representatives shall have received from Hyman, Phelps & McNamara, regulatory counsel for the Company, an opinion, dated the Closing Dates, to the effect set forth in Exhibit VI hereto.

(l) The Representatives shall have received from Brobeck, Phleger & Harrison LLP, counsel for the Underwriters, their opinion or opinions dated the Closing Dates with respect to the incorporation of the Company, the validity of the Stock, the Registration Statement and the Prospectus and such other related matters as it may reasonably request, and the Company shall have furnished to such counsel such documents as they may request for the purpose of enabling them to pass upon such matters.

(m) The Representatives shall have received a certificate, dated the Closing Dates, signed on behalf of the Company by its chief executive officer or the President and the chief financial or accounting officer of the Company to the effect that:

(i) No stop order suspending the effectiveness of the Registration Statement has been issued, and, to the best of the knowledge of the signers, no proceedings for that purpose have been instituted or are pending or contemplated under the Securities Act;

(ii) Neither any Preeffective Prospectus, as of its date, nor the Registration Statement nor the Prospectus, nor any amendment or supplement thereto, as of the time when the Registration Statement became effective and at all times subsequent thereto up to the delivery of such certificate, included any untrue statement of a material fact or omitted to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading;

(iii) Subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus, and except as set forth or contemplated in the Prospectus, the Company has not incurred any material liabilities or obligations, direct or contingent, nor entered into any material transactions not in the ordinary course of business and there has not been any material adverse change in the condition (financial or otherwise), properties, business, management, prospects, net worth or results of operations of the Company, or any change in the capital stock (other than through the exercise of stock options), short-term or long-term debt of the Company;

(iv) The representations and warranties of the Company in this Agreement are true and correct at and as of the Closing Dates, and the Company has complied with all the agreements and performed or satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Dates; and

(v) Since the respective dates as of which information is given in the Registration Statement and the Prospectus, and except as disclosed in or contemplated by the Prospectus, (i) there has not been any material

adverse change or a development involving a material adverse change in the condition (financial or otherwise), properties, business, management, prospects, net worth or results of operations of the Company; (ii) the business and operations conducted by the Company have not sustained a loss by strike, fire, flood, accident or other calamity (whether or not insured) of such a character as to interfere materially with the conduct of the business and operations of the Company; (iii) no legal or governmental action, suit or proceeding is pending or threatened against the Company which is material to the Company, whether or not arising from transactions in the ordinary course of business, or which may materially and adversely affect the transactions contemplated by this Agreement; (iv) since such dates and except as so disclosed, the Company has not incurred any material liability or obligation, direct, contingent or indirect, made any change in its capital stock (except pursuant to its stock plans), made any material change in its short-term or funded debt or repurchased or otherwise acquired any of the Company's capital stock; and (v) the Company has not declared or paid any dividend, or made any other distribution, upon its outstanding capital stock payable to stockholders of record on a date prior to the Closing Date.

(n) The Company shall have furnished to the Representatives such additional certificates as the Representatives may have reasonably requested as to the accuracy, at and as of the Closing Dates, of the representations and warranties made herein by it and as to compliance at and as of the Closing Dates by it with its covenants and agreements herein contained and other provisions hereof to be satisfied at or prior to the Closing Dates, and as to satisfaction of the other conditions to the obligations of the Underwriters hereunder.

(o) Cowen shall have received the written agreements of the officers, directors and holders of Common Stock listed in Schedule B that each will not offer, sell, assign, transfer, encumber, contract to sell, grant an option to purchase or otherwise dispose of, directly or indirectly, any shares of Common Stock or securities convertible into or exchangeable for Common Stock or warrants or other rights to purchase Common Stock (including, without limitation, Common Stock of the Company which may be deemed to be beneficially owned by the undersigned in accordance with the Rules and Regulations) during the 180 days following the date of the final Prospectus, other than (i) by operation of law, (ii) as a bona fide gift or gifts, provided the donee or donees thereof agree in writing to be bound by this restriction or (iii) as a distribution to partners or stockholders of such person provided that the distributees thereof agree in writing to be bound by the terms of this restriction.

All opinions, certificates, letters and other documents will be in compliance with the provisions hereunder only if they are satisfactory in form and substance to the Representatives. The Company will furnish to the Representatives conformed copies of such opinions, certificates, letters and other documents as the Representatives shall reasonably request. If any of the conditions hereinabove provided for in this Section shall not have been

satisfied when and as required by this Agreement, this Agreement may be terminated by the Representatives by notifying the Company of such termination in writing or by telegram at or prior to the Closing Dates, but Cowen shall be entitled to waive any of such conditions.

9. Effective Date. This Agreement shall become effective immediately as to Sections 5, 6, 7, 9, 10, 11, 13, 14, 15, 16 and 17 and, as to all other provisions, at 11:00 a.m. New York City time on the first full business day following the effectiveness of the Registration Statement or at such earlier time after the Registration Statement becomes effective as the Representatives may determine on and by notice to the Company or by release of any of the Stock for sale to the public. For the purposes of this Section 9, the Stock shall be deemed to have been so released upon the release for publication of any newspaper advertisement relating to the Stock or upon the release by you of telegrams (i) advising Underwriters that the shares of Stock are released for public offering or (ii) offering the Stock for sale to securities dealers, whichever may occur first.

10. Termination. This Agreement (except for the provisions of Section 5) may be terminated by the Company at any time before it becomes effective in accordance with Section 9 by notice to the Representatives and may be terminated by the Representatives at any time before it becomes effective in accordance with Section 9 by notice to the Company. In the event of any termination of this Agreement under this or any other provision of this Agreement, there shall be no liability of any party to this Agreement to any other party, other than as provided in Sections 5, 6 and 11 and other than as provided in Section 12 as to the liability of defaulting Underwriters.

This Agreement may be terminated after it becomes effective by the Representatives by notice to the Company if (i) at or prior to the First Closing Date (or the Option Closing Date) trading in securities on any of the New York Stock Exchange, the American Stock Exchange, the NASDAQ, the Chicago Board of Options Exchange, the Chicago Mercantile Exchange or the Chicago Board of Trade shall have been suspended or minimum or maximum prices shall have been established on any such exchange or market, or a banking moratorium shall have been declared by New York or United States authorities; (ii) trading of any securities of the Company shall have been suspended on any exchange or in any over-the-counter market; (iii) at or prior to the First Closing Date or the Option Closing Date there shall have been (A) an outbreak or escalation of hostilities between the United States and any foreign power or of any other insurrection or armed conflict involving the United States or (B) any change in financial markets or any calamity or crisis which, in the judgment of the Representatives, makes it impractical or inadvisable to offer or sell the Firm Stock or Optional Stock, as applicable, on the terms contemplated by the Prospectus; (iv) there shall have been any development or prospective development involving particularly the business or properties or securities of the Company or the transactions contemplated by this Agreement, which, in the judgment of the Representatives, makes it impracticable or inadvisable to offer or deliver the Firm Stock or the Optional Stock, as applicable on the terms contemplated by the Prospectus; (v) there shall be any litigation or proceeding, pending or threatened, which, in the judgment of the Representatives, makes it impracticable or inadvisable to offer or deliver the Firm Stock or Optional Stock, as applicable, on the terms contemplated by the Prospectus; or (vi) there shall have occurred any other event that makes it, in the judgment of the Representatives, impractical

or inadvisable to offer or deliver the Firm Stock or Optional Stock, as applicable on the terms contemplated by the Prospectus.

11. Reimbursement of Underwriters. Notwithstanding any other provisions hereof, if this Agreement shall not become effective by reason of any election of the Company pursuant to the first paragraph of Section 10 or shall be terminated by the Representatives under Section 8 or Section 10, the Company will bear and pay the expenses specified in Section 5 hereof and, in addition to its obligations pursuant to Section 6 hereof, the Company will reimburse the reasonable out-of-pocket expenses of the several Underwriters (including reasonable fees and disbursements of counsel for the Underwriters) incurred in connection with this Agreement and the proposed purchase of the Stock, and promptly upon demand the Company will pay such amounts to you as Representatives.

12. Substitution of Underwriters. If any Underwriter or Underwriters shall default in its or their obligations to purchase shares of Stock hereunder and the aggregate number of shares which such defaulting Underwriter or Underwriters agreed but failed to purchase does not exceed ten percent (10%) of the total number of shares underwritten, the other Underwriters shall be obligated severally, in proportion to their respective commitments hereunder, to purchase the shares which such defaulting Underwriter or Underwriters agreed but failed to purchase. If any Underwriter or Underwriters shall so default and the aggregate number of shares with respect to which such default or defaults occur is more than ten percent (10%) of the total number of shares underwritten and arrangements satisfactory to the Representatives and the Company for the purchase of such shares by other persons are not made within forty-eight (48) hours after such default, this Agreement shall terminate.

If the remaining Underwriters or substituted Underwriters are required hereby or agree to take up all or part of the shares of Stock of a defaulting Underwriter or Underwriters as provided in this Section 12, (i) the Company shall have the right to postpone the Closing Dates for a period of not more than five (5) full business days in order that the Company may effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees promptly to file any amendments to the Registration Statement or supplements to the Prospectus which may thereby be made necessary, and (ii) the respective numbers of shares to be purchased by the remaining Underwriters or substituted Underwriters shall be taken as the basis of their underwriting obligation for all purposes of this Agreement. Nothing herein contained shall relieve any defaulting Underwriter of its liability to the Company or the other Underwriters for damages occasioned by its default hereunder. Any termination of this Agreement pursuant to this Section 12 shall be without liability on the part of any non-defaulting Underwriter or the Company, except for expenses to be paid or reimbursed pursuant to Section 5 and except for the provisions of Section 6.

13. Notices. All communications hereunder shall be in writing and, if sent to the Underwriters shall be mailed, delivered or telegraphed and confirmed to you, as their Representatives c/o Cowen & Company at Financial Square, New York, New York 10005 except that notices given to an Underwriter pursuant to Section 6 hereof shall be sent to such Underwriter at the address furnished by the Representatives or, if sent to the Company, shall be mailed, delivered or telegraphed and confirmed c/o Douglas Armstrong.

14. Successors. This Agreement shall inure to the benefit of and be binding upon the several Underwriters, the Company and their respective successors and legal representatives. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person other than the persons mentioned in the preceding sentence any legal or equitable right, remedy or claim under or in respect of this Agreement, or any provisions herein contained, this Agreement and all conditions and provisions hereof being intended to be and being for the sole and exclusive benefit of such persons and for the benefit of no other person; except that the representations, warranties, covenants, agreements and indemnities of the Company contained in this Agreement shall also be for the benefit of the person or persons, if any, who control any Underwriter or Underwriters within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, and the indemnities of the several Underwriters shall also be for the benefit of each director of the Company, each of its officers who has signed the Registration Statement and the person or persons, if any, who control the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act.

15. Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

16. Authority of the Representatives. In connection with this Agreement, you will act for and on behalf of the several Underwriters, and any action taken under this Agreement by Cowen, as Representative, will be binding on all the Underwriters.

17. Partial Unenforceability. The invalidity or unenforceability of any Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Section, paragraph or provision hereof. If any Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

18. General. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof.

In this Agreement, the masculine, feminine and neuter genders and the singular and the plural include one another. The section headings in this Agreement are for the convenience of the parties only and will not affect the construction or interpretation of this Agreement. This Agreement may be amended or modified, and the observance of any term of this Agreement may be waived, only by a writing signed by the Company and the Representatives.

19. Counterparts. This Agreement may be signed in two (2) or more counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

If the foregoing correctly sets forth our understanding, please indicate your acceptance thereof in the space provided below for that purpose, whereupon this letter and your acceptance shall constitute a binding agreement between us.

Very truly yours,

AASTROM BIOSCIENCES, INC.

By:

President

Accepted and delivered in
New York, New York as of
the date first above written.

COWEN & COMPANY
J.P. MORGAN & COMPANY
Acting on their own behalf
and as Representatives of several
Underwriters referred to in the
foregoing Agreement.

By: Cowen Incorporated,
its general partner

By:

Title:

SCHEDULE A

Name	Number of Firm Shares to be Purchased	Number of Optional Shares to be Purchased
Cowen & Company.....		
J.P. Morgan & Company.....		
Total.....	3,250,000	487,500

SCHEDULE B

V. Albee
R.D. Armstrong
J. Arnett
A. Ausmus
Brentwood Associates V, L.P.
D. Brott
S. Brown
S. Boff
S. Burhop
J. Caldwell
Candice E. Appleton Family Trust
J. Caudill
M. Clarke
COBE Laboratories
T. Deaver
A. Deisseroth
J. Douville
N. Eades
T. Eisfeld
S. Emerson
Enterprise Development Fund II, L.P.
Enterprise Development Fund, L.P.
R. Fish
GC&H Partners
S. Giudici
K. Goltry
L. Gonzalez
G. Gorgas
A. Grims
H&Q Life Science Technology
H&Q London Ventures
B. Hampson
W. Hassel
M. Heidmous
J. Herbst
R. Herman
M. Hillman
G. Huang
S. Jankins
S. Jarose
T. Jensen
C. Jordan
J. Karaisz
R. Kelch
M. Koller
M. Laforest
D. Larson
E. Letourneau
M.D. Anderson Cancer Center
B. Lundell
R. Maher
J. Maluta
I. Manchel
R. Mandalam
T. Muller
E. Mussi
S. Neering
B. Newsom
Northwest Ohio Venture Fund, L.P.
W. Ogier
M. Orrico
M. Oxender
B. Palsson
M. Palsson
C. Parrish
L. Paul
P. Powell
D. Richardson
W. Robertson-Woerner
F. Rogers
R. Rossi
S. Rummel
SBIC Partners, L.P.
T. Schultz
R. Schwartz
S. Scott
T. Simpson
A. Smith
D. Smith
M. Staebler
E. Stawiarski
H. Stern
C. Stern
A. Tasich
E. Thomas
Treasurer of State of Michigan
S. Tucker
University of Michigan
G. Van Zant
C. Vento
N. Venturi
S. Weber
Rhone-Poulenc Rorer, Inc.
J. Williams
Wind Point II, L.P.
S. Winkler
H. Witzel
K. Zawaski

EXHIBIT I
OPINION OF GRAY CARY WARE & FREIDENRICH

(a) The Company is duly qualified to do business as a foreign corporation and is in good standing in each jurisdiction in which the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified or be in good standing would not have a material adverse effect on the condition (financial or otherwise), earnings, operations or business of the Company and its subsidiaries considered as one enterprise. To such counsel's knowledge, the Company does not own or control, directly or indirectly, any corporation, association or other entity;

(b) To such counsel's knowledge, the Firm Stock or the Optional Stock, as the case may be, to be issued by the Company pursuant to the terms of this Agreement will not have been issued in violation of or subject to any co-sale right, registration right, right of first refusal or other similar right.

(c) The license agreement between the Company and Joseph G. Cremonese dated July [__], 1992 and relating to [Patent nos. __] is a valid and binding agreement of the Company, enforceable in accordance with its terms; and to such counsel's knowledge, the Company is not in material breach or violation of any of the terms or provisions of such agreement, and no default exists under such agreement;

(d) The license agreement between the Company and the University of Michigan dated March 13, 1992, as amended, and relating to U.S. Patent No. 4,839,292 is a valid and binding agreement of the Company, enforceable in accordance with its terms; and to such counsel's knowledge, the Company is not in material breach or violation of any of the terms or provisions of such agreement and no default exists under such agreement;

(e) This Agreement, assuming due authorization, execution and delivery by the Company and you, is a valid and binding agreement of the Company, enforceable in accordance with its terms, except insofar as indemnification and contribution provisions may be limited by applicable law and except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting creditors' rights generally or by general equitable principles;

(f) The Registration Statement has become effective under the Act and, to such counsel's knowledge, no stop order suspending the effectiveness of the Registration Statement has been issued and no proceedings for that purpose have been instituted or are pending or threatened under the Act;

(g) The Registration Statement and the Prospectus, and each amendment or supplement thereto (other than the financial statements (including supporting schedules) and financial data derived therefrom as to which such counsel need express no

opinion), as of the effective date of the Registration Statement, complied as to form in all material respects with the requirements of the Act and the applicable Rules and Regulations;

(h) The description in the Registration Statement and the Prospectus of statutes other than Michigan Law are accurate and fairly present the information required to be presented by the Act and the applicable Rules and Regulations;

(i) To such counsel's knowledge, there are no agreements, contracts, leases or documents to which the Company is a party of a character required to be described or referred to in the Registration Statement or Prospectus or to be filed as an exhibit to the Registration Statement which are not described or referred to therein or filed as required;

(j) The performance of this Agreement and the consummation of the transactions herein contemplated (other than performance of the Company's indemnification and contribution obligations hereunder, concerning which no opinion need be expressed) will not, to such counsel's knowledge, result in a material breach or violation of any of the terms and provisions of, or constitute a default under, any bond, debenture, note or other evidence of indebtedness, or any lease, contract, indenture, mortgage, deed of trust, loan agreement, joint venture or other agreement or instrument known to such counsel to which the Company is a party or by which its properties are bound, or any applicable statute, rule or regulation known to such counsel or, to such counsel's knowledge, any order, writ or decree of any court, government or governmental agency or body having jurisdiction over the Company or over any of its properties or operations;

(k) No consent, approval, authorization or order of or qualification with any court, government or governmental agency or body having jurisdiction over the Company, or over any of its properties or operations is necessary in connection with the consummation by the Company of the transactions herein contemplated, except such as have been obtained under the Act or such as may be required under state or other securities or Blue Sky laws in connection with the purchase and the distribution of the Stock by the Underwriters;

(l) To such counsel's knowledge, there are no legal or governmental proceedings pending or threatened against the Company of a character required to be disclosed in the Registration Statement or the Prospectus by the Act or the Rules and Regulations, other than those described therein;

(m) To such counsel's knowledge, the Company is not presently (a) in material violation of its charter or bylaws, or (b) in material breach of any applicable statute, rule or regulation known to such counsel or, to such counsel's knowledge, any order, writ or decree of any court or governmental agency or body having jurisdiction over the Company or over any of its properties or operations; and

(n) To such counsel's knowledge, except as set forth in the Registration Statement and Prospectus, no holders of Common Stock or other securities of the Company have registration rights with respect to securities of the Company and, except as set forth in the Registration Statement and Prospectus, all holders of securities of the Company having rights known to such counsel to registration of such shares of Common Stock or other securities as part

of the offering contemplated by the Registration Statement have, with respect to the offering contemplated thereby, waived such rights or such rights have expired by reason of lapse of time following notification of the Company's intent to file the Registration Statement.

In addition, such counsel shall state that such counsel has participated in conferences with officials and other representatives of the Company, the Representatives, Underwriters' Counsel and the independent certified public accountants of the Company, at which such conferences the contents of the Registration Statement and Prospectus and related matters were discussed, and although they have not independently checked or verified the accuracy or completeness of the statements contained in the Registration Statement or the Prospectus, nothing has come to the attention of such counsel which leads them to believe that, (i) at the time the Registration Statement became effective, the Registration Statement and any amendment or supplement thereto (other than the financial statements including supporting schedules and other financial and statistical information derived therefrom, as to which such counsel need express no comment) contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, or (ii) at the Closing Date or any later date on which the Optional Stock are to be purchased, as the case may be, the Prospectus and any amendment or supplement thereto (except as aforesaid) contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. Such counsel may state that they do not assume any responsibility for the accuracy, completeness or fairness of the statements contained in the Registration Statement or Prospectus.

Counsel rendering the foregoing opinion may rely as to questions of fact upon representations or certificates of officers of the Company and of government officials, in which case their opinion is to state that they are so relying and that they have no knowledge of any material misstatement or inaccuracy in any such opinion, representation or certificate. Copies of any opinion, representation or certificate so relied upon shall be delivered to you, as Representatives of the Underwriters, and to Underwriters' Counsel.

EXHIBIT II
OPINION OF PEPPER, HAMILTON & SCHEETZ

(a) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the state of Michigan;

(b) The Company has the corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Prospectus;

(c) The Company is duly qualified to do business as a foreign corporation and is in good standing in each jurisdiction in which the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified or be in good standing would not have a material adverse effect on the condition (financial or otherwise), earnings, operations or business of the Company and its subsidiaries considered as one enterprise. To such counsel's knowledge, the Company does not own or control, directly or indirectly, any corporation, association or other entity;

(d) The Firm Stock or the Optional Stock, as the case may be, to be issued by the Company pursuant to the terms of this Agreement have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms hereof, will be duly and validly issued and fully paid and nonassessable, and will not have been issued in violation of or subject to any preemptive right, co-sale right, registration right, right of first refusal or other similar right.

(e) The Company has the corporate power and authority to enter into this Agreement and to issue, sell and deliver to the Underwriters the Stock to be issued and sold by it hereunder;

(f) The authorized, issued and outstanding capital stock of the Company is as set forth in the Prospectus under the caption "Capitalization" as of the dates stated therein, the issued and outstanding shares of capital stock of the Company have been duly and validly issued and are fully paid and nonassessable, and, to such counsel's knowledge, will not have been issued in violation of or subject to any preemptive right, co-sale right, registration right, right of first refusal or other similar right;

(g) This Agreement has been duly authorized by all necessary corporate action on the part of the Company and has been duly executed and delivered by the Company and, assuming due authorization, execution and delivery by you, is a valid and binding agreement of the Company, enforceable in accordance with its terms, except insofar as indemnification provisions may be limited by applicable law and except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting creditors' rights generally or by general equitable principles;

[(h) The license agreement between the Company and Joseph G. Cremonese dated July [__], 1992 and relating to [Patent nos. __] is a valid and binding agreement of the Company, enforceable in accordance with its terms; and to such counsel's

knowledge, the Company is not in material breach or violation of any of the terms or provisions of such agreement, and no default exists under such agreement;]

[(i) The license agreement between the Company and the University of Michigan dated March 13, 1992, as amended, and relating to U.S. Patent No. 4,839,292 is a valid and binding agreement of the Company, enforceable in accordance with its terms; and to such counsel's knowledge, the Company is not in material breach or violation of any of the terms or provisions of such agreement and no default exists under such agreement;]

(j) The information in the Prospectus under the caption "Description of Capital Stock," to the extent that it constitutes matters of law or legal conclusions, has been reviewed by such counsel and is a fair summary of such matters and conclusions; and the forms of certificates evidencing the Common Stock and filed as exhibits to the Registration Statement comply with Michigan law;

(k) The description in the Registration Statement and the Prospectus of the charter and bylaws of the Company and of statutes are accurate and fairly present the information required to be presented by the Act and the applicable Rules and Regulations;

[(l) To such counsel's knowledge, there are no agreements, contracts, leases or documents to which the Company is a party of a character required to be described or referred to in the Registration Statement or Prospectus or to be filed as an exhibit to the Registration Statement which are not described or referred to therein or filed as required;]

(m) The performance of this Agreement and the consummation of the transactions herein contemplated (other than performance of the Company's indemnification obligations hereunder, concerning which no opinion need be expressed) will not (a) result in any violation of the Company's charter or bylaws or (b) to such counsel's knowledge, result in a material breach or violation of any of the terms and provisions of, or constitute a default under, any bond, debenture, note or other evidence of indebtedness, or any lease, contract, indenture, mortgage, deed of trust, loan agreement, joint venture or other agreement or instrument known to such counsel to which the Company is a party or by which its properties are bound, or any applicable statute, rule or regulation known to such counsel or, to such counsel's knowledge, any order, writ or decree of any court, government or governmental agency or body having jurisdiction over the Company or over any of its properties or operations;

(n) No consent, approval, authorization or order of or qualification with any court, government or governmental agency or body having jurisdiction over the Company, or over any of its properties or operations is necessary in connection with the consummation by the Company of the transactions herein contemplated, except such as have been obtained under the Act or such as may be required under state or other securities or Blue Sky laws in connection with the purchase and the distribution of the Stock by the Underwriters;

(o) To such counsel's knowledge, there are no legal or governmental proceedings pending or threatened against the Company of a character required to be disclosed in the Registration Statement or the Prospectus by the Act or the Rules and Regulations, other than those described therein;

(p) To such counsel's knowledge, the Company is not presently (a) in material violation of its charter or bylaws, or (b) in material breach of any applicable statute, rule or regulation known to such counsel or, to such counsel's knowledge, any order, writ or decree of any court or governmental agency or body having jurisdiction over the Company or over any of its properties or operations; and

(q) To such counsel's knowledge, except as set forth in the Registration Statement and Prospectus, no holders of Common Stock or other securities of the Company have registration rights with respect to securities of the Company and, except as set forth in the Registration Statement and Prospectus, all holders of securities of the Company having rights known to such counsel to registration of such shares of Common Stock or other securities, because of the filing of the Registration Statement by the Company have, with respect to the offering contemplated thereby, waived such rights or such rights have expired by reason of lapse of time following notification of the Company's intent to file the Registration Statement or have included securities in the Registration Statement pursuant to the exercise of and in full satisfaction of such rights.

In addition, such counsel shall state that although they have not verified the accuracy or completeness of the statements contained in the Registration Statement or the Prospectus, nothing has come to the attention of such counsel which leads them to believe that, at the time the Registration Statement became effective and at all times subsequent thereto up to and on the Closing Date and on any later date on which Optional Stock are to be purchased, the Registration Statement and any amendment or supplement thereto (other than the financial statements including supporting schedules and other financial and statistical information derived therefrom, as to which such counsel need express no comment) contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, or at the Closing Date or any later date on which the Optional Stock are to be purchased, as the case may be, the Registration Statement, the Prospectus and any amendment or supplement thereto (except as aforesaid) contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

Counsel rendering the foregoing opinion may rely as to questions of law not involving the laws of the United States or the State of Michigan upon opinions of local counsel, and as to questions of fact upon representations or certificates of officers of the Company and of government officials, in which case their opinion is to state that they are so relying and that they have no knowledge of any material misstatement or inaccuracy in any such opinion, representation or certificate. Copies of any opinion, representation or certificate so relied upon shall be delivered to you, as Representatives of the Underwriters, and to Underwriters' Counsel.

EXHIBIT III
OPINION OF OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.

EXHIBIT IV
OPINION OF PRETTY, SCHROEDER, BRUEGGEMANN & CLARK, P.C.

EXHIBIT V
OPINION OF CAMPBELL & FLORES

EXHIBIT VI
OPINION OF HYMAN, PHELPS & MCNAMARA

a. The statements in the Registration Statement and Prospectus under the captions "Risk Factors -- Uncertainty of Regulatory Approval; Extensive Government Regulation" and "Business -- Government Regulation," insofar as such statements purport to summarize applicable provisions of the United Stated food and drug laws (the "Food and Drug Laws"), have been reviewed by such counsel and are accurate as to, and fairly describe, the regulatory status of the Company under the Food and Drug Laws; and to such counsel's knowledge, there are no presently existing Food and Drug Laws applicable to the Company and/or the Company's products that are required to be described or referred to in the Registration Statement and Prospectus that are not so described or referred to therein.

b. To such counsel's knowledge, the Company is currently conducting its business in material compliance with all applicable provisions of the Food and Drug Laws.

c. There are no judicial or administrative proceedings pending or, to such counsel's knowledge, threatened against the Company that may cause any regulatory permit that is material to the business of the Company, to be revoked, withdrawn, cancelled, suspended or not renewed.

In rendering the foregoing opinions, such counsel may state that they have not independently verified nor do they take any responsibility for nor are they addressing in any way any statements of fact or statements of belief attributable to the Company.

In addition to the foregoing opinions, counsel shall state that:

During the course of preparation of the Registration Statement, such counsel participated in certain discussions with officers of the Company as to the regulatory matters dealt with under the captions "Risk Factors -- Uncertainty of Regulatory Approval; Extensive Government Regulation" and "Business -- Government Regulation" in the Prospectus. While such counsel has not undertaken to determine independently and such counsel does not assume any responsibility for, the accuracy, completeness or fairness of the statements under such captions in the Prospectus, such counsel shall state on the basis of these discussions that no facts have come to their attention which cause them to believe that the statements in the Prospectus under the captions "Risk Factors -- - Uncertainty of Regulatory Approval; Extensive Government Regulation" and "Business -- Government Regulation," insofar as such statements relate to regulatory matters, at the time the Registration Statement became effective, or at the Closing Date or at any later date on which Optional Stock are purchased, as the case may be, the Prospectus contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, or as of the date hereof contains an untrue statement of a material fact or omits to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

EXHIBIT 10.11

LICENSE AGREEMENT

by and between

AASTROM BIOSCIENCES, INC.,
a Michigan corporation

and

JOSEPH G. CREMONESE

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LICENSE AGREEMENT

This License Agreement is entered into and made effective as of July 17, 1992, by and between AASTROM BIOSCIENCES, INC., a Michigan corporation ("Licensee") whose address is Post Office Box 376, Ann Arbor, Michigan 48106, and JOSEPH G. CREMONESE, an individual ("Licensor") whose address is 227 Maple Drive, Greensburg, Pennsylvania 15601, with respect to the facts set forth below.

RECITALS

A. Licensee is engaged in development of cell culture technology, including products which are automated culture systems or bioreactors.

B. Licensor has disclosed to Licensee certain technology described in Patent '292 (defined below), a copy of which has been delivered to Licensee.

C. Licensor has the exclusive right to grant a license to the technology described in Patent '292 and the Licensed Patents and Licensed Technology (defined below).

D. Licensor desires to grant to Licensee, and Licensee wishes to acquire, an exclusive worldwide right and license to the technology described in Recital C, subject to the terms and conditions set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein, Licensor and Licensee hereby agree as follows:

1. Definitions. Capitalized terms shall have the meaning set forth below.

Affiliate. The term "Affiliate" shall mean any entity which directly or indirectly controls, is controlled by or is under common control with Licensee. The term "control" as used herein means the possession of the power to direct or cause the direction of the management and the policies of an entity, whether through the ownership of a majority of the outstanding voting securities or by contract or otherwise.

Combination Product. The term "Combination Product" shall have the meaning as defined in Section 2.4.1 below.

Component Product. The term "Component Product" shall have the meaning as defined in Section 2.5.1 below.

Confidential Information. The term "Confidential Information" shall mean any and all proprietary or confidential information of Licensor or Licensee which may be exchanged between the parties at any time and from time to time during the term of this Agreement. Information shall not be considered confidential to the extent that it:

a. Is publicly disclosed through no fault of any party hereto, either before or after it becomes known to the receiving party; or

b. Was known to the receiving party prior to the date of this Agreement, which knowledge was acquired independently and not from the other party hereto (or such party's employees or agents); or

c. Is subsequently disclosed to the receiving party in good faith by a third party who has a right to make such disclosure; or

d. Has been published by a third party as a matter of right.

Licensed Patents. The term "Licensed Patents" shall mean Patent '292, plus all patents issued based on divisionals, continuations, continuations-in-part, reissues, re-examinations and extensions of Patent '292, together with all corresponding foreign patents, and together with all related pending patent applications and inventor's certificates, and together with all patents and patent applications covering improvements to the inventions described in the foregoing. Without limiting the generality of the foregoing, Licensed Patents shall include U.S. Patent No. 4,839,292; Canadian Patent Application Serial No. 577,082, filed September 7, 1988; European Patent Application Serial No. 88,201,922.7, filed September 6, 1988, designating the following countries: Austria, Belgium, France, Greece, Italy, Luxembourg, Netherlands, Spain, Sweden, Switzerland, Liechtenstein, United Kingdom, and West Germany; and a new patent application which is being prepared and is entitled "Cell Growth and Perfusion Bag".

Licensed Product. The term "Licensed Product" shall mean any product or process which cannot be developed, manufactured, used or sold without infringing on the valid claims of the Licensed Patents.

Licensed Technology. The term "Licensed Technology" shall mean the Licensed Patents, plus all improvements thereto developed by Licensor, and all related data, know-how and technology.

Net Sales. The term "Net Sales" shall mean the gross amount received by Licensee, or its Affiliates and sublicensees, or any of them, on sales of Licensed Products, net of (i) discounts actually given, (ii) credits for claims, allowances, retroactive price reductions or returned goods, (iii) prepaid freight (iv) sales taxes or other governmental charges paid in connection with sales of Licensed Products (but excluding what is commonly known as income taxes), and (v) the patent protection expenses described in the last sentence of this paragraph. For purposes of determining Net Sales, a sale shall be deemed to have occurred when a Licensed Product is shipped for delivery and paid for. Sales of Licensed Products by Licensee or its Affiliates or a sublicensee thereof to any Affiliate or sublicensee which is a reseller thereof shall be excluded, and only the subsequent sales of such Licensed Products by Affiliates or sublicensees to unrelated parties shall be deemed Net Sales hereunder. In the event that a Licensed Product is a Combination Product, then the Net Sales from said Licensed Product/Combination Product shall be determined in accordance with the formula set forth in Section 2.4 below. In the event that a Licensed Product is a Component Product, then the Net Sales from said Licensed Product/Component Product shall be determined in accordance with the formula set forth in Section 2.5 below. To the extent Licensee incurs any expenses (such as attorneys' fees or settlement payments, as examples) to protect the Licensed Patents against claims of invalidity, or to enforce the Licensed Patents against infringers, or to defend against claims that the Licensed Products infringe the patents of third parties, then said expenses shall be a deduction against the gross amounts for calculating Net Sales.

Patent '292. The term "Patent '292" shall mean U.S. Patent No. 4,839,292 entitled "Cell Culture Flask Utilizing a Membrane Barrier," issued to Licensor on June 13, 1989.

PTO. The term "PTO" shall mean the United States Patent and Trademark Office.

2. License Terms and Conditions.

2.1 Grant of License. Licensor hereby grants to Licensee an exclusive, worldwide license to use, make, have made and sell all products and/or processes utilizing the Licensed Technology, with the full right to grant sublicenses, subject to the terms of this Agreement.

2.2 Reimbursement of Patent Costs. As a part of the consideration for the exclusive license granted pursuant to Section 2.1 hereof, Licensee shall reimburse Licensor for Licensor's out-of-pocket costs incurred for patent attorney fees and patent application filing fees in connection with the Licensed Patents, up to an aggregate maximum of $25,000. Such reimbursement shall be subject to Licensor's presentation of appropriate documentation of Licensor's payment of such expenses.

No payment shall be payable by Licensee hereunder unless and until the issue of the validity of the claims as now stated in the Licensed Patents as described in Section 3.1 hereof is resolved favorably to Licensor's reasonable satisfaction, or, upon the expiration of one (1) year after the date of this Agreement if no request for re-examination of the Licensed Patents is made within such period. All payments made by Licensee to Licensor pursuant to this Section 2.2 shall be credited against Licensee's obligation to pay royalties as set forth in Section 2.3 hereof.

2.3 Royalties.

2.3.1 Percentage Royalty. As additional consideration for the exclusive license granted pursuant to Section 2.1 hereof, Licensee shall pay to Licensor a continuing royalty on a country-by-country basis in the amount of (i) three percent (3%) of Net Sales of Licensed Products made, used or sold in any country where the Licensed Technology utilized therein is protected by a valid patent.

2.3.2 Credits Against Royalties. Licensee shall be entitled to a credit against royalties payable hereunder in an amount equal to the payments made by Licensee under Sections 2.2 and 3.4 hereof.

2.3.3 Minimum Annual Royalty. From and after January 1, 1997, Licensee shall pay to Licensor minimum annual royalties as set forth herein. The minimum annual royalty for the calendar year 1997 shall be $20,000. For the three years thereafter, the minimum annual royalty for each subsequent calendar year shall increase by $10,000, such that for all years after and including the calendar year 2000, the minimum annual royalty shall be $50,000. Any percentage royalties accrued and paid to Licensor (but not taken as a credit pursuant to Section 2.3.2 hereof) for any calendar year shall be credited against the minimum royalty payable for such calendar year. The payment of any shortfall between actual royalties paid and the minimum annual royalty applicable to such calendar year shall be payable to Licensor within sixty (60) days after the last day of such calendar year. Licensor's sole remedy for any failure by Licensee to pay the minimum annual royalty required hereunder shall be to convert the exclusive license granted hereunder to a nonexclusive license upon the expiration of sixty (60) days' written notice of Licensor's intention to so convert the license, without Licensee's payment of any delinquent minimum annual royalty. Such conversion would not relieve Licensee from payment of royalties as described in Section 2.3.1.

2.3.4 Most Favored Licensee. If this license becomes non-exclusive and if Licensor grants a license to use the Licensed Patents to any third party at a royalty rate lower than three percent (3%), then the royalty rate payable by

Licensee under this Agreement shall be reduced to the same rate payable by the third party.

2.4 Combination Product.

2.4.1 Definition of Combination Product. As used herein, the term "Combination Product" shall mean a Licensed Product which cannot be manufactured, used or sold without (i) infringing the Licensed Patents, and also (ii) infringing one or more patents held by Licensee or a third party (referred to herein as "other patent rights").

2.4.2 Net Sales of Combination Product. The Net Sales of a Combination Product shall be determined in accordance with the following formula:

$$X = \frac{A}{B} \times C$$, where

X = the Net Sales attributable to the portion of the Combination Product which is attributable to the Licensed Patents, on which Net Sales Licensee shall pay the royalty rate set forth in Section 2.3.1; and

A = the value of the contribution of the Licensed Patents (as compared to the value of the contributions of the rights) used in the Combination Product; and

B = The aggregate value of all patent rights used for the Combination Product, consisting of both the Licensed Patents and all other patent rights used in the Combination Product; and

C = the Net Sales for the Combination Product.

The values described above shall be determined by the parties hereto in good faith. In the absence of agreement as to said values, the values shall be determined by arbitration in accordance with the provisions of Section 10.2 hereof.

2.5 Component Product.

2.5.1 Definition of Component Product. As used herein, the term "Component Product" shall mean a Licensed Product which is a distinct component of a product which contains multiple components (including, as an example of additional components, proprietary methods sold or licensed with the Component Product).

2.5.2 Net Sales of Component Product. The Net Sales of a Component Product shall be determined in accordance with the following formula:

$$X = \frac{A}{B} \times C$$, where

X = the Net Sales attributable to the Component Product, on which Licensee is obligated to pay the royalty rate set forth in Section 2.3.1; and

A = the value of the Component Product, based upon costs to manufacture the Component Product, or the sales price of the Component Product if it is sold separately; and

B = The value of the aggregate product, with all components (including methods sold or licensed with the Component Product), including the Component Product, based upon the same criteria as used for A above; and

C = the Net Sales for the aggregate product.

The values described above shall be determined by the parties in good faith. In the absence of agreement as to said values, the values shall be determined by arbitration in accordance with the provisions of Section 10.2 hereof.

2.6 Quarterly Payments.

2.6.1 Sales by Licensee. With regard to Net Sales made by Licensee or its Affiliates, royalties shall be payable by Licensee quarterly, within ninety (90) days after the end of each calendar quarter, based upon Net Sales of Licensed Products during such preceding calendar quarter, commencing with the calendar quarter in which the first commercial sale of any Licensed Product is made.

2.6.2 Sales by Sublicensees. With regard to Net Sales made by sublicensees of Licensee or its Affiliates, royalties shall be payable by Licensee quarterly, within one hundred twenty (120) days after the end of each calendar quarter, based upon the Net Sales of Licensed Products by such sublicensee during such preceding calendar quarter, commencing with the calendar quarter in which the first commercial sale of any Licensed Product is made by such sublicensee.

2.7 Term. The term of this Agreement and the license granted hereunder shall commence on the date set forth in the preamble paragraph of this Agreement, and unless sooner

terminated by Licensee upon delivery of thirty (30) days' written notice or in accordance with the provisions of Section 8.1 hereof, the term of this Agreement and the license granted hereunder shall expire when the last patent licensed hereunder has expired.

2.8 Sublicense Rights. Licensee shall have the sole and exclusive right to grant sublicenses to any party with respect to the rights conferred upon Licensee under this Agreement, provided, however, that any such sublicense shall be subject in all respects to all of the provisions contained in this Agreement (but not including the payment of patent costs pursuant to Sections 2.2 and 3.4 hereof and the obligation to pay minimum annual royalties pursuant to Section 2.3.3 hereof). Licensee shall pay Licensor, or cause its Affiliates or sublicensees to pay Licensor, the same royalties on all Net Sales of such Affiliate or sublicensee the same as if such Net Sales had been made by Licensee. Each Affiliate and sublicensee shall report its Net Sales to Licensor through Licensee, which Net Sales shall be aggregated with any Net Sales of Licensee for purposes of determining the Net Sales upon which royalties are to be paid to Licensor. Any royalties paid to Licensor with respect to Net Sales of any Affiliate or any sublicensee of Licensee or any Affiliate shall be credited against Licensee's minimum annual royalty obligations hereunder.

2.9 Duration of Royalty Obligations. The royalty obligations of Licensee as to each Licensed Product shall terminate on a country-by-country basis concurrently with the expiration of the last to expire of the patents licensed hereunder utilized by or in such Licensed Product in each such country. Notwithstanding any other provision of this Agreement, in the event that, based upon a challenge by a party other than Licensee, its Affiliates or sublicensees, the existing favorable claims of the Licensed Patents are held to be invalid by the PTO or any competent court of law, Licensee may terminate this Agreement and Licensee thereafter shall have no further obligation to pay any royalties hereunder.

2.10 Reports. Licensee shall furnish to Licensor at the same time as each royalty payment is made by Licensee, a written report of Net Sales of Licensed Products and the royalty due and payable thereon, including a description of any offsets or credits deducted therefrom, on a product-by-product and country-by-country basis, for the calendar quarter upon which such royalty payment is based.

2.11 Records. Licensee shall keep, and cause its Affiliates and sublicensees to keep, complete records and accounts of all sales of Licensed Products in sufficient detail to enable the royalties payable on Net Sales of each Licensed Product to be determined. Licensor shall have the right to appoint an independent certified public accounting firm approved by Licensee, which approval shall not be unreasonably withheld,

to audit, upon delivery of advance written notice and during normal business hours without interruption of normal business operations, the records of Licensee, its Affiliates and sublicensees as necessary to verify the royalties payable pursuant to this Agreement. Licensee, its Affiliates and sublicensees shall pay to Licensor an amount equal to any additional royalties to which Licensor is entitled as disclosed by the audit. Such audit shall be at Licensor's expense. Licensor may exercise its right of audit hereunder no more frequently than once in any calendar year. The accounting firm shall disclose to Licensor only such information as is necessary to verify the accuracy of the royalty payments required hereunder, and all such information shall be treated as Confidential Information by Licensor. Licensee, its Affiliates and sublicensees shall preserve and maintain all records required for audit for a period of three (3) years after the calendar quarter to which the record applies.

2.12 Foreign Taxes. Any tax required to be withheld by Licensee under the laws of any foreign country for the account of Licensor shall be paid by Licensee for and on behalf of Licensor to the appropriate governmental authority and deducted from any royalties payable by Licensee hereunder.

3. Patent Matters.

3.1 Validity of Licensed Patents. The parties hereto acknowledge that there may be an issue concerning the validity of some of the claims of the existing Licensed Patents. In order to resolve such issue, Licensee may, in the exercise of its sole discretion and at its sole expense, request a re-examination of the existing Licensed Patents by the PTO and the applicable foreign agencies. Each of the parties hereto shall exercise good faith and due diligence in their efforts to establish the validity of the existing Licensed Patents.

3.2 Patent Prosecution and Maintenance. From and after the date of this Agreement, the provisions of this Section 3.2 shall control the prosecution and maintenance of the Licensed Patents. Licensee shall direct and control (i) the maintenance of Patent '292 and the re-examination of Patent '292 described in Section 3.1 hereof; (ii) the preparation, filing and prosecution of all other domestic and foreign patent applications relating to Licensed Technology (including any interferences and foreign oppositions); and (iii) the maintenance of any patents issuing therefrom. Licensee shall select the patent attorney, and the fees and expenses incurred by Licensee with respect to services performed by such patent counsel and any filing or other fees shall be paid as set forth below in Section 3.4. Licensor shall assist Licensee and patent counsel retained by Licensee as necessary to accomplish the patent processes described hereunder. Licensor shall sign all documents which are reasonably necessary to enable Licensee to prosecute and maintain all patent matters. Licensee shall use good faith and due diligence in determining

which foreign countries, in addition to the U.S.A., in which to file for and maintain patent rights, depending on the commercial benefits Licensee can reasonably anticipate in each country. In as much as Licensee is paying the patent costs, the ultimate decision as to all of these patent prosecution and maintenance matters shall be made by Licensee.

3.3 Information to Licensor. Licensee shall keep Licensor informed with regard to the patent application, re-examination and maintenance processes. Licensee shall deliver to Licensor copies of all patent applications, amendments, related correspondence, and other related matters.

3.4 Patent Costs. The parties hereto agree that the exclusive license granted hereunder is in part in consideration for Licensee's assumption of patent costs and expenses as described herein. Licensee shall pay for all expenses incurred by Licensee pursuant to Sections 3.1 and 3.2 hereof, in addition to patent costs paid by Licensee as set forth in Section 2.2 hereof.

3.5 Ownership. Patent '292 and the patent applications filed and the patents obtained by Licensee pursuant to Section 3.2 hereof shall be owned solely by Licensor, and included in the exclusive license granted hereunder.

3.6 Infringement Actions.

3.6.1 Prosecution and Defense of Infringements. Licensee shall have the right but not the obligation to prosecute any and all infringements of any patent licensed hereunder and to defend all charges of infringement arising as a result of the exercise by Licensee, its Affiliates or sublicensees of the rights granted hereunder. Licensee may enter into settlements, stipulated judgments or other arrangements respecting such infringement, at its own expense. Licensor shall permit any action to be brought in his name if required by law, and Licensee shall hold Licensor harmless from any costs, expenses of liability respecting all such infringements or charges of infringement, except such infringements as shall result from any breach of warranty made by Licensor herein. Licensor agrees to provide all necessary assistance of a technical nature which Licensee may require in any litigation arising with respect to the Licensed Technology. In the event Licensee elects not to prosecute any infringement, Licensee shall notify Licensor in writing promptly and Licensor shall have the right to prosecute such infringement on his own behalf. If Licensee elects to prosecute an infringement, then Licensor shall not be entitled to do so.

3.6.2 Allocation of Recovery. Any damages or other recovery from an infringement action undertaken by Licensee pursuant to Section 3.6.1 shall be retained by Licensee as its exclusive property; but any such recovery, net of

Licensee's costs of litigation, shall be treated as "Net Sales" and Licensee shall pay a royalty thereon pursuant to Section 2.3.1 above. If Licensee elects to not prosecute an infringement, and Licensor does prosecute said infringement, then Licensee shall retain any recovery received from said prosecution.

4. Obligations Related to Commercialization.

4.1 Commercial Development Obligation. In order to maintain Licensee's exclusive license rights granted hereunder in force, Licensee shall use reasonable efforts and due diligence to develop the Licensed Technology into commercially viable Licensed Products, as promptly as is reasonably and commercially feasible, and thereafter to produce and sell reasonable quantities of Licensed Products. Licensee shall keep Licensor generally informed as to Licensee's progress in such development, production and sale, including its efforts, if any, to sublicense Licensed Technology.

4.2 Milestone. If Licensee has not, by July 1, 1998, pursued reasonable efforts and due diligence to develop the Licensed Technology into commercially viable Licensed Products, such that there is a reasonable probability of Net Sales forthcoming, then Licensor may require Licensee to pay to Licensor a one-time payment of Fifty Thousand Dollars ($50,000) as a condition to retaining the exclusivity of the license granted hereunder in force. If said payment is so required and not paid, then Licensee's rights under this Agreement shall become non-exclusive and no minimum royalties shall thereafter be payable. If Licensor concludes that Licensee has failed to pursue said reasonable efforts and due diligence, then Licensor shall give written notice of said conclusion to Licensee, and Licensee shall have three months after receipt of said notice to cure the failure. If there is a dispute as to whether there is a failure or a cure, the dispute shall be resolved by arbitration pursuant to Section 10.2 below.

4.3 Governmental Approvals and Marketing of Licensed Products. Licensee shall be responsible for obtaining all necessary governmental approvals for the development, production, distribution, sale and use of any Licensed Product, at Licensee's expense. Licensee shall have sole responsibility for any warning labels, packaging and instructions as to the use of Licensed Products and for the quality control for any Licensed Product.

4.4 Product Liability Indemnity. Licensee hereby agrees to indemnify, defend and hold harmless Licensor from and against any liability or expense arising from any product liability claim asserted by any party as to any Licensed Product made or sold by Licensee or its Affiliates and sublicensees, other than any claim which arises due to a breach by Licensor of any warranty made herein.

5. Representations and Warranties. Licensor hereby represents and warrants that (i) he is the rightful owner of the Licensed Technology, (ii) the Licensed Technology is not subject to any lien, license, assignment, security interest or other encumbrances, (iii) he has made full disclosure to Licensee of all communications with respect to the Licensed Technology with the PTO and any foreign patent agencies, (iv) he has the power and authority to enter into this Agreement and grant the license provided for hereunder, and (v) except as disclosed to Licensee, Licensor has no knowledge that the Licensed Technology infringes any patents or other intellectual property rights of third parties, or that any third party is in any way infringing the Licensed Technology covered by this Agreement.

6. Interests in Intellectual Property Rights.

6.1 Preservation of Title. Licensor shall retain full ownership and title to Licensed Technology, Patent '292 and any other patents licensed hereunder and shall use his reasonable best efforts to preserve and maintain such full ownership and title.

6.2 Ownership of Improvements.

6.2.1 Developed by Licensee. Any improvements to Licensed Technology conceived, developed or reduced to practice by Licensee, its Affiliates or sublicensees or their employees shall remain the sole and exclusive property of such party, and shall not be included in Licensed Technology hereunder.

6.2.2 Developed by Licensor. Any improvements to Licensed Technology conceived, developed or reduced to practice by Licensor during the term of this Agreement shall be included in Licensed Technology and subject to the exclusive license granted hereunder.

7. Confidentiality and Publication.

7.1 Treatment of Confidential Information. The parties agree that during the term of this Agreement, and for a period of three (3) years after this Agreement terminates, a party receiving Confidential Information of the other party will (i) maintain in confidence such Confidential Information to the same extent such party maintains its own proprietary industrial information, (ii) not disclose such Confidential Information to any third party without prior written consent of the other party and (iii) not use such Confidential Information for any purpose except those permitted by this Agreement.

7.2 Publications. In order to protect the rights granted to Licensee hereunder, Licensor shall submit to Licensee copies of proposed publications of Licensor which contain subject matter relating to intellectual property licensed hereunder and

afford Licensee sixty (60) days to review such proposed publications. Upon timely written request by Licensee, Licensor shall delay any such publication to facilitate the preparation and filing of a patent application, which delay shall not exceed ninety (90) days from the date Licensee requests such delay.

8. Termination.

8.1 Termination Upon Default. Upon the failure of a party to perform any obligation required of it or him to be performed hereunder, and the failure to cure within thirty (30) days after receipt of written notice from the other party specifying in reasonable detail the nature of such default, the non-defaulting party may deliver to the defaulting party written notice of intent to terminate, such termination to be effective upon the date set forth in such notice.

Such termination rights shall be in addition to and not in substitution for any other remedies that may be available to the non-defaulting party. Termination pursuant to this Section 8.1 shall not relieve the defaulting party from liability and damages to the other party for breach of this Agreement. Waiver by either party of a single default or a succession of defaults shall not deprive such party of any right to terminate this Agreement arising by reason of any subsequent default.

8.2 Transfer Upon Bankruptcy or Insolvency. In the event of the bankruptcy or insolvency of Licensee, this Agreement and the rights granted to Licensee hereunder may be transferred by Licensee or any trustee appointed for the estate of Licensee, provided such transferee shall agree in writing to comply with all of the terms and conditions set forth herein and to cure any financial defaults by Licensee.

8.3 Rights Upon Expiration. Neither party shall have any further rights or obligations upon the expiration of this Agreement other than the obligation of Licensee to make any and all reports and payments for the final quarter period. Provided, however, that upon such expiration, each party shall be required to continue to abide by its non-disclosure obligations as described in Section 7.1, and Licensee shall continue to abide by its obligation to indemnify Licensor as described in Section 4.4 for products sold prior to the termination.

8.4 Rights Upon Termination. Notwithstanding any other provision of this Agreement, upon any termination of this Agreement prior to the regularly scheduled expiration date of this Agreement, the license granted hereunder shall terminate. Except as otherwise provided in Section 8.5 of this Agreement with respect to work-in-progress, upon such termination, Licensee shall have no further right to develop, manufacture or sell any Licensed Products, or to otherwise use any Licensed Technology. Any such termination shall not relieve either party from any obligations accrued to the date of such termination. Upon such

termination, each party shall be required to abide by its nondisclosure obligations as described in Section 7.1, and, provided termination was not initiated by Licensee due to Licensor's breach hereunder, Licensee shall continue to abide by its obligations to indemnify Licensor as described in Section 4.4 for products sold prior to the termination.

8.5 Work-in-Progress. Upon any early termination of this Agreement and the license granted hereunder, Licensee shall be entitled to finish any work-in-progress and to sell any completed inventory of Licensed Products which remain on hand as of the date of termination, so long as Licensee pays to Licensor the royalties applicable to such sales in accordance with the terms and conditions as set forth in this Agreement .

9. Binding Upon Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of any successors in interest and assigns of Licensor and Licensee. Any such successor or assignee shall expressly assume in writing the performance of all the terms and conditions of this Agreement to be performed by the assigning party.

10. General Provisions.

10.1 Independent Contractors. The relationship between Licensor and Licensee is that of independent contractors. Licensor and Licensee are not joint venturers, partners, principal and agent, master and servant, employer or employee, and have no other relationship other than independent contracting parties. Licensor and Licensee shall have no power to bind or obligate each other in any manner, other than as is expressly set forth in this Agreement.

10.2 Arbitration. Any matter or disagreement arising under this Agreement shall be submitted for decision to a panel of three neutral arbitrators with expertise in the subject matter to be arbitrated. One arbitrator shall be selected by each party and the two arbitrators so selected shall select the third arbitrator. The arbitration shall be conducted in accordance with the Rules of the American Arbitration Association. The decision and award rendered by the arbitrators shall be final and binding. Judgment upon the award may be entered in any court having jurisdiction thereof. Any arbitration shall be held in Ann Arbor, Michigan, or such other place as may be mutually agreed upon in writing by the parties.

10.3 Entire Agreement; Modification. This Agreement sets forth the entire agreement and understanding between the parties as to the subject matter hereof. There shall be no amendments or modifications to this Agreement, except by a written document which is signed by both parties.

10.4 Governing Law. This Agreement shall be construed and enforced in accordance with the laws of the State of Michigan.

10.5 Severability. If any one or more of the provisions of this Agreement is held to be invalid or unenforceable by a court of competent jurisdiction, it 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 any invalid or unenforceable provision with a valid and enforceable provision such that the objectives contemplated by them when entering this Agreement may be realize d.

10.6 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.

10.7 Attorneys' Fees. In the event of a dispute between the parties hereto or in the event of any default hereunder, the party prevailing in the resolution of any such dispute or default shall be entitled to recover its reasonable attorneys' fees and other costs incurred in connection with resolving such dispute or default.

10.8 Notices. Any notices required by this Agreement shall be in writing, shall refer to this Agreement and shall be sent by registered or certified mail, postage prepaid, or by telefax, telex or cable, charges prepaid, or by overnight courier, charges prepaid to the addresses set forth below unless subsequently changed by written notice to the other party:

For Licensee: Aastrom Biosciences, Inc.
Post Office Box 376
Ann Arbor, Michigan 48106
Attention: R. Douglas Armstrong, Ph.D.
President/CEO
Fax No.: (313) 665-0485

For Licensor: Joseph G. Cremonese
227 Maple Drive
Greensburg, Pennsylvania 15601
Fax No.: (412) 838-7780

Notice shall be deemed delivered upon the earlier of (i) when received, (ii) three (3) days after deposit into the mail, or (iii) the date notice is sent via telefax, telex or cable,

(iv) the day immediately following delivery to overnight courier (except Sunday and holidays).

IN WITNESS WHEREOF, the parties have executed this Agreement by their duly authorized representatives as of the date set forth above.

LICENSOR:	LICENSEE:
	AASTROM BIOSCIENCES, INC.
/s/ Joseph G. Cremonese - -------------------------	By: /s/ R. Douglas Armstrong ---------------------------
Joseph G. Cremonese 7-17-92	R. Douglas Armstrong, Ph.D. President/CEO 8/5/92

[LETTERHEAD OF AASTROM BIOSCIENCES, INC. APPEARS HERE]

July 14, 1992

Mr. Joseph G. Cremonese
227 Maple Drive
Greensburg, PA 15601

Dear Joe,

In follow-up to our discussions, this letter is to constitute an Addendum to the "License Agreement by and between AASTROM Biosciences, Inc., a Michigan corporation and Joseph G. Cremonese" that is conditional upon the formal execution of that Agreement.

In Addendum to that Agreement, the parties agree to the following:

"If Licensee (AASTROM) elects to terminate the Agreement in advance of one year after the date of the Agreement, without the Licensee initiating reexamination of the Licensed Technology, or in the absence of new information which would clearly invalidate the key claims of the Licensed Technology, then Licensee shall pay to Licensor (Cremonese) a termination fee of Seven Thousand Five Hundred Dollars ($7,500) at the time of termination."

Execution as designated below, in adjunct with execution of the License Agreement, will serve to formalize this Addendum.

Sincerely,

/s/ R. Douglas Armstrong

R. Douglas Armstrong, Ph.D.
President/CEO

Licensor:

/s/ Joseph G. Cremonese
- --------------------------
Joseph G. Cremonese

Date: 7-17-92

Licensee:

AASTROM Biosciences, Inc.

By: /s/ R. Douglas Armstrong

R. Douglas Armstrong, Ph.D.
President/CEO

Date 8/5/92

July 7, 1993

Mr. Joseph G. Cremonese
227 Maple Drive
Greensburg, PA 15601

Dear Joe,

In follow-up to our discussion, this letter is to formalize our understanding for extension of our license agreement. More specifically, we mutually agree to allow AASTROM a 1-month extension to initiate a re-examination request for Patent #4,839,292, as per sections 2.2 and 3.1 of our July 17, 1992, License Agreement. All other provisions of the License Agreement are unmodified.

To represent your agreement with this, please sign as indicated below.

Thank you.

Sincerely,

/s/ R. DOUGLAS ARMSTRONG
- ---------------------------
R. Douglas Armstrong, Ph.D.
President and CEO

RDA:pp

I agree to the terms as indicated above.

/s/ JOSEPH G. CREMONESE 7/8/93
- --------------------------------
Joseph G. Cremonese

EXHIBIT 10.17

ATTACHMENT 1
RESEARCH AGREEMENT
UM/Ann Arbor Stromal

LICENSE AGREEMENT

By this Agreement, Ann Arbor Stromal, Inc. (hereinafter "Ann Arbor Stromal") and the Regents of The University of Michigan, a constitutional corporation of the State of Michigan (hereinafter "University") agree as follows:

1. INCORPORATION BY REFERENCE

Incorporated by reference with full force and effect to the provisions, definitions, terms and conditions of this License Agreement (hereinafter "License") are the provisions, definitions, terms and conditions of the Research Agreement to which this License is attached, including the Option Agreement and its Appendices.

2. DEFINITIONS

2.1 "Effective Date" of this License shall be the date of completed execution by both Parties in accordance with the provisions of Article 9 entitled "License", in the abovementioned Research Agreement to which this License is attached.

2.2 "Parties", in singular or plural usage as required by the context, means Ann Arbor Stromal and/or University.

2.3 "Territory" means all countries of the world.

2.4 "Licensed Technology" means all patentable inventions and Know-how for the production of red blood cells, white blood cells, platelets and bone marrow cells, which are either described in University Project proposal, or conceived or reduced to practice as part of Project, or conceived or reduced to practice, whether or not pursuant to or as part of the Project, by Drs. Stephen G. Emerson, Michael F. Clarke or Bernhard O. Palsson, or those working under their direction, during the term of their participation in the Project and Ann Arbor Stromal's funding of the Project.

2.5 "Licensed Patent(s)" means any and all pending patent applications(s) included within Licensed Technology, whether now existing or hereafter filed, both domestic and foreign, and any patents issuing therefrom.

2.6 "Valid Claim(s)" means any claim(s) pending in a patent application or in an unexpired patent included within the Licensed Patents which has not been held unenforceable, unpatentable, or invalid by a decision of a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, and which has not been admitted to be invalid or unenforceable through reissue or disclaimer. If in any country there should be two or more such decisions conflicting with respect to the validity of the same claim, the decision of the higher or highest tribunal shall thereafter control;

however, should the tribunals be of equal rank, then the decision or decisions upholding the claim shall prevail when the conflicting decisions are equal in number, and the majority of decisions shall prevail when the conflicting decisions are unequal in number.

2.7 "Know-How" means (a) all information, data and knowledge contained in patent applications or patents which are at anytime included in the definition of Licensed Patents, and (b) any other methods, procedures, processes, compositions of matter, biological materials, trade secrets, experience, work products technical information, inventions, discoveries, improvements, reports, data, results from experiments, developmental efforts and demonstrations and subject matter related to the Project, whether or not contained in Licensed Patents.

2.8 "Product(s)" means any red blood cells, white blood cells, platelets and bone marrow cells as well as any components, by-products, progeny or derivatives thereof and any factor, composition, substance, equipment, mechanism, device or other property and combinations thereof, the manufacture, use or sale of which would, but for this License, comprise an infringement of one or more Valid Claims.

2.9 "Combination Sales" shall mean sales of Product by Ann Arbor Stromal, its Affiliates or subsidiaries as a combined package comprised in part of Product and in part of one or more other products or parts which constitute either an

active ingredient or a significant delivery system or mechanism and which could readily be sold by Ann Arbor Stromal, its Affiliates or subsidiaries and used for their intended purpose by their purchasers without the incorporation or use of Product.

2.10 "Net Sales" means the sum, over the term of this License, of all amounts of monies received and all other consideration received (when in a form other than cash or its equivalent, the fair market value thereof when received) by Ann Arbor Stromal, its Affiliates or subsidiaries from purchasers or users from or by reason of the sale, distribution or use of Product, less any amounts collected for taxes, including sales and use taxes, customer charges, allowances (including any allowance for bad debts), import and export duties and other governmental charges, prompt payment or other customary trade discounts allowed or taken, credits or refunds for goods returned and transportation and delivery charges (including insurance premiums).

If Product is sold in Combination Sales, then Net Sales shall be computed in the following manner: First, gross revenues from the Combination Sales shall be reduced by any applicable deductions itemized in the first paragraph of this definition in order to arrive at "Combination Net Sales"; second, Net Sales shall be calculated by employing the following formulas:

C - p = Net Sales.

In the above formula, "p" is the fair market value of all other products or parts which constitute an active ingredient or significant delivery system or mechanism within the Combination Sale and C is equal to Combination Net Sales.

All fair market value calculations made by Ann Arbor Stromal hereunder shall be in good faith determined by Ann Arbor Stromal in the event no market price is available. In the event the University disagrees with any aspect of Ann Arbor Stromal's implementation of this definition, University may request that such dispute be submitted to arbitration as described in Article 17 and Ann Arbor Stromal hereby agrees to promptly grant and fully cooperate with such request.

2.11 "Affiliate" shall mean any corporation, partnership, proprietorship or other entity controlled by, controlling, or under common control with Ann Arbor Stromal, and shall include any corporation, partnership, proprietorship or other entity directly or indirectly owning, owned by or under common ownership with the party in question to the

extent of twenty-five percent (25%) or more of the equity or voting shares, including shares owned beneficially by such party.

2.12 "Calendar Quarters" means the three (3) months ending on the last day of March, June, September and December of each year.

3. GRANTS

3.1 Subject to the conditions and provisions of this License, University hereby grants to Ann Arbor Stromal an exclusive world-wide license, without the right to grant sublicenses, except as described in paragraph 3.2 below, under Licensed Patents and to use Know-How to make, use, and sell Product(s), except that University hereby retains the right to use Licensed Patents and Know-How solely for research purposes, and except that to the extent funding from federal agencies results in Licensed Technology or Licensed Patents in addition to Project funding, the federal government may have its standard license rights with respect to such Licensed Technology or Licensed Patents.

3.2 If at any time Ann Arbor Stromal wishes to grant sublicense rights under its exclusive license rights granted herein, University and Ann Arbor Stromal shall negotiate in good faith in order to allow Ann Arbor Stromal to enter into such sublicensing arrangements with a royalty return on Product(s) to University comparable to royalties earned by

University under this License. Subject only to this understanding and the need to have any sublicensing arrangements reflect a fair market value return to Ann Arbor Stromal as in an arms length transaction, it is the understanding of the parties that Ann Arbor Stromal should be able to make its own decisions as to the appropriate mechanisms, including sublicensing, for exploiting the Licensed Technology.

3.3 The University and Ann Arbor Stromal hereby assert that, to the best of their knowledge as of the date of execution of the Option Agreement, there do not exist any University patents or pending patents, other than the Licensed Patents of this License Agreement, which would be infringed by the practice of the Licensed Patents of this License or which would otherwise prevent the practice of any of the Valid Claims. If, however, such University patents or patent applications are subsequently found to have existed prior to the date of the Option Agreement, University shall use reasonable efforts to grant to Ann Arbor Stromal a nonexclusive license to such patents and/or patent applications, to the extent necessary for the practice of the Licensed Technology of this License.

4. ROYALTIES

4.1 The license rights granted to Ann Arbor Stromal herein are subject to Ann Arbor Stromal's payment of royalties to University according to the provisions of this Section 4.

4.2 For Product(s) defined in 2.8 herein, Ann Arbor Stromal will pay University a royalty equal to two percent (2%) of Net Sales of such Product(s) by Ann Arbor Stromal and Affiliates for the life of the last to expire of Licensed Patents.

4.3 Where Net Sales form the basis upon which payment to University is derived, the obligation to pay University under this Section 4 is imposed only once with respect to the same unit of Product regardless of the number of Valid Claims, Licensed Patents or items of Know-How covering the same; however, for purposes of determination of payments due hereunder, whenever the term Product may apply to a property during various stages of manufacture, use or sale, Net Sales, as otherwise defined shall be derived from the sale, distribution or use of such Product by Ann Arbor Stromal and Affiliates at the stage of its highest invoiced value to unrelated third parties.

4.4 If at any time or from time to time an unrelated third party in any country shall, under right of a compulsory license granted or ordered to be granted by a competent governmental authority, manufacture, use or sell any Product with respect to which royalties shall be payable pursuant to Paragraph 4.2 of this Section, then Ann Arbor Stromal, upon notice to University and during the period such compulsory license shall be effective, shall have the right to reduce such royalty on each unit of Product sold

in such country to an amount no greater than the amount payable by said third party in consideration of its compulsory license.

5. REPORTS

5.1 Within sixty (60) days after the close of each Calendar Quarter during the term of this License (including the last day of any such Calendar Quarter following any termination of this License), Ann Arbor Stromal shall report to University all royalties accruing to University under Section 4 during such Calendar Quarter. Such quarterly reports shall indicate for each Calendar Quarter the gross sales and Net Sales of Product; such reports shall also indicate Net Sales with respect to which payments are due and the amount of such payments, as well as the various calculations used to arrive at said amounts, including the quantity, description (nomenclature and type designation), country of sale and country of manufacture of Product(s). In case no payment is due for any such period, Ann Arbor Stromal shall so report.

5.2 Ann Arbor Stromal covenants that it will promptly establish and consistently employ a system of specific nomenclatures and type designations for Product(s) so that the various types can be identified and segregated, and Ann Arbor Stromal and Affiliates will consistently employ such system when rendering invoices thereon and henceforth agrees to inform University, or its auditors, when requested as to

the details concerning such nomenclature system as well as to all additions thereto and changes therein.

5.3 Ann Arbor Stromal shall keep and it shall cause its Affiliates to keep, true and accurate records and books of account containing data reasonably required for the computation and verification of payments to be made as provided by this License, which records and books shall be open for inspection upon reasonable notice during business hours by inspectors selected by and at the expense of University for the purpose of verifying the amount of payments due and payable. Said right of inspection will exist for six (6) years from the date of origination of any such record and this requirement and right of inspection shall survive any termination of this License for a period of three (3) years after such termination. However, in the event that such inspection reveals an underpayment of royalties to University in excess of five percent (5%), then said inspection shall be at Ann Arbor Stromal's expense and such underpayment shall become immediately due and payable to University.

5.4 The reports provided hereunder shall be certified by an authorized representative of Ann Arbor Stromal to be correct to the best of Ann Arbor Stromal's knowledge and information.

6. TIMES AND CURRENCIES OF PAYMENTS

6.1 Payments accrued at the close of each Calendar Quarter shall be due and payable in Ann Arbor, Michigan on the date each quarterly report, provided for under Section 5 above, is due and shall be paid in United States dollars. Ann Arbor Stromal agrees to make all payments due hereunder to University by check addressed to the University's Intellectual Properties Office or by wire transfer to the bank account designated by University with telephonic confirmation of receipt thereof.

6.2 On all amounts outstanding and payable to University, interest shall accrue from the date such amounts are due and payable at a rate of two (2) points above the prime lending rate as established by the Chase Manhattan Bank, N.A. in New York City, New York, or at such lower rate as may be required by law.

6.3 Any United States currency payments hereunder shall be determined by converting foreign currencies into their equivalent in United States dollars at the exchange rate of such currency as reported (or if erroneously reported, as subsequently corrected) in the Wall Street Journal on the last business day of the Calendar Quarter during which such payments accrue (or if not reported on that date, as quoted by the Chase Manhattan Bank, N.A. in New York City, New York).

7. COMMERCIALIZATION

7.1 Ann Arbor Stromal agrees to use commercially reasonable efforts in proceeding with the development, manufacture, marketing and sale of Products to commercially exploit the Licensed Technology and in creating a supply and demand for same; provided, however, Ann Arbor Stromal shall be entitled to exercise prudent business judgment in meeting its obligations hereunder.

7.2 Where Ann Arbor Stromal engages in continuing development with respect to Product(s), Ann Arbor Stromal shall keep University informed of such developments in writing. Ann Arbor Stromal shall promptly inform University of any patent applications, or similar applications, relating to Product(s) or improvements thereon, filed by or on behalf of Ann Arbor Stromal or Affiliates anywhere in the world.

8. INFRINGEMENT

8.1 In the event a third party is infringing a Valid Claim by making, using or selling Product(s) as defined herein, Ann Arbor Stromal shall have the right to bring suit in its own name. University agrees to use reasonable efforts to cooperate in the prosecution of such suit. Ann Arbor Stromal shall bear the expense of any such litigation and, except as described in Paragraph 8.5 below, shall have full authority to negotiate a settlement on such terms as Ann Arbor Stromal shall determine. Ann Arbor Stromal shall

share twenty-five percent (25%) of any resulting settlement payments or recovery awarded, less reasonable and actual attorneys' fees paid and unrecovered by Ann Arbor Stromal and University, with University.

8.2 In the event University, in its sole discretion determines that an infringement of Valid Claims resulting from a third party's making, using or selling of Product(s) is significant, University shall serve notice on Ann Arbor Stromal and Ann Arbor Stromal shall, within sixty (60) days of said notice, commence appropriate legal action. Ann Arbor Stromal shall share twenty-five percent (25%) of any resulting settlement payments or recovery awarded, less reasonable and actual attorneys' fees paid and unrecovered by Ann Arbor Stromal and University, with University. If Ann Arbor Stromal fails to commence such action, University may, at its option, commence legal action. Ann Arbor Stromal shall use reasonable efforts to cooperate in such action. University shall bear the expense of any such litigation and, except as described in Paragraph 8.5 below, shall have full authority to negotiate a settlement on such terms as University shall determine. Provided that Ann Arbor Stromal has maintained the license rights granted in 3.1 herein, University shall share twenty-five percent (25%) of any resulting settlement payments or recovery awarded, less reasonable and actual attorneys' fees paid and unrecovered by University and Ann Arbor Stromal, with Ann Arbor Stromal.

8.3 In the event that during the term hereof there be made against Ann Arbor Stromal, any charge for infringement of any third-party patent by reason of Ann Arbor Stromal's or Affiliate's manufacture or sale of a Product or any customer's use of the Product which charge is grounded essentially on an asserted domination by that third-party patent of the manufacture, sale or use of such Product, Ann Arbor Stromal shall give written notice thereof to University. Ann Arbor Stromal agrees to effectuate, if possible, an acceptable change in the Product to avoid such alleged infringement. If no such satisfactory change can be effectuated, University and Ann Arbor Stromal agree to collaborate and enter into discussions with said third party for the purposes of negotiating a settlement. If no settlement can be agreed upon by Ann Arbor Stromal, University and the third party, Ann Arbor Stromal shall have the right, but not the obligation, to defend any suit for infringement brought against it by the third party, and if required by law or if requested by University, to join University as a party defendant. If Ann Arbor Stromal shall elect not to defend such infringement suit, Ann Arbor Stromal shall promptly notify University to that effect and University shall thereafter have the obligation to defend the suit provided Ann Arbor Stromal reimburses the University within thirty (30) days of invoicing for all cost and expenses (including reasonable attorney fees), and if required by law or if requested by Ann Arbor Stromal, to join Ann Arbor Stromal as a party defendant.

8.4 Ann Arbor Stromal will bear the cost of defending claims of infringement or pursuing infringers, except as allowed in Paragraph 8.2 above. However, Ann Arbor Stromal can be reimbursed for up to one-half of the unrecovered amount of such actual and reasonable expenses in the following manner: Ann Arbor Stromal can deduct from royalties otherwise due and payable to University under the License, up to fifty percent (50%) until such time as Ann Arbor Stromal has recovered one-half of its actual, reasonable, and otherwise unrecovered expenses. University's "obligation" of bearing one-half of Ann Arbor Stromal's expenses shall not exceed the ability of the above-described mechanism (i.e., a 50% reduction in royalty payments due and payable) to reimburse such expenses and University royalty payments otherwise due shall never be reduced by more than 50%. Ann Arbor Stromal will make an accounting to University of all such expenses as part of its reporting obligations under Section 5.

8.5 Neither University nor Ann Arbor Stromal shall compromise or settle any claim or action in any manner that would affect the rights of the other Party without the consent of said other Party.

9. TERMINATION

9.1 With respect to any termination of this License, and except as provided herein to the contrary, all rights and

obligations of the Parties hereunder shall cease with respect thereto, except as follows:

9.1.1 Obligations to pay royalties and other sums accruing hereunder up to the day of such termination;

9.1.2 Obligations to pay royalties on Net Sales, subsequent to said date of termination of Product(s) in Stock at the date of termination with respect to which stock Ann Arbor Stromal shall have a reasonable time to sell or liquidate in a reasonable manner as deemed necessary by Ann Arbor Stromal under the circumstances;

9.1.3 Obligations for record keeping and accounting reports for so long as Product(s) are sold pursuant to Paragraph 9.1.2 above. At such time as there are no sales or other dispositions of Product(s) upon termination of this License, Ann Arbor Stromal shall render a final report and royalty payment;

9.1.4 University's rights to audit books and records as described in Section 5 herein;

9.1.5 Obligations of indemnity under Section 18;

9.1.6 Any cause of action or claim of Ann Arbor Stromal or University accrued or to accrue because of any breach or default by the other Party hereunder;

9.2 This License will become effective on its Effective Date and, unless terminated under another, specific provision of

this License, will remain in effect until and terminate upon the expiration of the later of Ann Arbor Stromal's obligation to pay royalties under Paragraph 4.3 herein or the last to expire of Licensed Patents. After such full-term termination of this License, Ann Arbor Stromal shall have the right to make, use and sell Product(s) without further payment to University hereunder.

9.3 If Ann Arbor Stromal shall at any time default in the payment of any royalty or the making of any report hereunder, or shall commit any material breach of any material covenant or promise herein contained, --------
or shall make any false report and shall fail to remedy any such default, material breach or report within sixty (60) days after written notice thereof by University, University may, at its option, terminate this License by notice in writing to such effect. In the event of such termination, interest shall continue to accrue as described in Paragraph 6.2 on any amounts outstanding and payable to University and any such termination shall be without prejudice to University's other legal rights for breach of this License.

9.4 In the event that Ann Arbor Stromal desires to terminate this License, Ann Arbor Stromal shall serve upon University a notice of termination, including a statement of reasons for such termination, at least six (6) months before a termination date established by Ann Arbor Stromal. Such notice shall be deemed by the parties to be final, and immediately upon service of such notice of termination,

University shall have the right to begin negotiations and enter into agreements with others for the manufacture, sale and use of the Product(s), and may, at its option, disclose to said others any and all information related to Product(s) other than Confidential Information generated or developed solely by Ann Arbor Stromal. During the period of time from the notice of termination until termination pursuant to this provision, Ann Arbor Stromal shall continue to commercialize Product(s) and to make them reasonably available to the public at fair market value.

10. ASSIGNMENT

This License shall not be transferable or assignable by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld; and any attempt to transfer or assign this License without such consent shall be void from the beginning. No transfer or assignment may be made by Ann Arbor Stromal unless and until the intended transferee or assignee agrees in writing to accept all of the terms and conditions of this License. For purposes of implementing this clause the University's consent may only be withheld:

i) if the University reasonably believes that implementing the terms of the proposed transfer or assignment could economically discriminate against the University or its employees holding equity in Ann Arbor Stromal as compared to any of the other shareholders or investors in Ann Arbor Stromal or their principals; or

ii) if the University reasonably believes that the proposed transfer or assignment is to a third party which is not in a financial and technical position at least equivalent to that of Ann Arbor Stromal for purposes of exploiting and commercializing the Licensed Technology.

11. REGISTRATION OR RECORDATION

11.1 If the terms of this License, or any assignment or license under this License are or become such as to require or make it appropriate that the Agreement or license or any part thereof be registered with or reported to a national or supranational agency of any area in which Ann Arbor Stromal, or Affiliates would do business, Ann Arbor Stromal will, at its expense, undertake such registration or report. Prompt notice and appropriate verification of the act of registration or report of any agency ruling resulting from it will be supplied by Ann Arbor Stromal to University.

11.2 Any formal recordation of this Agreement or any license herein granted which is required by the law of any country of the Territory as a prerequisite to enforceability of the Agreement or license in the courts of any such country or for other reasons shall also be carried out by Ann Arbor Stromal at its expense, and appropriately verified proof of recordation shall be promptly furnished to University.

12. EXPORT LAWS AND REGULATIONS OF THE UNITED STATES

12.1 The Export Regulations of the United States Department of Commerce prohibit the exportation from the United States of certain types of technical data and commodities (listed in the Export Administration Regulations), unless the exporter (e.g., Ann Arbor Stromal or Affiliates) has received the required General License or Validated License, whichever is applicable. In addition, the exporter may be required to obtain certain written assurances regarding re-export from the foreign importer for certain types of technical data and commodities. Prior to its engaging in any export activity, Ann Arbor Stromal has advised University that it will receive a copy of the then current Export Administration Regulations of the United States Department of Commerce and will arrange for a subscription under which it will receive Supplementary Bulletins from the United States Department of Commerce upon their issuance. Ann Arbor Stromal hereby agrees to comply with, and to require Affiliates to comply with, the Export Administration Regulations of the United States Department of Commerce; and Ann Arbor Stromal hereby gives University the assurances called for in the Export Administration Regulations, including the assurances called for in Part 379.4 and any successor provisions of such regulations.

12.2 This License shall be subject to all United States Government laws and regulations now or hereafter applicable to the subject matter of this License.

13. NOTICES

Any notice, request, report, or payment required or permitted to be given or made under this License by any Party shall be given by sending such notice by prepaid certified mail, return receipt requested, or by facsimile transmission to the address set forth below or such other address as such party shall have specified by written notice given in conformity herewith. Any notice not so given shall not be valid unless and until actually received, and any notice given in accordance with the provisions of this paragraph shall be effective when mailed:

TO University: The University of Michigan
Intellectual Properties Office
475 East Jefferson, Room 2354
Ann Arbor, Michigan 48109-1248
Attention: File No. 433

TO Ann Arbor Stromal: Robert Kunze
General Partner
H&Q Life Science Technology Fund I
One Bush Street
San Francisco, California 94104

With copy provided to: Kenneth L. Guernsey
Attorney at Law
Cooley, Godward, Castro, Huddleson & Tatum
One Maritime Plaza, 20th Floor
San Francisco, CA 94111-3580

14. INVALIDITY

In the event that any term, provision, or covenant of this License shall be determined by a court of competent jurisdiction to be invalid, illegal, or unenforceable, that term will be curtailed, limited, or deleted, but only to the extent necessary

to remove such invalidity, illegality, or unenforceability, and the remaining terms, provisions, and covenants shall not in any way be affected or impaired thereby. In the event that the time period of any covenant shall be held unenforceable as a matter of law, said covenant will be interpreted to be effective for an enforceable time period.

15. ENTIRE AGREEMENT AND AMENDMENT

This License contains the entire understanding of the Parties with respect to the matter contained herein, and supersedes all prior agreements, oral or written, and all other communication between them relating to the subject matter hereof. The Parties hereto may, from time to time during the continuance of this License, modify, vary or alter any of the provisions of this License, but only by an instrument duly executed by authorized officials of both Parties hereto.

16. GOVERNING LAW

This License and the relationships between the Parties shall be governed in all respects by the law of the State of Michigan, the United States of America, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent has been granted.

17. ARBITRATION AND DISPUTE RESOLUTION

Any dispute relating to the interpretation or performance of this Agreement or the grounds for the termination hereof shall be resolved at the request of either party through final and binding arbitration by a single arbitrator in accordance with the Commercial Arbitration rules of the American Arbitration Association ("AAA"). Such arbitrator shall be selected by the mutual agreement of the parties or, failing such agreement, shall be selected according to the relevant AAA rules. The parties shall bear the costs of such arbitrator and arbitration equally. The prevailing party in any such arbitration shall be entitled to its reasonable attorney's fees and costs solely at the discretion of the arbitrator in addition to any other amount of recovery ordered by such arbitrator. The arbitrator or court, as the case may be, shall determine which party is the "prevailing party" for purposes of this section. If judicial enforcement or review of such arbitrator's award is sought by either party, judgment may be entered upon such award in any court of competent jurisdiction. Ann Arbor Stromal hereby consents to venue and personal jurisdiction in Ann Arbor, Michigan for any such arbitration proceeding and for any court proceeding. The duty of the parties to arbitrate any dispute relating to the interpretation or performance of this Agreement or the grounds for the termination thereof shall survive any termination of this Agreement.

18. INDEMNITY: INSURANCE

18.1 Ann Arbor Stromal shall defend, indemnify and hold harmless and shall require Affiliates to defend, indemnify and hold harmless University, its fellows, officers, employees and agents, for and against any and all claims, demands, damages, losses, and expenses of any nature (including attorneys' fees and other litigation expenses), resulting from, but not limited to, death, personal injury, illness, property damage or products liability arising from or in connection with, any of the following:

18.1.1 Any manufacture, use, sale or other disposition by Ann Arbor Stromal, Affiliates, or other transferees of Products;

18.1.2 The direct or indirect use of Products by any person;

18.1.3 The use by Ann Arbor Stromal or Affiliates of any invention, discovery, data, information, product or process related to Licensed Patents or Know-How.

18.2 University shall be entitled to participate at its option and expense through counsel of its own selection, and may join in any legal actions related to any such claims, demands, damages, losses and expenses under Paragraph 18.1.

19. NO WARRANTY: LIMITATIONS OF LIABILITY

19.1 UNIVERSITY MAKES NO REPRESENTATIONS, EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ASSUMES NO RESPONSIBILITIES WHATEVER WITH RESPECT TO DESIGN, DEVELOPMENT, MANUFACTURE, USE, SALE OR OTHER DISPOSITION BY ANN ARBOR STROMAL OR AFFILIATES OF PRODUCTS. Regardless of any testing which may have been done at University, University makes no representations regarding how Product can or should be used in any specific process.

19.2 THE ENTIRE RISK AS TO PERFORMANCE OF PRODUCTS IS ASSUMED BY ANN ARBOR STROMAL AND AFFILIATES. Every user of Product must do its own verification testing and define for itself any processes for its use of Product. In no event shall University be responsible or liable for any direct, indirect, special, incidental, or consequential damages or lost profits to Ann Arbor Stromal, Affiliates, users or any other individual or entity regardless of legal theory. The above limitations on liability apply even though University may have been advised of the possibility of such damage.

19.3 University represents that to the best of its knowledge and belief it has the lawful right to grant the license set forth herein without breaching the terms or conditions of any agreements with any third parties.

20. PUBLICITY

Ann Arbor Stromal agrees to refrain from using and to require Affiliates to refrain from using quotes or opinions attributed or attributable to University or any employee of University in publicity, advertising, or news releases without the prior written approval of an authorized representative of University. Reports in scientific literature and presentations of joint research and development work are not considered publicity.

21. PRODUCT MARKING

Ann Arbor Stromal and Affiliates agree to mark Products with the appropriate patent notice as approved by University.

22. NON-WAIVER

No waiver, no matter how long continuing or how many times extended, by either Party of a breach of any term or condition of this License shall be considered as a permanent waiver or as an amendment to this instrument.

23. ARTICLE HEADINGS

The Article headings herein are for purposes of convenient reference only and shall not be used to construe or modify the terms written in the text of this agreement.

24. FORCE MAJEURE

Neither Party hereto shall be deemed to be in default of any provision of this License, or for any failure in performance, resulting from acts or events beyond the reasonable control of such Party. For purposes of this License, such acts shall include, but not be limited to, acts of Good, acts of civil or military authority, civil disturbance, war, strikes, fires, power failures, other catastrophes, or other "force majeure" events beyond the Parties' reasonable control.

25. NO AGENCY RELATIONSHIP

Except as clearly and specifically provided under the terms and provisions of this License, neither Party shall be deemed to be an agent of the other in connection with the exercise of any rights hereunder, and neither shall have any right or authority to assume or create any obligation or responsibility on behalf of the other.

26. CONFIDENTIALITY PROVISIONS

26.1 University and Ann Arbor Stromal each agree not to disclose or use, except as required by law or contemplated by this License and the Research Agreement to which this License is attached, the following ("Confidential Information"): (i) any of the terms of this License and the Exhibits hereto (except for disclosure of basic terms which may be required under University policy), or (ii) except as otherwise

provided for in the Research Agreement's Article 7 (Publications), any Project related Know-How, data, process, technique, drawing, formula, future development, or engineering or manufacturing development of either party and any marketing, business plan, servicing, financial or personnel matter relating to the other party, its present or future products, sales, suppliers, customers, employees, investors or business except as Ann Arbor Stromal finds reasonably necessary to conduct its business or raise capital or (iii) any information received from the other party which is in written form and marked "Confidential", "Proprietary", "Secret" or the like.

26.2 The parties hereto agree that the provisions of this Article 26 shall survive, whether or not the other provisions hereof remain in full force and effect, for a period of three (3) years after any termination of this License.

26.3 Confidential Information shall not include and neither party shall be obligated to hold in confidence or restrict the use of any information (i) which is or becomes public knowledge without breach of this License, (ii) which is or becomes available without a confidentiality restriction and without breach of this License from a source other than a party hereto, (iii) which is produced in response to a court order or government action, (iv) which is disclosed with the other party's prior written approval, (v) which is independently developed by the party receiving the Confidential Information from the other party, or (vi) which is known by other means to the party receiving the

Confidential Information at the time of disclosure of same, and in the case of (v) and (vi), can be established by documentary evidence.

IN WITNESS WHEREOF, each of the Parties hereto has caused this entire agreement to be executed in duplicate originals by its duly authorized officer or representative.

FOR ANN ARBOR STROMAL, INC.	FOR THE REGENTS OF THE UNIVERSITY OF MICHIGAN
By /s/ R. DOUGLAS ARMSTRONG	By /s/ ROBERT F. GAVIN
(authorized representative)	(authorized representative)
Typed Name R. Douglas Armstrong	Typed Name Robert F. Gavin
Title President and CEO	Title Director, Intellectual Properties
Date 3/13/92	Date 3/13/92

FIRST AMENDMENT TO LICENSE AGREEMENT

This First Amendment to License Agreement is made as of March 13, 1992,
by and between Aastrom Biosciences, Inc. (formerly Ann Arbor Stromal, Inc.), a Michigan corporation, (hereinafter "Aastrom") and the Regents of the University of Michigan, a constitutional corporation of the State of Michigan (hereinafter "University").

RECITATIONS

The following is a recital of facts underlying this Agreement:

A. On March 13, 1992 the parties hereto have executed a certain License Agreement ("License Agreement") as contemplated by a certain Research Agreement between the parties hereto which was executed by them during August of 1989 (the "Research Agreement"). Defined terms not otherwise defined in this First Amendment shall have the meanings set forth in the License Agreement.

B. The parties now wish to amend the License Agreement in certain respects.

NOW, THEREFORE, in consideration of their mutual promises, the parties hereto agree as follows:

1. The License Agreement is hereby amended as follows.

(a) Licensed Technology includes:

i) all patent applications, including related foreign patent applications, and patents issuing therefrom identified in Exhibit A attached hereto;

ii) all Know-How included in patents and patent applications of Exhibit A and grant proposals, papers, abstracts and other documents described in Exhibit B attached hereto; and

iii) all additional patentable inventions and Know-How for the production of red blood cells, white blood cells, platelets and bone marrow cells, which is either described in University Project proposal, or conceived or reduced to practice as part of Project, or conceived or reduced to pratice, whether or not pursuant to or as part of the Project, by Drs. Stephen G. Emerson, Michael F. Clarke or Bernhard O. Palsson, or those working under their direction, during the term of their participation in the Project and Aastrom's funding of the Project.

(b) Section 3.2 of the License Agreement hereby is amended to read in its entirety as follows:

3.2 Aastrom shall have the right to grant one or more sublicenses for third parties to use the rights granted to Aastrom under its exclusive

license rights granted in this License Agreement; and, subject to approval by Aastrom, sub-sublicense agreements may also be granted by a third party sublicensee. All sublicenses and sub-sublicenses, if any, shall provide that the sublicensee and sub-sublicensee shall comply fully with all provisions of this License Agreement, including without limitation, paying the same royalty to the University as is specified in this License Agreement. Notwithstanding any such sublicensing, Aastrom shall still remain fully responsible and liable for compliance with all terms of this License Agreement, including compliance by any and all sublicensees and sub-sublicensees. No consent from University is required for any sublicense or sub-sublicense, as described above; however, Aastrom shall provide timely notice of each sublicense hereunder along with copies of all sublicense agreements. Should Aastrom propose to enter into a sublicense which reduces any royalties payable to University, or which otherwise modifies any of the rights of University under this License Agreement, then no such sublicense can be entered into without the prior written consent of University and any

such sublicense entered into without prior written consent of University shall be void from the beginning. For example, if the proposed sublicensee is to issue stock to Aastrom in lieu of royalties, or if a proposed sublicensee is to make a lump sum front-end payment as a set-off against or in lieu of future royalties, then there shall be negotiations between Aastrom and University for an equitable allocation of said consideration in lieu of royalties, with the mutual consent of Aastrom and University required for any such non-conforming sublicense agreement.

2. Article 13 of the License Agreement, entitled "Notices", is amended as follows:

i) Provision for notice to Robert Kunze and Kenneth Guernsey is hereby deleted; and

ii) Notice to Aastrom shall be provided to:

Aastrom Biosciences, Inc.
President/CEO
P.O. Box 130469
Ann Arbor, Michigan 48113-0469

3. As amended hereby, the License Agreement shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused their duly authorized representatives to execute and deliver this First Amendment as of the date set forth above.

FOR AASTROM BIOSCIENCES, INC.	FOR THE REGENTS OF THE UNIVERSITY OF MICHIGAN
By /s/ R. DOUGLAS ARMSTRONG	By /s/ ROBERT F. GAVIN
(authorized representative)	(authorized representative)
Typed Name R. Douglas Armstrong	Typed Name Robert F. Gavin
Title President and CEO	Title Director, Intellectual Properties

EXHIBIT A

License Agreement Amendment dated March 13, 1992
between UM and Aastrom Biosciences

DOCUMENTATION FOR LICENSE AMENDMENT AGREEMENT

1. The following U.S. patent applications and all related foreign applications:

A. U.S. APPLICATION, SER. #07/366,639, OSMMN REF. #2363-022-55
Methods, Compositions and Devices for Growing Cells.
Filed: 6/15/89

B. U.S. APPLICATION, SER. #07/628,343, OSMMN REF. #2363-023-55 CIP
Methods and Compositions for the Ex Vivo Replication of Stem Cells
and for the Optimization of Hematopoietic Progenitor Cell Cultures.
Filed: 12/17/90

E. U.S. APPLICATION, SER. #07/737,024, OSMMN REF. #2363-034-55
Methods 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

F. U.S. APPLICATION, SER. #07/740,590, OSMN REF. #2363-035-55
Methods 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 and/or IL-6 Secretion of Human Stromal
Cells.
Filed: 8/5/91

H. U.S. APPLICATION, SER. #07,815,513, OSMMN REF. #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

I. U.S. APPLICATION, SER. #07/822,136, OSMMN REF. #2363-055-55
Targeted Virus.
Filed: 1/17/92

J. PENDING U.S. APPLICATION, OSMMN REF. #2363-043-55
Methods, Compositions and Devices for Maintaining and Growing Human
Stem and/or Hematopoietic Cells.
Filed: 3/4/92

	DESCRIPTION	AUTHOR	DATE
2.	Business Plan and Strategy	AASTROM Biosciences, Inc.	Dec., 1991
3.	Research Plan	AASTROM Biosciences, Inc.	Sept., 1991
4.	Goals, Science/Business, Personnel & Structure	Ann Arbor Stromal, Inc.	Undated
5.	Research Agreement	Appendix C to Option Agreement	3/24/89
6.	SBIR Proposal: Hematopoietic Cell Expansion System	R. Douglas Armstrong	12/12/91
7.	NRA-91-OSSA-18 Proposal: Shear Sensitivities of Human Bone Marrow Cultures	Bernard O. Palsson	11/25/91
8.	ACS Proposal: Hematopoietic Bioreactor System to Improve Bone Marrow Transplantation for Treatment of Cancer	Bernard O. Palsson	10/30/91
9.	Aastrom System One (Version 1.00 - Draft)	Bernard O. Palsson	10/19/91
10.	NRA-91-OSSA-13 Proposal: Reconstructing Human Bone Marrow Ex Vivo	Bernard O. Palsson	8/15/91
11.	NSF Proposal: Optimal Growth Factor Combinations for Human Bone Marrow Cultures and Large-Scale Cell Production	Bernard O. Palsson	7/3/90
12.	Naval Medical Command Proposal: Ex vivo Bone Marrow: Construction of a Perfusion Device	Bernard O. Palsson	2/20/89
13.	SBIR Proposal: Bioreactor for Retrovirus Infection of hemato-poietic Cells	R. Douglas Armstrong	12/12/91
14.	Experiment (Clarke)	Michael F. Clarke	1/9/92
15.	NIH Proposal: In Vitro Expanded Hematopoietic Progenitors for ABMT	Stephen G. Emerson	1/16/92
16.	NIH Proposal: Stromal Cell CSF Regulation and Hematopoiesis	Stephen G. Emerson	9/20/91
17.	Aplastic Anemia Foundation of America (Postdoctoral application): Leslie G. Blesecker	Stephen G. Emerson	7/1/92 (beg. date)

	DESCRIPTION	AUTHOR	DATE
18.	The Leukemia Society of America (Scholarship application): Stem Cell Cytoadhesion Molecules in Chronic Myelogenous Leukemia	Stephen G. Emerson	8/29/89
19.	The Leukemia Society of America (Scholarship application - continuation) Stem Cell Cytoadhesion Molecules in Chronic Myelogenous Leukemia	Stephen G. Emerson	4/26/91
20.	NIH Proposal: Optimization and Manipulation of Human Marrow Cultures	Stephen G. Emerson	7/20/90
21.	NSF Proposal: (Research Experience for Undergraduates) Effect of Serum Concentration and Perfusion Rate on Stromal Cell Metabolism	Stephen G. Emerson	1/30/89
22.	NSF Proposal: Contruction and Maintenance of Functioning Bone Marrow Tissue Ex Vivo	Stephen G. Emerson	5/15/89
23.	NSF Proposal: Construction of a High Efficiency Ex Vivo Bone Marrow	Stephen G. Emerson	5/10/88
24.	NRA-88-OSSA-5 Proposal: Development of a Device for the Large-Scale Cultivation of Human Bone Marrow: Space Flight Applications	Stephen G. Emerson	8/15/88
25.	Presidential Initiations Proposal: Development of an Artificial Bone Marrow	Stephen G. Emerson	Undated
26.	Paper: In Vitro Myelopoiesis Stimulated by Rapid Medium Exchange and Supplementation with hemato-poietic Growth Factors	Schwartz RM, Emerson SG, Clarke MF, Palsson BO	Blood, 78:12, pp 3155-3161, (12/15/91)
27.	Paper: Can Dexter Cultures Support Stem Cell Proliferation?	Varma A, El-Awar FY, Palsson BO, Emerson SG, Clarke MF	Experi-mental Hematology, 20:87-91 (1992)
28.	Paper: Rapid medium perfusion rate significantly increases the productivity and longevity of human bone marrow cultures	Schwartz RM, Palsson BO, Emerson SG	PNAS, 88:6760-6764 (8/91)
29.	Paper: The Construction of High Efficiency Human Bone Marrow Tissue Ex Vivo	Emerson SG, Palsson BO, Clarke MF	J Cell. Biochem 45:268-272 (1991)

	DESCRIPTION	AUTHOR	DATE
30.	Paper: Culture Perfusion Schedules Influence the Metabolic Activity and Granulocyte-Macrophage Colony-Stimulating Factor Production Rates of Human Bone Marrow Stromal Cells	Caldwell J, Palsson BO, Locey B, Emerson SG	J Cell Phys 147:344-353 (1991)
31.	Paper: Influence of Medium Exchange Schedules of Metabloic, Growth, and GM-CSF Secretion Rates of Genetically Engineering NIH-3T3 Cells	Caldwell J, Locey B, Clarke MF, Emerson SG Palsson BO	Biotechnol. Progress Vol. 7, No.1 Jan/Feb, 1991
32.	Paper: The Influence of Extra-Cellular Matrix and Stroma Remodeling on the Productivity of Long-Term Human Bone Marrow Cultures	Schwartz RM, Caldwell J, Clarke MF, Emerson SG, Palsson BO	Submitted to Cytotechnology Sept., 1991
33.	Advanced Technology Program Proposal: ATP 91-01: Human Stem Cell and Hematopoietic Expansion Systems	R. Douglas Armstrong	9/24/91
34.	Thesis: Optimization of Human Long-Term Bone Marrow Cultures	Richard M. Schwartz	1991
35.	Chapter: The Role of Physiologic Perfusion in the Metabolism and Genetic Regulation of Cytokine Production in Mesenchymal Stromal Cells	Caldwell J, Palsson BO, Clarke MF, Emerson SG	Undated
36.	UM Disclosure #715 "Mouse Tyrosine Kinare partial CDNA sequences A1, A8, P4, P7, P21"	Emerson SG	Biotechnol

SECOND AMENDMENT TO
LICENSE AGREEMENT

This Second Amendment to License Agreement is entered into as of October 8, 1993, by and between Aastrom Biosciences, Inc. (formerly Ann Arbor Stromal, Inc., a Michigan corporation, hereinafter called "Aastrom"), and the Regents of the University of Michigan, a constitutional corporation of the State of Michigan (hereinafter called "University").

RECITATIONS

The following is a recital of facts underlying this Agreement.

A. In August, 1989, the parties hereto entered into a certain Research Agreement (the "Research Agreement") pursuant to which Aastrom provided funding to the University for the University to conduct a certain research project. Pursuant to an Extension Agreement dated March 2, 1992, the parties extended the term of the Research Agreement until June 30, 1993, and extended the scope of the research projects and funding under the Research Agreement. As used hereinafter, the term "Research Agreement" shall include said Extension Agreement. Pursuant to the Research Agreement, Aastrom is entitled to an exclusive license to utilize any and all inventions, technology, and know-how (i) resulting from the research projects funded by Aastrom at the University, or (ii) related to the research projects (subject to certain qualifications).

B. On March 13, 1992, the parties entered into a certain License Agreement (the "License Agreement"), as contemplated by the Research Agreement; and on March 13, 1992, the parties also entered into that certain First Amendment to License Agreement (the "First Amendment to License Agreement") for the purpose of modifying and clarifying certain terms in the original License Agreement. As used hereinafter, the term "License Agreement" shall include said First Amendment.

C. Subsequent to entering into the First Amendment to License Agreement, some additional patent rights, technology, know-how and other intellectual property rights have been identified which are to be licensed to Aastrom pursuant to the License Agreement. This Second Amendment is being entered into for the purpose of identifying said additional rights.

NOW THEREFORE, in consideration of their mutual promises, the parties hereto agree as follows:

1. LICENSED TECHNOLOGY. In addition to all other Licensed Technology (as defined in the License Agreement) which is already identified as being covered by the License Agreement, the Licensed Technology shall also include the additional patent-

related matters identified in Exhibit A attached hereto, as well as the additional technology and know-how identified in the documents described in Exhibits B (1) and B(2) attached hereto, which technology and know-how have resulted from research pursuant to the Research Agreement.

2. EFFECT. Excepting only as otherwise expressly set forth above, all other terms and provisions of the License Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused their duly authorized representatives to execute and deliver this Second Amendment as of the date set forth above.

FOR:	FOR:
AASTROM BIOSCIENCES, INC.	THE REGENTS OF THE UNIVERSITY OF MICHIGAN
BY: /s/ R. DOUGLAS ARMSTRONG	BY: /s/ ROBERT L. ROBB
R. DOUGLAS ARMSTRONG, PH.D.	
PRESIDENT AND CEO	ITS: Director Technology/Management Office

EXHIBIT A

PATENT MATTERS

All of the following patent applications and patent matters, including all related foreign patent rights and all patents issued and patent rights related thereto:

A. U.S. APPLICATION #07/990,299, CAMPBELL & FLORES REF.#P-UM 9380
Novel Embryonic Tyrosine Kinase Sequences and Uses Thereof
Biesecker, Leslie G.; Emerson, Stephen Gx.
filed: 12/8/92

B. PENDING U.S. APPLICATION, CAMPBELL & FLORES REF. #P-UM 9430
P53-Mediated Apoptosis for the Therapeutic Treatment of Diseases
Clarke, Michael F.

C. PENDING U.S. APPLICATION, CAMPBELL & FLORES REF. #P-AA 9609
Directed Motion of Gene-Transfer Vectors for Increased Infectivities
Palsson, Bernhard O.

EXHIBIT B (1)

Know-how and Technology Items

All of the following and attached grant proposals, papers, abstracts and other documents, together with all inventions, know-how and/or technology described therein or resulting therefrom:

DESCRIPTION	AUTHOR	DATE
1. PAPER: BONE MARROW STROMAL FIBROBLASTS SECRETE INTERLEUKIN-6 AND GRANULOCYTE-MACROPHAGE COLONY-STIMULATING FACTOR IN THE ABSENCE OF INFLAMMATORY STIMULATION: DEMONSTRATION BY SERUM-FREE BIOASSAY, ENZYME-LINKED IMMUNOSORBENT ASSAY, AND REVERSE TRANSCRIPTASE POLYMERASE CHAIN REACTION	GUBA, SC; SARTOR, CL; GOTTSCHALK, LR; YE-HE,J; MULLIGAN,T; EMERSON,SG	BLOOD 80(5):1190-1198 SEPT., 1992)
2. ABSTRACT: MOLECULAR REGULATION OF THE HUMAN IL-3 GENE IN T-CELLS: EXPRESSION REQUIRES AN INTACT AP-1 AND ELF-1 NUCLEAR PROTEIN BINDING SITE	GOTTSCHALK, LR; GIANNOLA, DM; EMERSON, SG	ASH, 1992
3. ABSTRACT: EX VIVO EXPANSION OF HEMATOPOIETIC PROGENITOR CELLS AND LTCIC BY CONTINUOUS PERFUSION CULTURE	PALSSON, BO; SCHWARTZ, RM; PALSSON, M; ARMSTRONG, RD; CLARKE, MF; EMERSON, SG	ASH, 1992
4. ABSTRACT: IL-1 ALPHA AND TNF-ALPHA ACT SYNERGISTICALLY TO STIMULATE PRODUCTION OF MYELOID COLONY-STIMULATING FACTORS BY CULTURED HUMAN BONE MARROW STROMAL CELLS AND CLONED STROMAL CELL STRAINS	CALDWELL, J; EMERSON, SG	ASH, 1992
5. ABSTRACT: THE CLONING OF 5 NOVEL TYROSINE KINASE PARTIAL CDNAS ENCODING CANDIDATE STEM CELL CYTOKINE RECEPTORS	BIESECKER, LG; GOTTSCHALK, LR; EMERSON, SG	ASH, 1992
6. PAPER: IDENTIFICATION OF FOUR MURINE CDNAS ENCODING PUTATIVE PROTEIN KINASES FROM PRIMITIVE EMBRYONIC STEM CELLS DIFFERENTIATED IN VITRO	BIESECKER, L.G., ET AL	PNAS 90, 7044-7048 (1993)

7.	PAPER: INTERLEUKIN 6 IS A COMPONENT OF HUMAN UMBILICAL CORD SERUM AND STIMULATES HEMATOPOIESIS IN EMBRYONIC STEM CELLS IN VITRO	BIESECKER, LG; EMERSON, SG	EXPERIMENTAL HEMATOLOGY, 21:774-778 1993
8.	PAPER: MOLECULAR REGULATION OF THE HUMAN IL-3 GENE: INDUCIBLE T-CELL RESTRICTED EXPRESSION REQUIRES INTACT AP-1 AND ELF-1 NUCLEAR PROTEIN BINDING SITES	GOTTSCHALK, LR; GIANNOLA, DM; EMERSON, SG	JOURNAL OF EXPERIMENTAL MEDICINE IN PRESS NOV., 1993
9.	PAPER: IL-1 ALPHA AND TNF-ALPHA ACT SYNERGISTICALLY TO STIMULATE PRODUCTION OF MYELOID COLONY-STIMULATING FACTORS BY CULTURED HUMAN BONE MARROW STROMAL CELLS AND CLONED STROMAL CELL STRAINS	CALDWELL, J; EMERSON, SG	JOURNAL OF CELLULAR PHYSIOLOGY ACCEPTED 1994
10.	ABSTRACT: PHASE I EVALUATION OF EX VIVO EXPANDED HEMATOPOIETIC CELLS PRODUCED BY PERFUSION CULTURES IN AUTOLOGOUS BONE MARROW TRANSPLANTATION (BMT).	SILVER, SM; ADAMS, PT; HUTCHINSON, RJ; DOUVILLE, JW; PAUL, LA; CLARKE, MF; PALSSON, BO; EMERSON, SG	ASH, 1993
11.	ABSTRACT: EXPANSION IN BIOREACTORS OF HUMAN PROGENITOR POPULATIONS FROM CORD BLOOD AND MOBILIZED PERIPHERAL BLOOD	VAN ZANT, G; LARSON, DB; DRUBACHEVSKY, I; PALSSON, M; EMERSON, SG	ASH, 1993
12.	ABSTRACT: CLINICAL SCALE PRODUCTION OF STEM AND HEMATOPOIETIC CELLS EX VIVO	ARMSTRONG, RD; KOLLER, MR; PAUL, L; DOUVILLE, J; MALUTA, J; FISH, R; PALSSON, BO; VAN ZANT, G; EMERSON,SG	ASH, 1993
13.	ABSTRACT: EXPANSION OF HUMAN HEMATOPOIETIC STEM/PROGENITOR CELLS RESISTANT TO TREATMENT WITH 4-HYDROPEROXYCYCLOPHOSPHAMIDE	RUMMEL, SA; EMERSON, SG; VAN ZANT, G	ASH, 1993
14.	ABSTRACT: BIOREACTOR EXPANSION OF WHOLE, DENSITY-SEPARATED, AND CD34-ENRICHED HUMAN BONE MARROW	KOLLER, MR; NEWSOM, B; VAN ZANT, G; EMERSON, SG, PALSSON, BO	ASH, 1993
15.	SEMINAR: PROGRESS REPORT	PETER G. EIPERS	10/19/92
16.	PAPER: MEL CELLS, THE ONCOGENE C-MYB	CLARKE, MF	SUBMITTED TO NATURE 1/93

17.	PAPER: CELL CYCLE ANALYSIS OF P53-INDUCED CELL DEATH IN MURINE ERYTHROLEUKEMIA CELLS	RYAN, JJ; RIZWAN, D; GOTTLIEB, CA; CLARKE, MF	MOLECULAR AND CELLULAR BIOLOGY 13(1) (JAN, 1993)
18.	SEMINAR: MY PRIMARY OBJECT..	ALICE CURRY	1/25/93
19.	SEMINAR: PROGRESS REPORT, FEB. 1993	PETER G. EIPERS	3/8/93
20.	SEMINAR: CONSTRUCTION OF A RETROVIRUS PACKAGING CELL LINE	FAISAL EL-AWAR	4/19/93
21.	SEMINAR: FIRST CD 18 INFECTION.....	PETER G. EIPERS	6/14/93
22.	SEMINAR: GENERATION OF AN HIV-BASED PACKAGING LINE	ALICE M. CURRY	7/26/93
23.	PROGRESS REPORTS	ALICE M. CURRY	JAN., APR., MAY, JULY, 1993
24.	PAPER: EFFECT OF STROMAL AGE ON HEMATOPOIESIS IN HUMAN LONG-TERM BONE MARROW CULTURES	EL-AWAR, FY; EMERSON, SG; CLARKE, MF	SUBMITTED TO EXP. HEMATOLOGY
25.	ABSTRACT: RETROVIRUS-MEDIATED GENE TRANSFER IN HUMAN BONE MARROW MONONUCLEAR CELLS GROWN IN CONTINUOUS PERFUSION CULTURES	EIPERS, PG; KRAUSS, JC; TODD, RF; EMERSON, SG; PALSSON, BO; CLARKE, MF	ASH, 1993
26.	NIH GRANT APPLICATION: ANALYSIS OF THE KINETICS OF HEMATOPOIETIC CELL DIVISION BY RETROVIRUS TAGGING	MICHAEL F. CLARKE	9/30/93
27.	ABSTRACT: FLOW CYTOMETRIC ANALYSIS OF BIOREACTOR EXPANDED HUMAN BONE MARROW; ERYTHROID DEVELOPMENT AND CORRELATION WITH BURST-FORMING UNIT-ERYTHROID (BFU-E).	ROGERS, CE; BRADLEY, MS; PALSSON, BO; KOLLER, MR	ASH, 1993
28.	ABSTRACT: EXTENDED GROWTH OF STEM AND PROGENITOR CELLS FROM ADULT HUMAN BONE MARROW IN SEQUENTIAL BIOREACTOR CULTURES	OH, DJ; KOLLER, MR; PALSSON, BO	ASH, 1993
29.	ABSTRACT: GROWTH FACTOR CONSUMPTION AND PRODUCTION IN EX VIVO PERFUSION CULTURES OF HUMAN BONE MARROW	PALSSON, BO; BRADLEY, MS; KOLLER, MR	ASH, 1993
30.	SEMINAR: INTRO TO MICROENCAPSULATION	MINETTE LEVEE	10/13/92

31.	SEMINAR: FLOW CYTOMETRY & HUMAN MARROW	CLARE ROGERS	11/30/92
32.	SEMINAR: CULTIVATION OF BONE MAROW CELLS IN HEMOGEN 107 (DIAMOND SHAPE) REACTORS	DUK JAE OH	1/18/93
33.	SEMINAR: ENCAPSULATED BONE MARROW CULTURES AS A POTENTIAL ASSAY FOR HUMAN HEMATOPOIETIC PROGENITORS	LEVEE, MG; LEE, GM; PAEK, SH; PALSSON, BO	3/29/93
34.	SEMINAR: FLOW CYTOMETRIC ANALYSIS OF HUMAN MYELOID LINEAGE DEVELOPMENT IN HEMATOPOIETIC BIOREACTOR SYSTEMS	ROGERS, CE; BRADLEY, S; KOLLER, MR; PALSSON, BO	3/29/93
35.	SEMINAR: OXYGEN TRANSPORT IN THE HEMOGEN BIOREACTORS	PENG, CA; PALSSON, BO	4/5/93
36.	SEMINAR: TISSUE ENGINEERING	BERNHARD O. PALSSON	4/12/93
37.	SEMINAR: DYNAMICS OF CELL GROWTH AND DIFFERENTIATION IN HEMOGENS	PENG, CA; ROGERS, C; OH, DJ; BRADLEY, S; PALSSON, BO	6/7/93
38.	SEMINAR: METABOLIC STUDY IN BONE MARROW CULTURE	DUK JAE OH	8/23/93
39.	MINUTES & NOTES, GENE THERAPY PROJECT MEETINGS	BERNHARD O. PALSSON ET AL	6/21/93 THRU 9/28/93
40.	SBIR GRANT APPLICATION: A CLONAL HEMATOPOIETIC PROGENITOR CELL ASSAY	MANFRED R. KOLLER	8/14/92
41.	SBIR GRANT APPLICATON: HIGH TITER RETROVIRAL SUPERNATANTS	R. DOUGLAS ARMSTRONG	8/14/92

	DESCRIPTION	AUTHOR	DATE
PROPOSALS:			
1.	American Cancer Society - Development of a Clinical Hematopoietic Bioreactor System to Improve Bone Marrow Transplantation	Bernhard O. Palsson	10/15/92
2.	National Science Foundation - Hematopoietic Bioengineering and Biotechnology	Bernhard O. Palsson	1/27/93
3.	NIH - Hematopoietic Tissue Engineering	Bernhard O. Palsson	1/28/93
4.	NIH - Human Hematopoietic Differentiation and Lineage Development Ex Vivo	Bernhard O. Palsson	5/27/93
PAPERS:			
5.	The Influence of Extra-Cellular Matrix and Stroma Remodeling on the Productivity of Long-Term Human Bone Marrow Cultures	Schwartz, R.M., Caldwell, J., Clarke, M.F., Emerson, S.G., and Palsson, B.O.	Cytotechnology 10:217-224 (1993)
6.	Expansion of Human Bone Marrow Progenitor Cells in a High Cell Density Continuous Perfusion System	Palsson, B.O., et al	Bio/Technology 11,368-372 (1993)
7.	Large-Scale Expansion of Human Stem and Progenitor Cells from Bone Marrow Mononuclear Cells in Continuous Perfusion Cultures	Koller, M.R., Emerson, S.G., and Palsson, B.O.	Blood 82,378-384 (1993)
8.	Retroviral Gene Transfer into Human Hematopoietic Cells Using Rapidly Perfused Long-Term Bone Marrow Cultures	Clarke, M.F., et al	The Cancer Bulletin 45:2, 153-158 (1993)
9.	Tissue Engineering: Reconstitution of Human Hematopoiesis Ex Vivo	Koller, M.R. and Palsson, B.O.	Biotechnology & Bioengineering 42, in press (1993)

	DESCRIPTION	AUTHOR	DATE
10.	Kinetics of Retroviral Production from the Amphotropic VCRIP Murine Producer Cell Line	Shen, B.O., Clarke, M.F., Palsson, B.O.	Biotechnology & Bioengineering Accepted with revisions
11.	Microencapsulated Bone Marrow Cultures as a Potential Assay for Human Hemato-poietic Progenitor Cells	Levee, M.G., Lee, G-M., Paek, S-H.,	Biotechnology & Bioengineering Submitted
12.	Unilineage Model of Hematopoiesis Predicts Self-Renewal of Stem and Progenitor Cells from Observed Ex Vivo Growth Patterns	Peng, C-A., Koller, M.R., and Palsson, B.O.	Biotechnology & Bioengineering Submitted
13.	Extended Growth of Adult Mononuclear Human Bone Marrow Cells Through Repeated Harvesting and Replating	Oh, D.J., Koller, M.F. and Palsson, B.O.	To be submitted
REPORTS:			
14.	Development of the HemoGen 106 Bone Marrow Expansion System	B.O. Palsson and S-H Paek	April 15, 1992
15.	Research and Development Program for the HemoGen 106 Bioreactor System (Unfinished document)	B.O. Palsson	September 22, 1992
16.	The HemoGen 107/108 Series: Progress Report	R.M. Schwartz and B.O. Palsson	October 27, 1992
17.	Progress Report on Residence Time Distribution	C-A. Peng and B.O. Palsson	December 17, 1992
18.	Partial Cell Harvesting and Replating Experiments	D.J. Oh and B.O. Palsson	December 17, 1992
19.	Oxygen Transport in the HemoGen Bioreactors	C-A. Peng and B.O. Palsson	April 5, 1993
20.	Growth Factor Delivery in the HemoGen Bioreactors:	B.O. Palsson and C-A. Peng	May 21, 1993
21.	Slides to accompany 16 above	B.O. Palsson	April 12, 1993
22.	Dynamics of Cell Growth and Differentiation in HemoGens	B.O. Palsson	June 7, 1993

BD
7/20/93

Additionally, as specified in the Research Agreement, University hereby licenses to Aastrom, pursuant to the terms of the License Agreement, all of the inventions, technology and know-how which are either (i) described in the Research Projects referenced in the Research Agreement, or (ii) conceived or reduced to practice as part of said Research Projects, or (iii) conceived or reduced to practice, whether or not pursuant to or as part of said Research Projects, by Drs. Stephen G. Emerson, Michael F. Clarke or Bernhard O. Palsson, or those working under their direction (including without limitation, research scientists, technicians, and/or post-doctoral training fellows), during the term of their participation in the Research Projects and Company's funding of the Research Projects, provided that such inventions, technology and know-how are related to the work described in said Research Projects. Further, the parties hereby acknowledge that Drs. Emerson, Clarke and Palsson serve as consultants to Company, as well as employees of University, and that inventions, know-how and technology conceived, reduced to practice or developed by these scientists in the course of their consulting work for Company shall be included in subparagraph (iii) above, such that they shall be covered by this License Agreement as Licensed Technology.

THIRD AMENDMENT TO LICENSE AGREEMENT

This Third Amendment to License Agreement is entered into as of June 21, 1995, by and between Aastrom Biosciences, Inc. (formerly Ann Arbor Stromal, Inc., a Michigan corporation, hereinafter called "Aastrom"), and the Regents of the University of Michigan, a constitutional corporation of the State of Michigan (hereinafter called "University").

RECITATIONS

The following is a recital of facts underlying this Agreement.

A. In August, 1989, the parties hereto entered into a certain Research Agreement (the "Research Agreement") pursuant to which Aastrom provided funding to the University for the University to conduct a certain research project. On March 2, 1992, the parties extended the term of the Research Agreement until June 30, 1993. Pursuant to a further Extension Agreement dated October 20, 1993, and Request Letter dated June 13, 1994, the term of the Agreement was further extended to June 30, 1994, and December 31, 1994, respectively, and the scope of the research projects and funding under the Research Agreement extended accordingly. As used hereinafter, the term "Research Agreement" shall include said Extension Agreements and Letter. Pursuant to the Research Agreement, Aastrom is entitled to an exclusive license to utilize any and all inventions, technology, and know-how (i) resulting from the research projects funded by Aastrom at the University, or (ii) related to the research projects (subject to certain qualifications).

B. On March 13, 1992, the parties entered into a certain License Agreement (the "License Agreement"), as contemplated by the Research Agreement; and on March 13, 1992, the parties also entered into that certain First Amendment to License Agreement (the "First Amendment to License Agreement") for the purpose of modifying and clarifying certain terms in the original License Agreement. On October 8, 1993, the parties entered into a Second Amendment to License Agreement. As used hereinafter, the term "License Agreement" shall include said First and Second Amendments and this Third Amendment.

C. Subsequent to entering into the First and Second Amendments to License Agreement, some additional patent rights, technology, know-how and other intellectual property rights have been identified which are to be licensed to Aastrom pursuant to the License Agreement. This Third Amendment is being entered into for the purpose of identifying said additional rights.

NOW THEREFORE, in consideration of their mutual promises, the parties hereto agree as follows:

1. LICENSED TECHNOLOGY. In addition to all other Licensed Technology (as defined in the License Agreement) which is already identified as being covered by the License Agreement, the Licensed Technology shall also include the additional patent-related matters identified in Exhibit A attached hereto, as well as the additional technology and know-how identified in the documents described in Exhibits B (1) and B(2) attached hereto, to the extent such technology and know-how are described by Section E of the Extension Agreement.

2. EFFECT. Excepting only as otherwise expressly set forth above, all other terms and provisions of the License Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused their duly authorized representatives to execute and deliver this Third Amendment as of the date set forth above.

FOR:	FOR:
AASTROM BIOSCIENCES, INC.	THE REGENTS OF THE UNIVERSITY OF MICHIGAN
BY: /s/ R. DOUGLAS ARMSTRONG	BY: /s/ ROBERT L. ROBB
- ----------	----------
R. Douglas Armstrong, Ph.D.	
President and CEO	ITS: Director, Technology Management Office

EXHIBIT A

Patent Matters

All of the following patent applications and patent matters, including all related foreign patent rights and all patents issued and patent rights related thereto:

A. U.S. APPLICATION NO. 08/100,337
Filed: 7/30/93; (Continuation to U.S. App. #07/628,343)

B. U.S. APPLICATION NO. 08/164,779
Filed: 12/10/93; (Continuation to U.S. App. #07/737,024)
Amendment filed: 8/1/94

C. AMENDMENT TO U.S. APP. #07/740,590
Filed: 8/9/94

D. U.S. APP. NO. 08/178,433
Filed: 1/6/94 (Continuation to U.S. App. #07/845,969)

E. U.S. APPLICATION, SER. #08/143,751

Methods 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: 11/1/93 as a divisional of 07/845,969 (ex vivo mitotic stem cells)

F. U.S. APPLICATION, SER. #08/187,509

Methods 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: 1/28/94 as a continuation of 8/100,337, 7/628,343, 7/366,639; to
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declare interference with Gillis et al patents.

G. U.S. APPLICATION, SER. #08/307,862

Stabilized Virus for Gene Therapy
Filed: 9/15/94

H. U.S. APPLICATION, SER. #08/353,531

Methods, Compositions and Apparatus for Cell Transfection
Filed: 12/9/94

EXHIBIT B (1)

KNOW-HOW AND TECHNOLOGY ITEMS

ALL OF THE FOLLOWING AND ATTACHED GRANT PROPOSALS, PAPERS, ABSTRACTS AND OTHER DOCUMENTS, TOGETHER WITH ALL INVENTIONS, KNOW-HOW AND/OR TECHNOLOGY DESCRIBED THEREIN TO THE EXTENT DESCRIBED BY SECTION E OF THE EXTENSION AGREEMENT:

DESCRIPTION	AUTHOR	DATE
1. NIH GRANT APPLICATION: ANALYSIS OF HEMATOPOIETIC CELL DIVISION BY RETROVIRUS TAGGING*	MICHAEL F. CLARKE	1/11/94
2. PAPER: RETROVIRAL-MEDIATED GENE TRANSFER IN HUMAN BONE MARROW CELLS GROWN IN CONTINUOUS PERFUSION CULTURE VESSEL*	EIPERS,P; KRAUSS,J; PALSSON,B; EMERSON,S; TODD,R; CLARKE, M.	REC'D. 8/1/94
3. PAPER: TISSUE ENGINEERING: ENGINEERING CHALLENGES	BERNHARD PALSSON	REC'D. 11/21/93
4. PAPER: GROWTH FACTOR CONSUMPTION AND PRODUCTION IN AASTROM'S PERFUSION BIOREACTOR SYSTEMS	BERNHARD PALSSON	1/20/94
5. MANUSCRIPT: KINETICS OF RETROVIRAL INFECTION AND THE INFLUENCE OF CELL CYCLE: IMPLICATIONS FOR GENE THERAPY	ANDREADIS, STYLIANOS; PALSSON, BERNHARD O.	7/8/94
6. FOLDER: ALICE CURRY NOTES (75 PAGES)	ALICE CURRY	5/31/94
7. PROGRESS REPORTS	ALICE M. CURRY	NOV, 1993; JAN. & FEB, 1994
8. ABSTRACT: LTC-IC EXPANSION REQUIRES RAPID MEDIUM EXCHANGE COMBINED WITH THE PRESENCE OF STROMAL AND OTHER ACCESSORY CELLS	KOLLER,M.R.; PALSSON, M.A.; MANCHEL,I; NEWSOM,B.S.; PALSSON, BERNHARD O.	ASH, 1994
9. ABSTRACT: EXPANSION POTENTIAL OF CD34+ CELLS FROM PATIENTS IS LOWER AND MORE STROMAL-DEPENDENT THAN FROM NORMAL DONORS	KOLLER,M.R.; MANCHEL, I; PALSSON, M.A.; BROTT,D.A.; SILVER,S.M.; PALSSON,B.O.	ASH, 1994

*These materials especially may include some inventions, know-how and technology not described by Section E of the Extension Agreement (and thus not included in Licensed Technology); including inventions, know-how and technology developed by or under the direction of Dr. Robert Todd related to leukocyte adhesion deficiency disease.

10.	SBIR GRANT APPLICATION: NOVEL APPROACHES TO ENHANCING RETROVIRAL STABILITY	BERNHARD O. PALSSON	4/14/94 (PHASE I)
11.	SBIR GRANT APPLICATION: HEMATOPOIETIC CELL EXPANSION SYSTEM	BERNHARD O. PALSSON	4/14/94 (PHASE II)
12.	ATP GRANT APPLICATION: GENE TRANSFER SYSTEM FOR ENABLEMENT OF HUMAN GENE THERAPY	R. DOUGLAS ARMSTRONG	6/21/94
13.	SEMINAR: CD18 CELL EXPANSION*	PETER EIPERS	10/25/93
14.	THESIS: MEETING PRESENTATION	ALICE CHUCK	6/29/94
15.	THESIS: MEETING PRESENTATION	ALICE CHUCK	9/28/93
16.	PAPER: GROWTH FACTOR CONSUMPTION AND PRODUCTION IN PERFUSION BIOREACTOR CULTURES OF HUMAN BONE MARROW CORRELATES WITH SPECIFIC CELL PRODUCTION	M.R.KOLLER, M.S. BRADLEY, B.O.PALSSON	SUBMITTED TO EXP. HEMATOLOGY, 9/28/94
17.	ABSTRACT: CHARACTERIZATION OF HUMAN STEM AND PROGENITOR CELL EXPANSION IN BIOREACTORS	M.R.KOLLER, B.NEWSOM, C.E.ROGERS, G.VAN ZANT, S.G.EMERSON, B.O.PALSSON	KEYSTONE CONFERENCE, TAOS, NM, 2/94
18.	PAPER: GROWTH FACTOR CONSUMPTION AND PRODUCTION IN PERFUSION BIOREACTOR CULTURES OF HUMAN BONE MARROW	M.R.KOLLER, B.O.PALSSON	6/13/94
19.	INTERNAL REPORT: RETROVIRUS PRODUCTION AND CONCENTRATION PROJECT: EXPERIENCE WITH THE OPTICELL SYSTEM; FILE NO. 4.3.1-001	TIMOTHY M. EISFELD	8/29/94; REVISED 8/30/94
20.	INTERNAL REPORT: SUMMARY REPORT ON VIRUS STABILIZATION PROJECT: JANUARY 1994 TO PRESENT; FILE NO. 4.3.2-001	TIMOTHY M. EISFELD	8/22/94
21.	PAPER: BIOREACTOR EXPANSION OF HUMAN BONE MARROW: COMPARISON OF UNPROCESSED, DENSITY-SEPARATED, AND CD34-ENRICHED CELLS	KOLLER,M.R.	SUBMITTED TO BLOOD, 1994 (MANUSCRIPT NO. 1-94-5-192)

*These materials especially may include some inventions, know-how and technology not described by Section E of the Extension Agreement (and thus not included in Licensed Technology); including inventions, know-how and technology developed by or under the direction of Dr. Robert Todd related to leukocyte adhesion deficiency disease.

22. PAPER: IL-1A REGULATES EXPRESSION OF THE 75 KDA BUT NOT THE 55 KDA TNF RECEPTOR BY CDCL STROMAL CELLS: IMPLICATIONS FOR IL-1/TNF SYNERGY.	JERRY CALDWELL, STEPHEN G. EMERSON	BLOOD 84 (10), SUPPLEMENT 1, 11/15/94 (NO. 1109)

*These materials especially may include some inventions, know-how and technology not described by Section E of the Extension Agreement (and thus not included in Licensed Technology); including inventions, know-how and technology developed by or under the direction of Dr. Robert Todd related to leukocyte adhesion deficiency disease.

EXHIBIT B(2)

DESCRIPTION	AUTHOR	DATE
PEER-REVIEWED PAPERS:		
2. Microencapsulated Human Bone Marrow Cultures: A Potential Culture System for the Clonal Outgrowth of Hemalopoietic Progenitor Cells	M. Levee, G.M. Lee, S.H. Paek, B.O. Palsson	Biotechnology & Bioengineering 43, 734-739 (1994)
3. Retroviral Infection is Limited by Brownian Motion	A.S. Chuck, C.A. Peng, M.F. Clarke B.O. Palsson	Submitted to Science Dec. 1993
4. Frequent Harvesting from Perfused Bone Marrow Cultures Results in Increased Overall Cell and Progenitor Expansion	D.J. Oh, M.R. Koller, B.O. Palsson	Biotechnology & Bioengineering 44, 609-616 (1994)
5. Replating of Bioreactor-Expanded Human Bone Marrow Results in Extended Growth of Primitive and Mature Cells	D.J. Oh, B.O. Palsson, M.R. Koller	Submitted to Experimental Hematology May 1994
6. Bioreactor Expansion of Human Bone Marrow: Comparison of Unprocessed, Density-Separated and CD34-enriched Cells	M.R. Koller, I. Manchel et al	Submitted to J. Hematotherapy 9/6/94
7. Unilineage Model of Hematopoiesis Predicts Self-Renewal of Stem and Progenitor Cells from Observed ex vivo Growth Patterns	C.A. Peng, M.R. Koller, and B.O. Palsson	Submitted to Biotechnology & Bioengineering 9/93

EXHIBIT B(2)

DESCRIPTION	AUTHOR	DATE
CHAPTERS IN BOOKS:		
8. The Role of Physiological Perfusion in the Metabolism and Genetic Regulation of Cytokine Production in Mesenchymal Stromal Cells in The Hematopietic Microenvironment: The Functional and Structural Basis of Blood Cell Development	J. Caldwell, B.O. Palsson, M.F. Clarke, and S.G. Emerson Eds. M. W. Long and M.S. Wicha	Johns Hopkins University Press 1993 Baltimore
ABSTRACTS:		
9. Biomedical Expansion of Human Stem and Progenitor Cells is More Efficient with Mononuclear Cells Than with CD34-Enriched Cells	M.R. Koller, B. Newsom, G. Van Zant, S.G. Emerson, B.O. Palsson	NIH Workshop on Hematopoletic Stem Cell Purification and Biology, Rockville, MD., 9/21/1993
10. Growth Factor Consumption and Production in ex vivo Perfusion Cultures of Human Bone Marrow	B.O. Palsson, M.S. Bradley, and M.R. Koller	ASH Meeting, St. Louis, MO Dec. 1993
11. Extended Growth of Stem and Progenitor Cells from Adult Human Bone Marrow in Sequential Bioreactor Cultures	B.O. Palsson, D.J. Oh, and M.R. Koller	ASH Meeting, St. Louis, MO Dec. 1993
12. Bioreactor Expansion of Whole, Density-Separated, and CD34-Enriched Human Bone Marrow	M.R. Koller, B. Newsom, G. Van Zant, S.G. Emerson, B.O. Palsson	ASH Meeting, St. Louis, MO Dec. 1993
13. Flow Cytometric Analysis of Bioreactor Expanded Human Bone Marrow: Erythroid Development and Correlation with Burst-Forming Unit-Erythroid (BFU-E)	C.E. Rogers, M.S. Bradley, B.O. Palsson, and M.R. Koller	ASH Meeting, St. Louis, MO Dec. 1993
14. Clinical Scale Production of Stem and Hemato-poietic Cells Ex Vivo	R.D. Armstrong, M.R. Koller, L. Paul, J. Douville, J. Maluta, R. Fish, B.O. Palsson, G. Van Zant, S.G. Emerson	ASH Meeting, St. Louis, MO Dec. 1993

EXHIBIT B(2)

DESCRIPTION	AUTHORS	DATE
15. Hematopoletic Bioreactor Engineering for Transplantation Rapid Detection and Control of Progenitor Cell Production	B.O. Palsson	Engineering Foundation Conference: Cell Culture Engineering IV, San Diego, CA, March 7-12, 1994
16. Growth Factor Consumption and Production in Ex Vivo Perfusion Cultures of Human Bone Marrow	B.O. Palsson and M.R. Koller	American Chemical Soc. Spring National Meeting, San Diego, CA March 7-12, 1994

Prepared by
Barbara Dunn
8/10/94

EXHIBIT 23.1

CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the inclusion in this registration statement on Form S-1 Amendment No. 3 (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
January 6, 1997