SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended June 30, 1998

OR

[_] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File Number 0-22025

AASTROM BIOSCIENCES, INC.
(Exact name of registrant as specified in its charter)

Michigan	94-3096597
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

24 Frank Lloyd Wright Drive
P.O. Box 376
Ann Arbor, MI 48106
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (734) 930-5555

Securities registered pursuant to Section 12(b) of the Act:
None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, no par value

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [_]

The approximate aggregate market value of the registrant's Common Stock, no par value ("Common Stock"), held by non-affiliates of the registrant (based on the closing sales price of the Common Stock as reported on the Nasdaq National Market) on September 23, 1998 was $2.00. Excludes shares of Common Stock held by directors, officers and each person who holds 5% or more of the outstanding shares of Common Stock, since such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of September 18, 1998, 13,694,429 shares of Common Stock, no par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

DOCUMENT	FORM 10-K REFERENCE
Proxy Statement for the Annual Meeting of Shareholders scheduled for November 11, 1998	Items 10, 11, 12 and 13 of Part III
Annual Report to Shareholders for fiscal year ended 1998	Items 5, 6, 7, 7A, 8, 9 and 14(a) of Part II

AASTROM BIOSCIENCES, INC.

ANNUAL REPORT ON FORM 10-K

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Except for the historical information presented, the matters discussed in this Report include forward-looking statements that involve risks and uncertainties. The Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed under the caption "Business Risks" in "Management's Discussion and Analysis of Financial Condition and Results of Operations."

PART I

ITEM 1. BUSINESS

OVERVIEW

Aastrom Biosciences, Inc. ("Aastrom" or the "Company") is developing automated cell therapy systems designed to enable therapeutic procedures using living cells for therapeutic procedures or for the restoration of normal tissues in patients treated for cancer and other diseases. The AastromReplicell/(TM)/ Cell Production System (the "AastromReplicell/(TM)/ System"), the Company's lead product, is currently in multi-site U.S. clinical trials for the production of either bone marrow or umbilical cord blood cells to mitigate the toxicity of aggressive chemotherapy used to treat cancer and other diseases. The AastromReplicell/(TM)/ System is designed to place patient-specific cell production capability directly in patient treatment centers and to enable physicians to access cells for therapy just as they do with traditional pharmaceuticals. Improved, cost effective, access to cells should expand the use of current cell therapies as well as increase the breadth of new disease treatments with cells. The AastromReplicell/(TM)/ System is designed as a family of products keyed by a multi-use instrumentation platform that operates single-use therapy-specific kits tailored for each patient application.

In 1993, the Company entered into a global marketing alliance with COBE BCT for worldwide marketing of the AastromReplicell/(TM)/ System for stem cell therapy. COBE BCT is a leader in the manufacture, sale and customer support of blood cell processing equipment, including transfusion medicine, therapeutic apheresis and stem cell therapy.

The Company believes that the AastromReplicell/(TM)/ System can be modified to produce a wide variety of other cell types for selected emerging therapies being developed by other companies and institutions. The Company intends to develop additional strategic collaborations for the development of the AastromReplicell/(TM)/ System in certain of these other cell therapy market segments. In ex vivo gene therapy, the Company is also developing the Aastrom Gene Loader, which is being designed to address the production of gene-modified cells.

CELL THERAPY

Cell therapy is the transplantation use of living cells in the treatment of medical disorders. These cells can either be used in conjunction with, or as a replacement to, traditional pharmaceuticals. Cell therapy has been used for many years, beginning with simple, but very effective, blood and platelet transfusion. More recently, cell therapies have expanded to include specialized procedures including bone marrow, or stem cell transplants. In this procedure, stem cells are transplanted into patients to restore blood and immune system function that is damaged or destroyed by aggressive chemotherapy used to treat the cancer. This form of cell therapy, as with a number of emerging new therapies, have been hastened by a number of limitations involving the access to the cells necessary for transplantation.

To date, cell therapies have involved the collection of large amounts of cells from the patient, or from a matched donor and subsequently re-infused. This approach is time consuming, expensive and quite invasive to the patient. An alternative to the collection of large quantities of cells for these therapies is to grow the cells in culture. However, this approach has been hampered by a number of technical difficulties and a requirement to comply with stringent regulatory standards, which have limited the widespread practice of ex vivo cell production.

The success of cellular therapy is based, in part, on the need for care providers to be able to access therapeutic quantities of biologically active cells necessary for patient treatment. The AastromReplicell/(TM)/ System is being developed to fill this current and growing need in cell therapy.

In ex vivo gene therapy, 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 current Good Manufacturing Practices ("cGMP").

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 the 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 therapy bleeding episodes following cancer treatments. In order to treat many cancers, high intensity chemotherapy or radiation therapy is often required, which may substantially 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. For traditional stem cell transplant procedures, 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 stem cell ("PBSC") collection. 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 significant new development in stem cell therapy, but is currently limited by difficulties in obtaining sufficient quantities of these cells and by prolonged engraftment times for the cells once transplanted into the patient. See "--Current Stem Cell Collection Methods."

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

Stem cell therapy is a widely used medical procedure used in the treatment of cancer patients. It is estimated that over 50,000 stem cell transplant procedures are performed annually. 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 are believed to 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.

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 PBSC 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.

PBSC MOBILIZATION AND COLLECTION

PBSC mobilization is a 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 PBSC 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, often times through the placement of a catheter 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 five consecutive days, however, procedure time has decreased and is expected to continue to decrease as the procedure is further optimized. 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 PBSC process has become the predominant procedure in autologous stem cell therapy.

UMBILICAL CORD BLOOD

Umbilical Cord Blood ("UCB"), which is collected directly from the umbilical cord of newborn infants, 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 PBSC 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 PBSC storage. Accordingly, the costs of collection and storage of UCB cells are comparatively low. UCB may provide a "tumor-free," source of cells making it a preferred source of cells for many current stem cell therapy procedures in metastatic cancer patients. Before UCB can becom e 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.

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 typical stem cell collection procedures through bone marrow harvest or PBSC collection ranges from $10,000 to $20,000 with considerable variability between institutions.

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, PBSC procedures have gained popularity compared with bone marrow harvests because the number of platelet transfusions is reduced for some patients.

While UCB is a promissory new source of cells for transplantation, certain disadvantages exits including the relatively low number of available cells which may contribute to prolonged engraftment times for the cells once transplanted into the patient. Unlike bone marrow or PBSC 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 PBSC 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 may 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.

Products to implement a cell isolation method known as CD34 selection have been developed by other companies in conjunction with bone marrow harvest and PBSC 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 and to assist in depleting contaminating tumor cells from the transplant cells collected. CD34 selection is used after the initial collection of stem and progenitor cells and, therefore, increases the difficulties or costs associated with the basic cell collection procedures. CD34 selection is also used to assist in depleting tumor cells from the transplant cells collected.

AASTROM TECHNOLOGY

Aastrom is developing product and proprietary process technologies that are pioneering the ex vivo production of human stem and progenitor cells. The Company's initial product candidate, the AastromReplicell/(TM)/ System 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 bone marrow harvest and PBSC mobilization methods and to enhance the clinical utility of UCB cells. The initial application of the AastromReplicell/(TM)/ System is the production of cells for stem cell therapy. However, once established for use in stem cell therapy, the Company plans to leverage the cell production capabilities of the AastromReplicell/(TM)/ System across multiple cell therapy opportunities as they develop. As these emerging cell therapies are developed, Aastrom intends to develop and introduce new therapy kits through collaborative relationships with others directed toward the treatment of cancer, infectious diseases, auto-immune diseases and in the restoration of solid tissues.

CORE TECHNOLOGIES

Stem Cell Growth Process

Aastrom has developed proprietary processes and patented 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 rights to several issued U.S. patents that cover these processes and cell compositions. 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 allows 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 and dendritic cells used for immunotherapies, chondrocytes for cartilage replacement, and mesenchymal tissues for bone and cartilage replacement. The Company holds exclusive rights to issued 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, however, 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 of success. 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 has exclusive rights to three issued U.S. patents, and has additional applications pending, for this technology. See "Aastrom Product Candidates For Ex Vivo Gene Therapy."

The AastromReplicell/(TM)/ System

The AastromReplicell/(TM)/ System is the Company's lead product under development. While potentially applicable to multiple cell therapy applications such as immunotherapy, solid tissue repair and ex vivo gene therapy, the AastromReplicell/(TM)/ System is being developed initially by the Company for stem cell therapy. The AastromReplicell/(TM)/ System is a proprietary system that the Company believes will enable the large scale ex vivo production of a variety of therapeutic cells at healthcare 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 AastromReplicell/(TM)/ System is comprised of several components, including single-use therapy kits and microprocessor-controlled instruments, which are at various stages of development. The single use therapy kits contain a cell cassette cartridge which contains the Aastrom cell culture chamber, supply waste reservoirs and harvest bag, necessary growth medium and supplements and process specific software which provides the cell production processing parameters to the AastromReplicell/(TM)/ System instruments. The microprocessor-controlled instruments include the AastromReplicell/(TM)/ Incubator which controls the culture conditions for the operation of the AastromReplicell/(TM)/ Cell Cassette, and the Processor which automates the innoculation of cells into and harvesting of the cells from the AastromReplicell/(TM)/ Cell Cassette. The AastromReplicell/(TM)/ System Manager is a user interface computer that is being developed to simultaneously track and monitor the cell production process in over twenty-four AastromReplicell/(TM)/ Incubators and record relevant process variables and operator actions. Prototype components of the AastromReplicell/(TM)/ System are currently being used in clinical trials and ongoing development activities are directed at completing other production level components of the AastromReplicell/(TM)/ System.

The AastromReplicell/(TM)/ System 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 AastromReplicell/(TM)/ System process is a blood-bag container with the cell product. The control and documentation features of the AastromReplicell/(TM)/ System have been designed to meet cGMP requirements for the therapeutic production of cells.

AASTROMREPLICELL/(TM)/ SYSTEM FOR STEM CELL THERAPY

The Company's initial application for the AastromReplicell/(TM)/ System is expected to be in the growing field of stem cell therapy, where the Company believes that the AastromReplicell/(TM)/ System may address many of the limitations of existing procedures. The AastromReplicell/(TM)/ System 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. Alternatively, UCB cells have been shown to be a new source of cells for use in stem cell transplantations. The starting mixture of either bone marrow or UCB cells is quantified, and an appropriate volume of cells is then inoculated into one or more AastromReplicell/(TM)/ Cell Cassettes with the necessary growth media. Growth-factor-stimulated cells are produced using the AastromReplicell/(TM)/ System in approximately 12 to 13 days, with no further patient involvement. Depending upon the cell quantity necessary for a therapeutic application, single or multiple AastromReplicell/(TM)/ Cell Cassettes may be required, with a different volume requirement of starting cells taken from the patient at the initial visit or obtained from the UCB bank. The AastromReplicell/(TM)/ System has been designed to minimize operator involvement during the cell production process, and the steps required before and after the AastromReplicell/(TM)/ System are standard laboratory procedures. Cells derived from UCB may also serve as a tumor-free source of stem and progenitor cells for expansion in the AastromReplicell/(TM)/ System.

POTENTIAL ADVANTAGES OF AASTROMREPLICELL/(TM)/ SYSTEM

The Company believes that the AastromReplicell/(TM)/ System, if approved for commercial sale by the U.S. Food and Drug Administration ("FDA") and foreign regulatory agencies, may provide certain improvements and efficiencies over traditional cell collection and infusion processes. The following table, which sets forth 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 and procedure time for currently established cell collection and infusion techniques with the AastromReplicell/(TM)/ System method of cell procurement:

CELL SOURCE	CARE EPISODES(1)	PROCEDURE TIME (HOURS)(1)
Bone Marrow Harvest (2).....	8	16
PBSC Mobilization and Collection (3).....	21	39
AastromReplicell/(TM)/ System (4).....	2	1-3

(1) Includes all outpatient, inpatient, and home care episodes.
(2) Includes operating room procedure and all preparatory and recovery procedures.
(3) Based on an average of three rounds of apheresis following cell mobilization injections.
(4) Projections, based on data accumulated during the Company's research and clinical trials.

The Company believes that the AastromReplicell/(TM)/ System may provide the following benefits when compared to current cell collection and infusion methods:

Cost-Effectiveness. The Company believes the AastromReplicell/(TM)/ System has the potential to cost-effectively replace or reduce the 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 AastromReplicell/(TM)/ System 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 or multiple 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

AastromReplicell/(TM)/ System 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 such transplant might reintroduce cancer cells into the patient. Additionally, patients may have undetected tumor cells present in their marrow or PBSC transplant, which could re-establish cancer in the patient following transplant. The Company's initial clinical results, as well as studies conducted by third-party investigators, have shown that some primary human tumor cells die or do not grow during hematopoietic cell culture. The smaller volume of starting cells used for the AastromReplicell/(TM)/ System compared with bone marrow harvest or PBSC transplants may provide approximately 10 to 70 fold less tumor cells in a transplant. Further, in an evaluation of seven tumor-contaminated bone marrow samples that were expanded with the AastromReplicell/(TM)/ System process, the presence of breast cancer cells in each sample was either substantially reduced or was no longer detectable. The Company believes that 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 clinical benefit of such tumor depletion, if any, will vary depending upon the type of cancer and state of disease.

Supplemental therapy with AastromReplicell/(TM)/ System produced cells. Collection of cells for transplant is a variable procedure requiring longer collection procedures for some patients compared to others. The AastromReplicell/(TM)/ System offers a means to augment current collection techniques thereby reducing the overall collection burden for the patient and care provided to a single care episode, and improving patient recoveries.

CLINICAL DEVELOPMENT

The AastromReplicell/(TM)/ System is an automated clinical system designed to be used by medical personnel at hospitals and patient care centers to produce therapeutic cells for the treatment of a broad range of diseases, including cancer, infectious diseases and the restoration of solid tissues.

The AastromReplicell/(TM)/ System is designed as a family of products consisting of an instrumentation platform that operates single-use, patient-specific, therapy kits. Each therapy kit, which is specific to the desired cell or tissue type, is operated by the AastromReplicell/(TM)/ System instrument platform which automates the otherwise complex cell production processes. This instrument platform allows for on site cell manufacturing directly at the hospital, that is compliant with cGMP's. The reagents, growth medium, cytokines, and process instructions contained within each therapy kit are procedure specific for the production of each cell type of therapy. This product design feature provides for a variety of therapy kits to be integrated into the AastromReplicell/(TM)/ System product line.

The AastromReplicell/(TM)/ System is being evaluated in multi-site clinical trials in the U.S. under Investigational Device Exemptions (IDE's) from the FDA and in Europe. The initial goals of the Company's clinical trial program are to obtain a Premarket Approval (PMA) in the U.S., necessary to market the AastromReplicell/(TM)/ System for autologous stem cell therapy and umbilical cord blood transplants, and to obtain approval in Europe to market the AastromReplicell/(TM)/ System for a variety of cell therapy applications, by affixing the CE Mark.

Aastrom is conducting two clinical trials in the U.S. evaluating stem cells produced in the AastromReplicell/(TM)/ System from a small starting amount of bone marrow. The first study utilizes cells produced in the AastromReplicell/(TM)/ System from a small aspirate bone marrow collection as the sole cellular support following ablative chemotherapy. Initial results from the first study have demonstrated the ability of the AastromReplicell/(TM)/ System to safely and reliably produce stem and progenitor cells that engraft and restore blood and immune system function in cancer patients who had undergone very aggressive chemotherapy. Further, the small volume aspirate, along with a purging of contaminated tumor cells during the stem cell production has indicated a way to offer patients a transplant with a lower risk of receiving back tumor cells.

In a second U.S. study, the AastromReplicell/(TM)/ System is being used to compliment traditional therapies by augmenting stem cells collected from a single PBSC apheresis procedure. The objectives of this study are to demonstrate that an optimal targeted recovery can be achieved using the AastromReplicell/(TM)/ System produced cells with a sub-optimal PBSC cell dose that otherwise would not provide this desired outcome. This procedure appears to improve the certainty of procedure outcome by providing a more reliable means of cell collection and patient recovery.

Aastrom has also initiated clinical feasibility trials to evaluate UCB cells produced in the AastromReplicell/(TM)/ System to improve recoveries of pediatric and adult patients requiring donor derived (or allogeneic) stem cell transplants. Preliminary results of the pediatric transplants indicated that AastromReplicell/(TM)/ System-produced cells were safe and well tolerated by the patients, and that transplant cell recoveries during the 100-day post-transplant period were very favorable. Based on the positive data, this pediatric trial was expanded from 10 to 28 patients. Moreover, several UCB banking institutions are now being established by other organizations. This banking infrastructure together with the expansion capabilities of the AastromReplicell/(TM)/ System may lead to UCB as a promising new source of cells for therapeutic use.

Aastrom has initiated two clinical sites in Europe to evaluate the use of AastromReplicell/(TM)/ System cells to promote hematopoietic recovery in breast cancer patients undergoing aggressive myelosuppressive or myelotoxic chemotherapy. Assuming the successful completion of these and other clinical trials, the Company intends to seek approval to market the AastromReplicell/(TM)/ System in Europe through CE Mark Registration. See "--Government Regulation--Regulatory Process in Europe."

The preliminary results of the Company's pre-pivotal trials may not be indicative of results that will be obtained from subsequent patients in the trials or from more extensive trials. Further, there can be no assurance that the Company's pre-pivotal or pivotal trials will be successful, or that PMA registration or required foreign regulatory approvals for the AastromReplicell/(TM)/ System will be obtained in a timely fashion, or at all. See "Business Risks--Uncertainties Related to Clinical Trials."

ADDITIONAL STEM CELL AND OTHER CELL THERAPIES

The Company believes that AastromReplicell/(TM)/ System therapy kits may be developed for application in a variety of other emerging cell therapies in addition to stem cell therapy. The Company believes that the AastromReplicell/(TM)/ System has the potential to supplant current manual cell culture methods to produce therapeutic quantities of cell types such as T-cells, dendritic cells, chondrocytes, mesenchymal cells, keratinocytes and neuronal 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 AastromReplicell/(TM)/ System in these therapies may include: (i) reducing labor and capital costs; (ii) enhancing process reliability; (iii) automating quality assurance; (iv) reducing the need for specialized, environmentally controlled facilities; and (v) providing greater accessibility of these procedures to care providers and patients and, (vi) in certain cases, providing a more biologically active cell product.

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 cell culture environments which may need to be incorporated within the Company's existing product platform. Such modifications may require the Company to raise substantial additional funds, or to seek additional collaborative partners, or both. 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. In addition, the Company may be required to obtain license rights to such technologies in order to develop or modify existing or future products for use in such therapies. No assurance can be given that the Company will be able to obtain such licenses or that such licenses, if available, could be obtained on commercially reasonable terms. See "--Clinical Development" and "Business Risks--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. Therapeutic procedures using Cytotoxic T-lymphocytes ("CTLs") involve 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 (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 tumor and antigens or antigens from infectious agents to the immune system and aid in the generation of a cytotoxic T-cell response to the offending 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 AastromReplicell/(TM)/ System 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 THERAPY APPLICATIONS

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 used, which has traditionally been the source of organs 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 cGMP's.

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 "Business Risks--Future Capital Needs; Uncertainty of Additional Funding."

THE AASTROMREPLICELL/(TM)/ SYSTEM FOR GENE THERAPY

The AastromReplicell/(TM)/ System has been designed to produce cells for therapy and the Company believes that the AastromReplicell/(TM)/ System 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 AastromReplicell/(TM)/ System 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 AastromReplicell/(TM)/ System for gene therapy: (i) the enablement of stem cell gene therapies for a variety of hematologic and other disorders, based on the AastromReplicell/(TM)/ System'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 process 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 marketing, distribution and service provider for the AastromReplicell/(TM)/ System 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

AastromReplicell/(TM)/ System to customers for stem cell therapy applications. The Company has, however, reserved the right to sell the AastromReplicell/(TM)/ System 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 AastromReplicell/(TM)/ System for Stem Cell Therapy Applications. See "Business Risks--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 AastromReplicell/(TM)/ System 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, if Cobe, determines that commercialization of the AastromReplicell/(TM)/ System 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 elected to purchase 714,200 shares of Common Stock in the Company's initial public offering in February 1997. See "Description of Capital Stock--Rights of Cobe" and "Certain Transactions."

The Company has entered into a Strategic Planning Consulting Services and Collaboration Agreement (the "Consulting Agreement") with Burrill & Company, LLC ("Burrill"), pursuant to which Burrill will advise the Company on potential strategic alliances and seek to identify potential collaborations. Pursuant to the Consulting Agreement, Burrill will be paid a monthly retainer of $10,000 and will be reimbursed for expenses. Aastrom has issued Burrill an immediately exercisable warrant to purchase 100,000 shares of Common Stock at an exercise price of $7.24 and a second warrant, which vests over a one-year period ending on October 1998, to purchase 100,000 shares at an exercise price of $7.24. The Consulting Agreement is terminable by either party following periods of up to 30 days following notice.

The Consulting Agreement also provides for payments to Burrill that are based on the timing and amount of proceeds Aastrom may receive from any future strategic alliances. In the event that the Company enters into strategic alliances (which exclude minor technology license agreements and customary manufacturing or supply agreements that do not involve equity investments in Aastrom, as well as performance pursuant to any of Cobe's existing agreements with Aastrom), the Company will pay Burrill a success fee ranging from 4% to 7.5% of the proceeds in connection with the strategic alliance. In addition to the success fee, Aastrom will issue to Burrill additional warrants to purchase up to 500,000 shares of Common Stock, depending upon the achievement of certain milestones.

MANUFACTURING

The Company has established relationships with third party manufacturers which are FDA registered as suppliers for the manufacture of medical products to manufacture various components of the AastromReplicell/(TM)/ System.

In May 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 AastromReplicell/(TM)/ System, 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. In April 1998 the Company entered into a manufacturing agreement with SeaMED for the commercial

manufacturing of the instrument components of the AastromReplicell/(TM)/ System pursuant to a pricing formula set forth in the agreement. The initial term of the manufacturing agreement is three years from the date of the initial shipment of instruments by SeaMED, after which the agreement is automatically renewed until terminated upon a 24-month notice from SeaMED or a 6-month notice from the Company. The Company retains all proprietary rights to its intellectual property which is utilized by SeaMED pursuant to this agreement. During the initial three-year term of the manufacturing agreement, SeaMED is regarded as the Company's preferred supplier and the Company will purchase a minimum of 65% of its instrument requirements for the AastromReplicell/(TM)/ System.

In November 1994, the Company entered into a Collaborative Product Development Agreement with Ethox Corporation ("Ethox"). Pursuant to this agreement, the Company and Ethox collaborated on the design of certain bioreactor assembly and custom tubing kit components of the AastromReplicell/(TM)/ System. 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 March 1996, the Company entered into a five-year License and Supply Agreement with Immunex Corporation ("Immunex") to purchase and resell certain cytokines and ancillary materials for use in conjunction with the AastromReplicell/(TM)/ System. 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. In August 1997, the Company and Immunex amended the agreement to expand the Company's territorial rights to use and sell such materials to a worldwide basis. Unless earlier terminated or renewed by the Company for an additional five-year term, the agreement will expire in April 2001. Pursuant to an agreement between Immunex and the Company, the annual fee due in March 1998 was paid by the Company through the issuance of $1,100,000 in the Company's Common Stock. 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.

In December 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 AastromReplicell/(TM)/ System 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 "Business Risks--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 has exclusive rights to 15 issued U.S. 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; (iii) certain methods of infecting or transfecting target cells with vectors; and (iv) a cell composition containing human stem cells or progenitor cells, or genetically modified stem cells, when such cells are produced in an ex vivo medium exchange culture. Patents equivalent to two of these U.S. patents have also been issued in other jurisdictions: one in Australia and another in Canada and under the European Patent Convention. These patents are due to expire beginning in 2006. 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 a number of U.S. patent applications and corresponding applications in other countries related to various components of the AastromReplicell/(TM)/ System.

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 others for certain 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 in such patents, which would have a material adverse effect on the Company's business, financial condition and results of operations. See "--Research and License Agreements."

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 information. 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 U.S. 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 United States are to be manufactured substantially in the United States, 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.

RESEARCH AND LICENSE AGREEMENTS

In March 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, in March 1992, October 1993 and June 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 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.

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 or modified, 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 or to transfer the license to a non-exclusive basis.

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 United States, 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 cell 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 AastromReplicell/(TM)/ System 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 AastromReplicell/(TM)/ System as a medical device.

Further, it is unclear whether the FDA will separately regulate the cell therapies derived from the AastromReplicell/(TM)/ System. 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 draft documents concerning the regulation of umbilical cord blood stem cell products, as well as cellular and tissue-based 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, called a biologic license application ("BLA"). This proposal may indicate that the FDA will extend a similar approval requirement to other types of cellular therapies. Any such additional regulatory or approval requirements could 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 preclinical and clinical 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 submission with the FDA prior to commencing human clinical trials. The IDE submission must be supported by data, typically including the results of pre-clinical and laboratory testing. Following submission of the IDE, 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, and 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, Quality System Regulation ("QSR"), 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 AastromReplicell/(TM)/ System, and is currently conducting pre-pivotal clinical studies under these IDEs. The Company believes that the AastromReplicell/(TM)/ System 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 QSR regulations. These regulations will require that the Company and any contract manufacturer, design, manufacture and service products and maintain documents in a prescribed manner with respect to manufacturing, testing, distribution, storage, design control and service activities. 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 the safety and efficacy of the product for its intended use, (iv) submission to the FDA of a biologic license application ("BLA") and (v) review and approval of the BLA 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 BLA 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 BLA must be filed with the FDA. The BLA 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 cGMP's and the ability to consistently manufacture the product in the facility in accordance with the BLA. If the FDA finds the inspection unsatisfactory, it may decline to approve the BLA, resulting in a delay in production of products.

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 AastromReplicell/(TM)/ instruments and disposables, will be regulated in Europe as a Class I Sterile or 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 as part of the Aastrom/(TM)/ System are expected to 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 member states of 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.

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 AastromReplicell/(TM)/ System for stem cell therapy. That market is currently dominated by the bone marrow harvest and PBSC collection methods. The Company's clinical data, although early, suggests that cells expanded in the AastromReplicell/(TM)/ System using its current process will enable hematopoietic recovery within the time frames currently achieved by bone marrow harvest, however, neutrophil and platelet recovery times may be slower than with PBSC collection methods. The Company is evaluating techniques and methods to optimize the cells produced in the Aastrom/(TM)/ System to reduce the recovery time of neutrophils and platelets in patients. There can be no assurance that if such procedure optimization does not lead to recovery times equal to or faster than those of PBSC collection methods, such outcome would not have a material adverse effect on the Company's business, financial condition and results of operations. In addition, the bone marrow harvest and PBSC 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 AastromReplicell/(TM)/ System 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 potential competitors such as

Amgen, Inc., CellPro, Incorporated, VimRx Pharaceuticals, Inc. Novartis, A.G., Baxter Healthcare Corp. and Rhne-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.

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.

EMPLOYEES

As of August 31, 1998, the Company employed approximately 87 individuals. 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.

EXECUTIVE OFFICERS OF THE COMPANY

The executive officers of the Company, and their respective ages as of August 31, 1998, are as follows:

Name	Age	Position
R. Douglas Armstrong, Ph.D.	45	President and Chief Executive Officer
William L. Odell	40	Senior Vice President Product Operations
Todd E. Simpson	37	Vice President Finance & Administration, Chief Financial Officer, Secretary and Treasurer
Alan K. Smith, Ph.D.	43	Vice President Research
Bruce V. Husel	40	Vice President Quality Systems

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") (now the Burham Institute), a 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.

William Odell joined the Company in August 1998 as Senior Vice President, Product Operations. Prior to joining Aastrom, Mr. Odell was a Vice President at Mitchell International, a healthcare consulting firm. Prior to that, Mr. Odell served at Owens & Minor, Inc. as Division Vice President, where he was responsible for managing sales, marketing, operations and customer service for the Chicago division. Mr. Odell has also held senior marketing and product development

positions with Smiths Industries Medical Systems, Intertech Resources and Baxter International. Mr. Odell received his Bachelor of Science degree in Business Administration from the University of Illinois at Champaign/Urbana.

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.

Bruce V. Husel joined the Company in November 1997 as Vice President, Quality Systems. From May 1994 to September 1997, Mr. Husel served as Director of Quality Assurance for Sanofi Diagnostics Pasteur, where he led efforts to achieve EN 46001 registration and prepare for CE Marking. From June 1992 to May 1994, Mr. Husel was Director of Quality and Regulatory Affairs for Baxter Anesthesia Division (formerly known as Bard MedSystems). Prior to that, he served as Quality Manager of McGaw, Inc. Mr. Husel received his B.B. degree in Electrical Engineering from Rice University in 1980, an M.S degree in Engineering Management from Southern Methodist University in 1986 and an M.B.A. degree in Accounting from the University of Texas at Dallas in 1987.

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 and as Director of Biochemistry at HyClone Laboratories. 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. Dr. Smith is a director of Chata Biosystems, Inc., a privately held pharmaceutical service company.

ITEM 2. PROPERTIES

The Company leases approximately 22,000 square feet of office and research and development space in Ann Arbor, Michigan under a lease agreement expiring in August 2000. The Lease is renewable at the option of the Company for up to an additional five year term. The Company believes that its facilities are adequate for its current needs. However, additional facilities may be required to support expansion of research and development activities or to assume manufacturing operations which are currently fulfilled through contract manufacturing relationships.

ITEM 3. 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.

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

No matters were submitted to a vote of the Company's security holders during the fourth quarter of the Company's fiscal year ended June 30, 1998.

PART II

Certain information required by Part II is omitted from this Report, in that the Company will deliver to the shareholders of the Company its Annual Report to Shareholders, and certain information included therein is incorporated herein by reference and filed as Exhibit 13.1 to this Report.

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED SHAREHOLDER MATTERS

Certain information regarding the market for the Company's capital stock is incorporated by reference to the Company's Annual Report to Shareholders under the caption "Market for Registrant's Common Equity and Related Shareholders Matters."

ITEM 6. SELECTED FINANCIAL DATA

The information relating to selected financial data is incorporated by reference to the Company's Annual Report to Shareholders under the caption "Selected Financial Data."

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

The information with respect to the management's discussion and analysis of financial condition and results of operations is incorporated by reference to the Company's Annual Report to Shareholders under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations."

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not Applicable

BUSINESS RISKS

The Company's business is subject to a number of risks and uncertainties, including those discussed below.

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 AastromReplicell/(TM)/ System, 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 AastromReplicell/(TM)/ System 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 AastromReplicell/(TM)/ System as an alternative to the bone marrow harvest and peripheral blood stem cell ("PBSC") 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 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 in the U.S., 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. The Company is currently conducting pre-pivotal clinical trials to demonstrate the safety and biological activity of patient-derived or UCB cells produced in the Company's prototype of the AastromReplicell/(TM)/ System in a limited number of patients. If the results from these pre-pivotal trials are successful, the Company intends to seek clearance from the FDA to commence pivotal clinical trials. 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 trials. Further delays in patient accrual, in the Company's current pre-pivotal clinical trials, or in pivotal trials planned to be conducted, 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 AastromReplicell/(TM)/ System 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 trials are designed to demonstrate specific biological safety and activity of cells produced in the AastromReplicell/(TM)/ System, but are not designed to demonstrate long-term sustained engraftment of such cells. The patients enrolled in these pre-pivotal trials will have undergone extensive chemotherapy treatment prior to the infusion of cells produced in the AastromReplicell/(TM)/ System. 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 patients may die or suffer severe complications during the course of the current pre-pivotal trials or future trials. For example, in the trials to date, patients who were in the transplant recovery process have died from complications related to the patient's clinical condition that, according to the physicians involved, were unrelated to the AastromReplicell/(TM)/ System procedure. 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 AastromReplicell/(TM)/ System 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 the AastromReplicell/(TM)/ System. 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. Additionally, there can be no assurance that the Company will not require additional cytokines, components and other materials to manufacture, use or market its product candidates, or that necessary key components will be available for use on a sustained basis, if at all, by the Company in the markets in which it intends to sell its products. 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. 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 becomes limited or interrupted, the Company would not be able to conduct clinical trials or 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.

MANUFACTURING AND SUPPLY UNCERTAINTIES; DEPENDENCE ON THIRD PARTIES

Certain of the compounds used by the Company in its current stem cell expansion process involve the use of animal-derived products. The availability of these compounds for clinical and commercial use may become limited by suppliers or restricted by regulatory authorities, which may impose a potential competitive disadvantage for the Company's products compared to competing products and procedures. There can be no assurance that the Company will not experience delays or disadvantages related to the future availability of such materials. Any restriction on the use of such materials could have a material adverse effect on the Company's business, financial condition and results of operations, and there can be no assurance that the Company will be able to develop or obtain alternative compounds.

Like SeaMED, Ethox, MSP and Immunex, 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 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 parities 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 June 30, 1998, the Company has incurred net operating losses totaling approximately $58.5 million. Such losses have resulted principally from costs incurred in the research and development of the Company's cell culture technologies and the AastromReplicell/(TM)/ System, general and administrative expenses, and the prosecution of patent applications. The Company expects to incur significant and increasing operating losses until product sales commence, 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 for the worldwide distribution of the AastromReplicell/(TM)/ System 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 if Cobe determines that commercialization of the AastromReplicell/(TM)/ System 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 may 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, and if such relationships are established, that they will be successful or sustained on a long-term basis. 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 from the sale of the Series I Shares, together with the Company's available cash and expected interest income thereon, will be sufficient to finance the development and manufacture of the AastromReplicell/(TM)/ System for use in clinical trials, expanded clinical trials, other research and development and working capital and other corporate requirements until mid 1999. This estimate is based on certain assumptions which could be negatively impacted by the matters discussed under this heading and elsewhere under the caption "Business Risks." 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. The Company intends to seek additional collaborative partners to assist in the development of certain of its products. If the Company is not successful in finding, entering into and maintaining such arrangements, 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 "Managements' 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 AastromReplicell/(TM)/ System 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 AastromReplicell/(TM)/ System 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 AastromReplicell/(TM)/ System. 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 guidelines or requirements for approval of such product candidates will continue to be subject to significant uncertainty.

Before marketing, the AastromReplicell/(TM)/ System 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, changes in FDA classification of the Company's products, 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 governmental regulation may be established which could prevent or delay regulatory approval of the Company's products.

The Company believes that the AastromReplicell/(TM)/ System's components will be regulated in Europe as Class I Sterile, Class IIb and Class III medical devices, under the authority of the new Medical Device Directives ("MDD") being implemented by European Union ("EU") member countries. In order for the Company to market its products in Europe, it must obtain a CE Mark from a Notified Body to certify that the Company and its operations comply with certain minimum quality standards and compliance procedures, or, alternatively, that its manufactured products meet a more limited set of requirements. There can be no assurance that the Company and its suppliers will be able to meet these minimum requirements, or, if met, that the Company and its suppliers will be able to maintain such compliance. The result of such non-compliance would have a material adverse effect on the Company's business, financial condition and results of operations. There can be no assurance, however, that the AastromReplicell/(TM)/ System will ultimately be regulated in Europe as currently expected, and, if the AastromReplicell/(TM)/ System is not so regulated, the Company could be forced to obtain additional regulatory approvals and could be subject to additional regulatory requirements and uncertainty, which would have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Government Regulations."

CONSEQUENCES OF COBE RELATIONSHIP

Cobe is the largest single shareholder of the Company, beneficially owning approximately 20.2% of the outstanding Common Stock (prior to conversion of any 1998 Series Shares into Common Stock, but including the shares of Common Stock issuable upon conversion of the outstanding 5 1/2% Convertible Preferred Stock as of June 30, 1998). In addition, Cobe has certain preemptive rights to maintain its relative percentage ownership and voting interest in the Company. Cobe also has an option, until February 2000, 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. Edward C. Wood, Jr., the President of Cobe BCT, is a director of the 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. 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.

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 AastromReplicell/(TM)/ System for stem cell therapy. That market is currently dominated by the bone marrow harvest and PBSC collection methods. The Company's clinical data, although early, suggests that cells expanded in the AastromReplicell/(TM)/ System using its current process will enable hematopoietic recovery within the time frames currently achieved by bone marrow harvest, however, neutrophil and platelet recovery times may be slower than with PBSC collection methods. The Company is evaluating techniques and methods to optimize the cells produced in the AastromReplicell/(TM)/ System to reduce the recovery time of neutrophils and platelets in patients. There can be no assurance that if such procedure optimization does not lead to recovery times equal to or faster than those of PBSC collection methods, such outcome would not have a material adverse effect on the Company's business, financial condition and results of operations. In addition, the bone marrow harvest and PBSC 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 AastromReplicell/(TM)/ System 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, Novartis, A.G., VimRx Pharmaceuticals, Inc. 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.

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 for certain 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, which would have a material adverse effect on the Company's business, financial condition and results of operations. 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 the 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 depends 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 of the use of each of the Company's products to each payor separately. Significant uncertainty exists as to the payments 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 form 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.

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.

PRODUCT LIABILITY AND LIMITED INSURANCE

The Company faces an inherent business risk of exposure to product liability claims in the event that the use of the AastromReplicell/(TM)/ System during research and development efforts, including clinical trials, or after commercialization results in adverse effects. As a result, the Company may incur significant product liability exposure. There can be no assurance that existing insurance coverage will be adequate or that adequate insurance coverage for future clinical trials or commercial activities will be available at an acceptable cost, if at all, or that a product liability claim would not materially adversely affect the business, financial condition or results of operations of the Company.

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--Executive Officers of the Company."

SHARES ELIGIBLE FOR FUTURE SALE; POTENTIAL FOR DILUTION

On July 2, 1998 the Company sold 5,000 shares of its newly created 1998 Series I Convertible Stock (the "Series I Stock") to one investor for an aggregate purchase price of $5 million. The shares of Series I Stock are convertible, at the option of the holder, into shares of the Company's Common Stock at the lower of (i) $4.81, or (ii) a price based on the market price of the Company's Common Stock prior to conversion. With limited exceptions, the shares of Series I Stock are not convertible into Common Stock until March 30, 1999 and, subject to extension under certain circumstances, will automatically convert into Common Stock on July 2, 2001, unless converted sooner. In general, the Company may require the holders to convert the Series I Stock if the average closing bid price of the Company's Common Stock exceeds $9.62 for specified periods after July 2, 1999.

Future sales of shares by existing stockholders and sales of substantial amounts of Common Stock in the public market following the conversion of the 1998 Series Shares could adversely affect the market price of the Company's Common Stock and the Company's ability to raise capital. Substantially all of the outstanding shares of Common Stock and the shares issuable upon the conversion of the various series of preferred stock of the Company are freely tradeable, subject to restrictions imposed by Rule 144 under the Securities Act of 1933, as amended, with respect to sales by affiliates.

As of September 21, 1998, 5,000 of the Series I Shares were issued and outstanding, and none of the Series II Shares were outstanding, though the Selling Shareholder is obligated under the Purchase Agreement to purchase 3,000 Series II Shares upon satisfaction of certain conditions. The 1998 Series Shares are each convertible into such number of shares of Common Stock as is determined by dividing the stated value ($1,000) of each 1998 Series Share (as such value is increased by a premium based on the number of days the 1998 Series Shares are held) by the then current conversion price (which is determined by reference to the then current market price). If circumstances were such that the Selling Shareholder was able to and did convert all of its Series I Shares as of September 21, 1998, the Selling Shareholder would have received 2,077,456 shares of Common Stock, but this number of shares could prove to be significantly greater in the event of a decrease in the trading price of the Common Stock. Purchasers of Common Stock could therefore experience substantial dilution of their investment upon conversion of the 1998 Series Shares. Similarly, issuance and sale of the shares of Common Stock upon conversion of the Series II Shares could result in substantial dilution of existing shareholders and could adversely affect the market price for the Common Stock. The 1998 Series Shares are not registered and may be sold only if registered under the Securities Act or sold in accordance with an applicable exemption from registration, such as Rule 144. The shares of Common Stock into which the 1998 Series Shares may be converted are being registered pursuant to a registration statement.

CONTROL BY EXISTING MANAGEMENT AND SHAREHOLDERS

As of August 31, 1998, the Company's directors, executive officers, and certain principal shareholders, including Cobe, affiliated with members of the Board of Directors and their affiliates beneficially own approximately 29% of the outstanding shares of Common Stock (prior to conversion of any 1998 Series Shares into Common Stock, but including the shares of Common Stock issuable upon conversion of the outstanding 5 1/2% Convertible Preferred Stock). 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."

POSSIBLE STOCK PRICE AND VOLUME VOLATILITY

The trading price and volume of the Company's Common Stock has experienced significant volatility. The trading price and volume 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 technology companies for reasons frequently unrelated to or disproportionate to the operating performance of the specific companies. These market fluctuations, as well as shortfalls in revenue or earnings as compared with public market analysts' expectations, changes in such analysts' recommendations or projections and fluctuations in the stock markets generally, as well as sales or offers of the large amounts of Shares, may adversely affect the market price of the Common Stock. In addition, since the Company's initial public offering in February 1997, the average daily trading volume of the Common Stock on the Nasdaq National Market has generally been relatively low. There can be no assurance that a more active trading market will develop in the future.

ANTI-TAKEOVER EFFECT OF CHARTER AND BYLAW PROVISIONS AND MICHIGAN LAW

The Company's Restated Articles of Incorporation authorize the Board of Directors to issue, without shareholder approval, an additional 2,792,000 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 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. The Company's Restated Articles of Incorporation eliminate the right of shareholders to act without a meeting, do not provide for cumulative voting in the election of directors and provide that the holders of at least two-thirds of the outstanding shares of Common Stock must approve certain transactions resulting in a change of control of the Company. In addition, certain provisions of Michigan laws applicable to the Company, including, but not limited to, provisions requiring class or series votes in certain circumstances with respect to proposed business combinations, could also delay or make more difficult a merger, tender offer or proxy contest involving the Company.

ABSENCE OF DIVIDENDS

The Company has never paid cash dividends on its Common Stock and does not anticipate paying any cash dividends on its Common Stock in the foreseeable future. The Company's 5 1/2% Convertible Preferred Stock accrues a dividend at 5 1/2% per annum, payable, at the Company's option, in cash or through the issuance of shares of Common Stock of the Company. As of June 30, 1998, 72,940 shares have been issued as payment of this dividend.

FORWARD-LOOKING STATEMENTS

This Report contains certain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, including, but not limited to, statements regarding: uncertainties related to product development and marketability; uncertainties related to clinical trials; manufacturing and supply uncertainties and dependence on third parties; history of operating losses and anticipation of future losses; limited sales and marketing capabilities and dependence on collaborative relationships; future capital needs and uncertainty of additional funding; uncertainty of regulatory approval and extensive government regulation; consequences of Cobe relationship; competition and technological change; uncertainty regarding patents and proprietary rights; no assurance of third party reimbursement; hazardous materials; and potential product liability and availability of insurance. These statements are subject to risks and uncertainties, including those set forth under this caption, and actual results could differ materially from those expressed or implied in these statements. All forward-looking statements included in this Report are made as of the date hereof, and the Company assumes no obligation to update any such forward-looking statement or reason why actual results might differ.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information relating to Company's financial statements as of June 30, 1996, 1997, and 1998 for each of the three years in the period ended June 30, 1998 and for the period from Inception to June 30, 1998 and the report of independent accountants are incorporated by reference to the Company's Annual Report to Shareholders as set forth under the caption "Financial Statements and Supplementary Data."

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

The information relating to the Company's accountants is incorporated by reference to the Company's Annual Report to Shareholders as set forth under the caption "Changes in and Disagreements with Accountants on Accounting and Financial Disclosure."

PART III

Certain information required by Part III is omitted from this Report, and is incorporated by reference to the Company's definitive Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A in connection with its Annual Meeting of Shareholders to be held on November 11, 1998.

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information relating to the directors of the Company is incorporated by reference to the Proxy Statement as set forth under the caption "General Information--Board of Directors." Information relating to the executive officers of the Company is set forth in Part I of this Report under the caption "Executive Officers of the Company."

Information with respect to delinquent filings pursuant to Item 405 of Regulation S-K is incorporated by reference to the Proxy Statement as set forth under the caption "Section 16(a) Beneficial Ownership Reporting Compliance."

ITEM 11. EXECUTIVE COMPENSATION

The information relating to executive compensation is incorporated by reference to the Proxy Statement under the caption "Executive Compensation and Other Matters."

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information relating to ownership of equity securities of the Company by certain beneficial owners and management is incorporated by reference to the Proxy Statement as set forth under the caption "General Information--Stock Ownership of Certain Beneficial Owners and Management."

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information relating to certain relationships and related transactions is incorporated by reference to the Proxy Statement under the captions "Certain Transactions" and "Compensation Committee Interlocks and Insider Participation."

PART IV

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

(a) THE FOLLOWING DOCUMENTS ARE FILED AS PART OF THIS REPORT:

1. FINANCIAL STATEMENTS.

The information relating to the Company's financial statements is incorporated by reference to the Company's Annual Report to Shareholders under the caption "Financial Statements."

2. FINANCIAL STATEMENT SCHEDULE:

All schedules are omitted because they are not applicable or not required, or because the required information is included in the Financial Statements or Notes thereto.

3. EXHIBITS:

See Exhibit Index.

(b) REPORTS ON FORM 8-K:

On July 15, 1998, the Company filed with the Securities and Exchange Commission a Current Report on Form 8-K, dated July 15, 1998, which contains disclosure under Item 5.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: September 28, 1998 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 Exchange Act of 1934, this Report has been signed below on September 28, 1998 by the following persons in the capacities indicated.

Signature	Title
/s/ R. Douglas Armstrong R. Douglas Armstrong, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)
/s/ Todd E. Simpson Todd E. Simpson	Vice President, Finance & Administration, Chief Financial Officer, Secretary and Treasurer (Principal Financial and Accounting Officer)
/s/ Robert J. Kunze Robert J. Kunze	Chairman of the Board and Director
/s/ Stephen G. Emerson Stephen G. Emerson, M.D., Ph.D.	Director
/s/ Mary L. Campbell Mary L. Campbell	Director
/s/ Horst R. Witzel, Dr.-Ing Horst R. Witzel, Dr.-Ing.	Director
/s/ Edward C. Wood, Jr. Edward C. Wood, Jr.	Director

EXHIBIT INDEX

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
3.1*	Restated Articles of Incorporation of the Company.
3.2**	Bylaws, as amended.
4.1**	Specimen Common Stock Certificate.
4.2**	Amended and Restated Investors' Rights Agreement, dated April 7, 1992.
10.1**#	Form of Indemnification Agreement.
10.2**#	Amended and Restated 1992 Incentive and Non-Qualified Stock Option Plan and forms of agreements thereunder.
10.3**#	1996 Outside Directors Stock Option Plan and forms of agreements thereunder.
10.4**#	1996 Employee Stock Purchase Plan and form of agreement thereunder.
10.5**	Stock Purchase Agreement, dated October 22, 1993, between Cobe Laboratories, Inc. and the Company and amendment thereto dated October 29, 1996.
10.6**+	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.
10.7**	Lease Agreement, dated May 18, 1992, between Domino's Farms Holdings, L.P. and the Company and amendments thereto dated February 26, 1993, October 3, 1994, November 16, 1994 and July 29, 1996.
10.8**#	Promissory Note, dated November 18, 1993, for $120,000 loan by the Company to R. Douglas Armstrong, Ph.D. and amendment thereto dated October 30, 1996.
10.9**#	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.
10.11**	Stock Purchase Commitment Agreement, dated October 15, 1996, between the State Treasurer of the State of Michigan and the Company.
10.12**	Convertible Loan Commitment Agreement, dated October 15, 1996, between the State Treasurer of the State of Michigan and the Company.
10.13**	Letter Agreement, dated November 11, 1996, between the Company and Cobe Laboratories, Inc.
10.16**	Collaborative Supply Agreement, dated December 16, 1996, between the Company and Anchor Advanced Products, Inc. Mid-State Plastics Division.
10.19**#	401(k) Plan.
10.20**#	Form of Employment Agreement.
10.21**	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.
10.22**+	Collaborative Product Development Agreement, dated May 10, 1994, between SeaMED Corporation and the Company.
10.23**+	Collaborative Product Development Agreement, dated November 8, 1994, between Ethox Corporation and the Company.

10.24**+	License and Supply Agreement, dated April 1, 1996, between Immunex Corporation and the Company.
10.26**	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.
10.27**#	Employee Proprietary Information and Invention Agreement, effective June 1, 1991, between the Company and R. Douglas Armstrong, Ph.D.
10.29**#	Employment Agreement, dated December 8, 1995, between the Company and Todd E. Simpson.
10.32**#	Employment Agreement, dated October 26, 1995, between the Company and Alan K. Smith, Ph.D.
10.38****#	Second Amendment to Promissory Note payable to the Company by Stephen G. Emerson, M.D., Ph.D., dated June 30, 1997.
10.39****#	Second Amendment to Promissory Note payable to the Company by R. Douglas Armstrong, Ph.D., dated June 30, 1997.
10.40****	Amendment to License and Supply Agreement, dated August 25, 1997, between Immunex Corporation and the Company.
10.41+	Manufacturing Supply Agreement, dated as of August 14, 1998,, by and between the Company and SeaMED Corporation.
10.42#%	Employment Agreement, dated August 10, 1998, by and between the Company and Bruce Husel.
10.42#	Employment Agreement, dated August 10, 1998, by and between the Company and William Odell.
10.43%	Strategic Planning Consulting Services and Collaboration Agreement, dated October 7, 1997, between Burrill & Company, LLC and the Company.
11.1	Statement regarding computation of net loss per share.
13.1	Annual Report to Shareholders.
23.1	Consent of PricewaterhouseCoopers LLP.
27.1	Financial Data Schedule.

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* Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 1996, as filed on March 7, 1997.

** Incorporated by reference to the Company's Registration Statement on Form S-1 (No. 333-15415), declared effective on February 3, 1997.

*** Incorporated by reference to the Company's Current Report on Form 8-K, as filed on July 16, 1997.

**** Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended June 30, 1997, as filed on September 25, 1997.

% Incorporated by reference to the Company's Registration Statement on Form S-1 (No. 333-37439), as filed on October 8, 1997.

+ Confidential treatment has been requested as to a portion of this exhibit.

Management contract or compensatory plan or arrangement covering executive officers or directors of the Company.

Exhibit 10.41
"Confidential Treatment Requested"

MANUFACTURING SUPPLY AGREEMENT

[*] = CERTAIN INFORMATION IN THIS DOCUMENT HAS BEEN OMITTED AND FILED SEPARATELY WITH THE COMMISSION. CONFIDENTIAL TREATMENT HAS BEEN REQUESTED WITH RESPECT TO THE OMITTED PORTIONS.

INDEX OF DEFINED TERMS

Exhibit 10.41
"Confidential Treatment Requested"

MANUFACTURING SUPPLY AGREEMENT

This Manufacturing Supply Agreement (the "Agreement") is entered into as of April 14, 1998, by and between Aastrom Biosciences, Inc., a Michigan corporation ("Aastrom"), and SeaMED Corporation, a Washington corporation ("SeaMED").

A. Aastrom and SeaMED previously entered into a Collaborative Product Development Agreement dated May 10, 1994 (the "Development Agreement"), pursuant to which SeaMED agreed to collaborate with Aastrom to complete the necessary design work for, and produce pre production units of, an instrument or instruments (the "Instrument") for a proprietary Aastrom Cell Production System (CPS) which is used for cell growth (the "System"). Attached hereto as Exhibit ------- A is a general description of the System, including the Instrument.
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B. Pursuant to the terms of Section 6 of the Development Agreement, the parties agreed to enter into a manufacturing agreement for SeaMED to manufacture commercial units of the Instrument.

C. In accordance with Section 6 of the Development Agreement, the parties are entering into this Agreement to set forth the terms and conditions pursuant to which SeaMED will manufacture commercial units of the Instrument for Aastrom.

D. The terms and conditions of the Development Agreement shall remain in effect until such time as Aastrom issues to SeaMED a purchase order for the production version of the Instruments as set forth in the Specifications and such order has been accepted by SeaMED, with such acceptance not being unreasonably withheld.

AGREEMENT

NOW, THEREFORE, the parties hereby agree as follows:

1. Manufacture, Delivery and Acceptance of Instrument Units.

1.1 Manufacture of Instrument Units. SeaMED shall manufacture and
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sell to Aastrom so many of the Instrument units as Aastrom may order, with each Instrument unit being manufactured in accordance with (i) the then-current specifications as set forth in this Agreement; (ii) then current applicable Good Manufacturing Practices (as described in Title 21 of the U.S. Code of Federal Regulations, Part 820); and (iii) any other applicable standards (UL, CSA, IEC and TUV) for manufacturing of the Instrument. SeaMED shall maintain its manufacturing facility, equipment and procedures so as to obtain and comply with EN 46001 certification in accordance with the EC Medical Directives, and shall apply the EC mark to Instrument units intended for the European market.

1.2 Specifications, DMR and Changes.

(a) Specifications. SeaMED shall manufacture the Instruments in
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accordance with the specifications attached hereto as Exhibit B

("Specifications") and no part of SeaMED's responsibility may be subcontracted without the prior written consent of Aastrom.

(b) Establish DMR. SeaMED shall prepare a Device Master Record ("DMR") covering the manufacture of the Instruments from the Specifications, other requirements and technical information to be provided by Aastrom, and manufacturing quality processes and procedures established by SeaMED in accordance with SeaMED's Device Master Record Procedure. "*"

(c) Specification and DMR Changes. Notwithstanding any provision of this Agreement to the contrary, SeaMED shall not have the right to change the Specifications or DMR except as in accordance with the procedure set forth in Exhibit C. If a Party desires a change to Specifications or any part of the DMR, it shall submit a proposed change in accordance with the procedure set forth in Exhibit C, setting forth a detailed description and drawings thereof. The Parties shall work in good faith as expeditiously as is reasonable to reach a determination whether a change to Specifications will be made and, if so, when such change will be implemented and the effect that such change will have, if any, on quantities, quality criteria, price and delivery dates.

1.3 Forecast and Order Schedule. Every month during the term of this Agreement, Aastrom shall provide SeaMED with a rolling forecast of the anticipated quantity of Instrument units Aastrom intends to purchase each month from SeaMED for the following twelve-month period. The quantities given for the first six months of each twelve-month rolling forecast shall be firm orders (the "Firm Order Period") and Aastrom shall issue its purchase order therefor. Quantities beyond the foregoing Firm Order Period are for planning purposes only. SeaMED shall fulfill all orders submitted by Aastrom, and SeaMED shall have no right to unreasonably limit the number Instruments being added to the Firm Order Period by Aastrom. For example, the forecasted quantity of Instrument units that Aastrom intends to purchase from SeaMED during the period from January through December would contain a Firm Order Period that includes the quantities to be delivered from January through June. In February of that year, Aastrom would finalize the quantity of units to be delivered by SeaMED in July which would become part of the Firm Order Period and SeaMED would have no right to unreasonably limit the quantity of Instrument units being added to the Firm Order Period for Delivery in July. Such update to the forecast will be performed on a monthly basis. Further, SeaMED shall use its best reasonable efforts to accommodate Aastrom requested changes to the forecasted volumes and delivery dates during the Firm Order Period, with such requested changes to be received from Aastrom in writing. In the event that SeaMED determines that economies can be achieved by purchasing materials to meet Aastrom's forecasts beyond those set forth in Aastrom's purchase order, SeaMED may purchase such materials only upon the written approval of Aastrom. SeaMED shall have no obligation to purchase materials without a purchase order from Aastrom except as necessary to meet Aastrom's firm purchase orders or other written authorization

received from Aastrom to procure materials. Aastrom shall pay SeaMED for all materials and direct costs expended by SeaMED to fill Aastrom's firm purchase orders for Instruments in the event that they are not used to fulfill such purchase orders or other written authorization to procure materials.

1.4 "*"

1.5 Shipment and Risk of Loss. SeaMED shall deliver the Instrument units FOB SeaMED's manufacturing facility, for shipment to Aastrom's premises in Ann Arbor, Michigan, or to such other address as specified by Aastrom. Title and risk of loss shall pass to Aastrom upon SeaMED's delivery of the Instrument units to a licensed carrier approved by Aastrom for shipment to Aastrom. At the request of Aastrom, SeaMED shall obtain insurance, acceptable to Aastrom, for each instrument shipment with the cost of such insurance to be paid by SeaMED and invoiced to Aastrom.

1.6 "*"

1.7 Inspection and Acceptance. Promptly after Aastrom receives a shipment of the Instruments "*", Aastrom, or its designee, shall inspect the Instruments to verify that they have been manufactured in accordance with the required Specifications. Delivery of each Instrument unit shall be deemed accepted by Aastrom unless SeaMED is notified in writing of Aastrom's rejection of such delivery within thirty (30) days after the delivery date of the Instrument "*", due to a failure thereof to comply with the Specifications, including the acceptance test criteria. In the event that SeaMED receives such notice, SeaMED shall take all necessary actions to remedy and correct any non-conforming Instrument units. "*" If an Instrument is found later to be non-conforming to the required Specifications, the fact that Aastrom did not discover the non-conformance earlier shall not impair Aastrom's warranty rights under Section 5.1 below.

2. Continuing Obligations of SeaMED.

2.1 Engineering Support. During the term of this Agreement, SeaMED shall collaborate with Aastrom and any other design contractors designated by Aastrom with regard to engineering support necessary to support the manufacture of the Instruments. Without limiting the foregoing, SeaMED shall:

(a) Assist Aastrom with respect to planning for any manufacturing issues that arise in connection with Instrument, including issues relating to manufacturing process development and validation, component sourcing, and maintenance of DMR documentation requirements;

(b) Assist Aastrom to establish a reliability goal for the Instrument, calculate the reliability of the Instrument units at certain established review points during the design and development of the Instrument, and perform demonstration tests on pilot production units produced by SeaMED;

(c) Maintain working drawings for manufacturing and testing the Instrument units, including without limitation, (i) specifications for component parts to be acquired from specified vendors, (ii) drawings and specifications for component parts, (iii) test and acceptance procedures and criteria, (iv) subassembly specifications, drawings and requirements, (v) costed bill of materials, and (vi) revised Specifications, including product specific manufacturing procedures, DMR, routing and processes which revised Specifications shall be subject to the prior written approval of Aastrom in accordance with Exhibit C;

(d) To the extent required for submittal to the U.S. Food and Drug Administration ("FDA") (or comparable foreign agencies) for Aastrom's IDE and/or PMA (or comparable foreign approvals), prepare a detailed description of SeaMED's manufacturing methods, processes, procedures and facility applicable to Aastrom's Instrument; and

(e) Collaborate with Aastrom on any engineering projects that Aastrom may request. Aastrom shall deliver to SeaMED a written request for such engineering work and SeaMED shall deliver to Aastrom a proposal which, if acceptable to Aastrom, will be authorized by Aastrom prior to the initiation of work by SeaMED. "*"

2.2 Maintenance of Adequate Facilities and Manufacturing Practices
SeaMED shall assemble all of the Instrument units in an environment where current good manufacturing practices are followed. Inasmuch as SeaMED's U.S., European Economic Community and other foreign body facility registration and inspection records are extremely important to Aastrom's ability to obtain prompt regulatory approval for Aastrom's System, SeaMED hereby agrees to use its best efforts to maintain in good standing all appropriate regulatory facility registrations and inspection records stated in Section 3.2 and Section 6.

2.3 No Subcontracting. No part of SeaMED's obligations under this Agreement shall be subcontracted by SeaMED without the prior written approval of Aastrom.

2.4 Inventory and Insurance. All inventory of components and materials purchased by SeaMED to make Instrument units shall be owned by SeaMED and shall be insured against risk of loss by SeaMED. Any components and materials purchased by Aastrom and delivered to SeaMED for SeaMED to use to make Instrument units shall be covered by SeaMED's insurance policy for risk of loss while said items remain in SeaMED's facility, with Aastrom being the loss payee therefor.

2.5 Aastrom's Equipment SeaMED shall install, maintain and account for all tools, fixtures, molds, dies or other equipment provided or paid for by Aastrom for manufacture of the Instrument at SeaMED's facility and at any of SeaMED's permitted subcontractor facilities. SeaMED hereby acknowledges that Aastrom's equipment is the sole and exclusive property of Aastrom and shall identify and tag such items as Aastrom's equipment. SeaMED shall ensure that such tags are properly placed and maintained on all of Aastrom's equipment and hereby covenants that, during the term of this Agreement:

(i) SeaMED, and any permitted subcontractor of SeaMED using Aastrom's equipment, shall utilize Aastrom's equipment solely for manufacturing Aastrom's requirements of the Instrument as provided hereunder,

(ii) SeaMED shall not encumber any of Aastrom's equipment, nor shall SeaMED permit Aastrom's equipment to become encumbered as a result of any act or omission of SeaMED or a subcontractor of SeaMED.

Within twenty (20) business days following termination or expiration of this Agreement and at Aastrom's request, SeaMED agrees to properly pack and return to Aastrom or it designee, or cause to be properly packed and returned to Aastrom or its designee, F.O.B., point of shipment, all of Aastrom's equipment, the same to be shipped to such facility as Aastrom directs at Aastrom's expense.

2.6 Financial Condition. Each party shall give written notification to the other party of any material adverse financial condition affecting the party, including without limitation: (i) the filing of a significant lawsuit against the party, (ii) the lack of cash funds available to pay all obligations of the party as they become due, (iii) the lack of resources available to enable the party to fully and promptly perform its obligations under this Agreement on schedule, or (iv) any other condition which may jeopardize or impair the full and prompt performance by the party of its obligations under this Agreement. Said notification shall be given within five (5) days after the occurrence or realization of said adverse condition.

3. Manufacturing Process, Registration and Compliance.

3.1 Manufacturing Process. SeaMED shall furnish to Aastrom copies of the documentation which fully describes in detail the manufacturing and testing processes, methods and techniques used to manufacture and test the Instrument, including without limitation, all necessary Instrument information, documentation, drawings, equipment lists, material lists, traceable recordings, tooling, suppliers, Specifications and description of manufacturing methods, facilities and processes (including DMR) required by U.S. or foreign regulatory agencies, to enable the continued manufacture of the Instrument. SeaMED shall provide copies of such information in printed and/or electronic form as Aastrom may request and at Aastrom's reasonable expense. As changes or improvements are contemplated in said manufacturing, the documentation describing the changes and improvements will be furnished to Aastrom for approval prior to implementation. SeaMED acknowledges that the System is a PMA device and that changes to the manufacturing and testing process will likely require submission to FDA and FDA approval prior to implementation. SeaMED acknowledges that similar regulatory review and approval will be required for non-U.S. sale of Instruments. "*"

3.2 Registration and Compliance. SeaMED hereby represents to Aastrom that it is registered with the FDA as a contract medical device manufacturer in accordance with the Federal Food, Drug and Cosmetic Act 21 CFR Part 807, as amended. SeaMED also hereby represents that it has achieved EN46001 certification by TUV as notified body and that during

the term of this Agreement, shall maintain and document a quality system as may be required as a condition of maintaining such registration and certification.

4. Price and Payment Terms.

4.1 Price. Subject to Section 4.2, Aastrom shall compensate SeaMED for SeaMED's manufacture and supply of Instrument units as further described on Exhibit D attached hereto. The prices set forth on Exhibit D shall include all packaging, packing and taxes, except sales taxes imposed upon the sale or transfer of the Instrument. The cost of freight and insurance incurred by SeaMED on Aastrom's account, if any, shall be invoiced to Aastrom. Aastrom shall have no liability for such taxes if it has complied with resale tax certificate requirements. Furthermore, if Aastrom is liable to pay these taxes, they shall be specifically listed on SeaMED's invoice.

4.2 Price Adjustments. "*", either SeaMED or Aastrom may request a change in the purchase price based upon the pricing formula set forth in Exhibit D, to accommodate increased or decreased costs of manufacture, or an increase or decrease in the number of Instrument units ordered by Aastrom. Such request and change shall be based upon demonstrated increased or decreased costs of components or labor for the units manufactured and to be manufactured or increase or decrease in volume of units ordered by Aastrom. If any costs of components or labor decrease during the term of this Agreement, or if the number of units manufactured is materially greater than the estimated number used for establishing the previous price, then SeaMED shall reduce the purchase price to reflect such changes. Similarly, if the costs of components or labor increase, or the number of units manufactured is materially less than the estimated number used for establishing the previous price, then SeaMED and Aastrom shall increase the price to reflect such changes. "*"

4.3 Payment Terms. Aastrom shall pay SeaMED the invoiced price in U.S. dollars for each shipment of Instrument units accepted by Aastrom within thirty (30) days after the later of (i) the date the invoice for such shipment is received by Aastrom, or (ii) the date the shipment of Instruments is delivered by SeaMED to Aastrom or Aastrom's designee. Unless otherwise specified or required by law, all prices will be quoted and billed exclusive of federal, state, or local excise, sales, or other similar taxes. Although the parties do not expect any such taxes, if any such taxes are payable, they will appear as an additional item on the invoices.

5. Warranties.

5.1 Manufacturer's Warranty. "*" During the Warranty Period, SeaMED warrants that each Instrument unit (i) shall be manufactured in full compliance with the Specifications, (ii) shall be free from defects in material and workmanship, and (iii) shall be free from defects in design as to those specific elements for which SeaMED was primarily responsible for the design, as specified in the Project Plan, as amended, as such term is defined in the Development Agreement. As to the elements of the Instrument for which SeaMED was not primarily responsible for the design, SeaMED makes no warranty as to design. SeaMED further warrants that the manufacture, assembly and delivery of the Instrument hereunder shall be in compliance with (a) all applicable federal, state and local laws, rules, regulations and executive

orders, including without limitation, all of the employee compensation, health and safety and environmental laws applicable to SeaMED's facility, and all U.S. customs laws and regulations, and applicable regulations of the FDA and the European Community and Japanese equivalent of the FDA; and (b) performed in a professional, workmanlike manner in accordance with prevailing industry standards. SeaMED understands that Aastrom may sell the Instrument to hospital customers or other users. SeaMED agrees that the foregoing warranties are for the benefit of Aastrom and any ultimate end-user of the Instrument.

5.2 Limitation on Liability. "*"

5.3 Aastrom's Warranty. Aastrom warrants that all elements of the Instrument units for which SeaMED was not primarily responsible for the design shall be free from defects in design.

5.4 Disclaimer of Warranties. EXCEPT FOR THE WARRANTIES SET FORTH IN THIS SECTION, THE PARTIES DISCLAIM ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

6. Records; Inspection and FDA Reports.

6.1 Records Inspection. SeaMED shall keep full and complete records with respect to its manufacture of the Instrument, including a Device History Record which will document that each Instrument has been manufactured in accordance with the DMR and Specifications, and all records of costs and purchase price adjustments. All such manufacturing records shall be owned by Aastrom. At Aastrom's request, SeaMED shall allow Aastrom or its designee to inspect and audit such records. Additionally, at Aastrom's request, SeaMED shall allow Aastrom to inspect the facility where the Instrument units are manufactured, and to inspect any work in progress on the Instruments, for quality control purposes. Further, at Aastrom's request, SeaMED shall make available to Aastrom or its designee all information as Aastrom may reasonably request relating to the purchase of components and to the manufacture, assembly and shipment of the Instrument, and to the performance by SeaMED of its obligations hereunder.

6.2 FDA Inspection Reports SeaMED shall provide Aastrom with copies of any FDA Form 483 observations, follow-up warning letters and/or close-out reports for those portions of FDA CGMP / QSR compliance inspection reports relating specifically to the Instrument or the System's regulatory submission for any facility where the Instrument is manufactured and will work closely with Aastrom when responding to Form 483 observations that impact the Instrument or System. "*" SeaMED shall immediately report to Aastrom in writing any adverse events, circumstances, or potential problems relating to SeaMED's registrations and inspections that could adversely effect the Instrument or the System approval. SeaMED shall furnish to Aastrom a copy of the facility registrations and inspection reports specifically related to the System applicable as of the date of this Agreement and throughout the term of this Agreement. SeaMED shall allow Aastrom and its agent to review and inspect SeaMED's facilities, and regulatory compliance files, and correspondence to and from the FDA

regarding inspections, registrations, and audits that pertain directly to the Instruments or any regulatory submission with regard to the System.

7. Indemnification.

7.1 By SeaMED. SeaMED shall indemnify, defend and hold harmless Aastrom and its officers, directors, employees and agents for any loss, claim, cost or damage arising out of any claim or action for bodily injury based on the use of any Instrument unit to the extent that such loss, claim, cost or damage results, directly or indirectly, (i) from a breach by SeaMED of its warranties as set forth in this Agreement, or (ii) from any negligent, willful or intentional acts by SeaMED.

7.2 By Aastrom. Aastrom shall indemnify, defend and hold harmless SeaMED and its officers, directors, employees and agents for any loss, claim, cost or damage arising out of any claim or action for bodily injury based on the use of any Instrument unit to the extent such loss, claim, cost or damage does not result from SeaMED's acts described in Section 7.1 above, but rather results, directly or indirectly, (i) from the negligent, willful or intentional acts of Aastrom or its agents (other than SeaMED), (ii) from a breach by Aastrom of its warranties with respect to the Instrument unit, or (iii) from any product liability claim related to, or arising out of, the Instrument units, other than those claims described in Section 7.1 above.

7.3 Patent Infringement. Aastrom shall indemnify and hold SeaMED harmless from any loss, damage, or cost (including reasonable attorneys' fees and expenses) arising from any claim that the Instrument or its operation infringes a United States patent, trademark, copyright, or other proprietary right, including trade secrets. SeaMED shall indemnify and hold Aastrom harmless from any loss, damage, or cost (including reasonable attorneys' fees and expenses) arising from any claim that SeaMED's manufacturing processes or methods infringes a United States patent or other proprietary right, including trade secrets.

7.4 Control of Action. "*"

7.5 Insurance. SeaMED agrees to provide and maintain, at its sole expense, comprehensive general liability insurance, including product liability insurance, covering worldwide sales of, and bodily injury and property damage claims of third parties for accidents or injuries arising out of the use of, the Instrument units manufactured by SeaMED. Said insurance shall have a combined single limit of $5 million per occurrence, as a total limit of liability for any one occurrence with respect to bodily injury and property damage, with a deductible of no higher than $25,000, and with no aggregate annual limit. Within ten (10) days after the Effective Date, SeaMED will furnish to Aastrom certificates of insurance evidencing that such insurance is in effect. "*"

8. "*".

8.1 Continuing Prohibition. At all times both during and after the term of this Agreement, SeaMED shall not make or sell, or enable others to make or sell, the Instrument, excepting only for making and selling the Instrument for Aastrom. Similarly, at all times

SeaMED shall not use, or enable others to use, any of Aastrom's proprietary information as further described in Section 9 below.

8.2 "*"

8.3 No Use of Aastrom's Proprietary Information. "*", SeaMED shall not thereafter render any services or make or sell any product for any other party which services or products use or arise out of technology developed or owned by Aastrom or developed by SeaMED on behalf of Aastrom. Such methods or systems shall include, without limitation, those presently in the course of development by Aastrom and those which shall be developed by SeaMED and/or Aastrom and/or the other design contractors in furtherance of this Agreement. SeaMED acknowledges and agrees that Aastrom has a legitimate business purpose in precluding SeaMED from divulging or otherwise using any and all information derived by SeaMED in the course of performing this Agreement, and that Aastrom intends to use the Instrument and related methods and systems for its own business purpose and competitive advantage in the marketplace.

9. Proprietary Information.

9.1 Aastrom's Property; Use of Property by SeaMED. SeaMED recognizes the proprietary interest of Aastrom in the techniques, designs, specifications, drawings and other technical data now existing or developed during the term of this Agreement relating to the System. SeaMED acknowledges and agrees that such techniques, designs, specifications, drawings and technical data relating to the System, whether developed by SeaMED alone, in conjunction with others, or otherwise, shall be and is the property of Aastrom. SeaMED shall cooperate fully in communicating to Aastrom or its agents the property described above. SeaMED hereby waives any and all right, title and interest in and to such proprietary information. SeaMED shall have the right to use any technology, information, samples, documents and other proprietary information of Aastrom provided in connection with the manufacturing activities described herein solely and exclusively for the purpose of manufacturing the Instrument for Aastrom and for no other purpose.

9.2 Inventions. As to any improvement to the Instrument, any component thereof or any disposable used in connection therewith, which is made by SeaMED's employees or agents in the course of SeaMED's work for Aastrom, or as a result thereof, which improvement constitutes a patentable invention, SeaMED hereby agrees to promptly disclose the same to Aastrom, and SeaMED hereby agrees to assign to Aastrom, and SeaMED hereby agrees to cause the inventor/employee to assign to Aastrom, all ownership rights in the invention; and SeaMED shall cause said inventor/employee to sign appropriate patent applications prepared at the expense of Aastrom.

9.3 Nondisclosure. SeaMED acknowledges and agrees that Aastrom is entitled to prevent Aastrom's competitors from obtaining and utilizing Aastrom's trade secrets. SeaMED agrees during the term hereof and thereafter to hold Aastrom's trade secrets and other confidential or proprietary information in strictest confidence and not to use them for purposes other than performance hereunder, and not to disclose them or allow them to be disclosed, directly or indirectly, to any other person or entity, other than to persons engaged by SeaMED for

the purpose of performance hereunder, without Aastrom's prior written consent. SeaMED acknowledges the confidential nature of its relationship with Aastrom and of any information relating to the Instrument, Aastrom, or its distributors, agents, clients or customers which SeaMED may obtain during the term hereof. SeaMED also agrees to place any persons to whom said information is disclosed for purposes of performance hereunder under a legal obligation to treat such information as strictly confidential.

9.4 Confidentiality. The provisions and arrangements made under this Agreement are confidential between parties. Each party shall protect confidential information in the same manner it protects its own confidential materials. Neither party shall make any reference to this Agreement or any provision hereof in any publicly disseminated literature, printed matter, or other publicity issued by or for it, except (i) as required by law, (ii) in connection with a public or private offer or sale of securities, a business collaboration or transaction, or a governmental or industry regulatory communication, or (iii) in a fashion and at a time mutually agreed upon by both parties after the execution of this Agreement. After Aastrom has sold an Instrument in the ordinary course of business, SeaMED may add Aastrom to SeaMED's list of customers and may show external product photographs for marketing purposes but may not disclose the other business terms of this Agreement to other third parties.

10. Term. The term of this Agreement shall commence on the Effective Date and shall continue in full force and effect until "*" after the date of shipment by SeaMED of an initial Instrument unit pursuant to this Agreement. The term of this Agreement shall be renewed automatically after the initial term for an indefinite continuous term unless (i) SeaMED gives Aastrom written notice of its intent not to renew at least "*" prior to expiration of the initial term; or (ii) Aastrom gives SeaMED written notice of its intent not to renew at least "*" prior to expiration of the initial term. The renewed term of this Agreement may be terminated at any time by SeaMED giving Aastrom a "*" written notice of termination, or by Aastrom giving SeaMED a "*" written notice of termination.

11. Default and Termination.

11.1 Breach. The occurrence of any one or more of the following events shall constitute an event of default hereunder, and upon the expiration of any applicable time period for a cure, shall constitute a breach of this Agreement, giving rise to the rights identified in Section 11.2 hereof:

(a) If Aastrom shall default hereunder in the payment of funds when due and such default continues for a period of thirty (30) days after written notice thereof;

(b) If either party fails to faithfully perform or observe any agreement or condition to be performed by such party and if such default continues for a period of thirty (30) days after written notice thereof, specifying the nature of such default;

(c) If any proceeding is commenced by or for either party under any of the bankruptcy laws, or if either party is adjudged insolvent by any court, makes an assignment for the benefit of creditors, or enters into a general extension agreement with creditors that either

Party reasonably determines has materially impaired the other Party's ability to perform under this Agreement;

(d) If SeaMED shall breach its obligation to timely repair any defective Instrument unit pursuant to Section 1.7 or Section 5.2; or

(e) If SeaMED shall breach its obligations of "*" confidentiality set forth in Sections "*" hereof.

(f) SeaMED breach shall not include events that are design changes, software or other factors under the primary control of Aastrom or as set forth in Section 12.2.

11.2 Remedy In addition to all rights and remedies provided under law, the non-defaulting party shall have the right, in the event of default, to terminate this Agreement and any obligations imposed on such non-defaulting party hereunder subject to Section 11.3 below.

11.3 Obligations Upon Termination. Upon any termination of this Agreement, (i) both parties shall fully perform all of their obligations accruing up through the date of termination and "*"complete any work in process if so requested by Aastrom upon termination of this Agreement.

12. Miscellaneous

12.1 Independent Contractors The relationship between Aastrom and SeaMED hereunder shall be that of independent contractors, and nothing in this Agreement shall be deemed to constitute a joint venture, partnership, agency or employer/employee arrangement between the parties. Neither party shall have any authority or power to bind the other party or to contract in the name of, or make any representations or warranties, express or implied, on behalf of the other party, or otherwise create any liability against the other party in any way for any purpose.

12.2 Causes Beyond Control The parties hereto shall not be responsible for any loss or breach due to delay in delivery or performance hereunder caused by governmental regulations, controls or directions, outbreak of a state of emergency, hostilities, civil commotion, riots, epidemics, acts of God, other natural casualties, fires, strikes, walkouts or other similar cause or causes beyond the control of the parties. In the event that any party shall be delayed in, or prevented from, performing its obligations under this Agreement as a result of any of the foregoing, such party shall promptly notify the other party of such delay or cessation in performance. "*"

12.3 Successors and Assigns The rights and remedies of Aastrom under this Agreement shall inure to the benefit of the successors, assigns and transferees of Aastrom. "*"

12.4 Applicable Law. The construction of this Agreement, and the rights and liabilities of the parties hereto, shall be governed by the laws of the State of Michigan.

12.5 Severability Each term, condition or provision of this Agreement shall be viewed as separate and distinct, and in the event that any such term, condition or provision shall be held by a court of competent jurisdiction to be invalid, the remaining provisions shall continue in full force and effect.

12.6 Entire Agreement; Modification and Waiver This Agreement contains the entire agreement and understanding between the parties and supersedes all prior agreements and understandings between them relating to the subject matter hereof, including but not limited to any terms contained in the Development Agreement pertaining to the commercial manufacture by SeaMED of Instrument units for Aastrom. This Agreement may not be amended or modified except by an instrument in writing, signed by duly authorized representatives of both parties. The waiver, express or implied, by any party of any right hereunder or of any failure to perform or breach hereof by any other party shall not be deemed to constitute a waiver of any other right hereunder or of any claim in respect of any other failure to perform or breach.

12.7 Counterparts This Agreement may be executed in counterparts all of which together shall constitute one and the same instrument.

12.8 Dispute Resolution. Any controversy or claim arising out of or relating to this Agreement, or the breach or interpretation hereof, shall be resolved through good faith negotiation between the principals of the parties hereto. Any controversy or claim not resolved by mutual agreement shall be submitted to binding arbitration in Ann Arbor, Michigan, in accordance with the rules of the American Arbitration Association ("AAA") as then in effect; and judgment upon the award rendered in such arbitration shall be final and may be entered in any court having jurisdiction thereof. Notice of the demand for arbitration shall be filed in writing with the other party to this Agreement and with the AAA. In no event shall the demand for arbitration be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The party most prevailing in said arbitration, as determined by the arbitrator based upon the parties' respective claims and positions, shall be entitled to recover from the non-prevailing party all attorneys' fees and other costs incurred in connection with the arbitration proceeding.

12.9 Notices. All notices and other communications permitted or required under this Agreement shall be in writing and shall be deemed to have been given when received at the addresses set forth on the signature page hereof, or at such other address as may be specified by one party in writing to the other. Said written notice may be given by mail, telecopy, rush delivery service, personal delivery or any other means.

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

AASTROM:

AASTROM BIOSCIENCES, INC.

a Michigan corporation

By:

Name: R. Douglas Armstrong, Ph.D.
Title: President and CEO
P.O. Box 376
Ann Arbor, MI 48106
Attn: R. Douglas Armstrong, Ph.D.
Fax: (313) 665-0485

SEAMED:

SEAMED CORPORATION
a Washington corporation

By:

Name: W. Robert Berg
Title: President and CEO
14500 N.E. 87th Street
Redmond, WA 98052
Attn: W. Robert Berg
Fax: (425) 867-0622

EXHIBIT A

General Description of the System and the Instrument

1.1 The Aastrom Cell Production System represents technology for the ex vivo growth and expansion of human stem and hematopoietic progenitor cells as well as other human cells and tissues. In stem cell therapy, the system is intended to provide cells in sufficient volume and with the necessary characteristics to complete a stem cell transplantation or a nadir prevention/rescue resulting from therapies such as high dose chemotherapy or radiation. These cells are grown from a small starting population of cells normally obtained from the bone marrow, umbilical cord blood or peripheral blood. The use of Cell Production System provides for production of cells that can be safely infused in a patient to augment recovery of a compromised hematopoietic system.

1.2 The Aastrom Cell Production System consists of (1) a disposable Cell Cassette cartridge where the growth and expansion of cells takes place, (2) an Incubator unit and companion System Manager module that monitors the expansion process, (3) Processor unit that facilitates the initial filling and inoculation of cells into the Cell Cassette as well as the final harvest of cells at the completion of the expansion process from the Cell Cassette, (4) growth medium as required by the cell culture (to which specified growth factors and glutamine are added), (5) harvest reagents which facilitate the removal of the expanded cells from the Cell Cassette, (6) a system Rack will be available to conveniently integrate multiple Incubator units.

1.2.1 The disposal Cell Cassette contains the cell and medium contact components for the incubation period and provides a functionally closed environment in which the cell expansion can occur. The Cell Cassette is provided fully assembled in a sterile package.

In addition to a Cell Culture Chamber, the medium contact components include a reservoir for medium supply, a pump mechanism for delivery of the medium to the growth chamber, valves to facilitate filling and harvesting, a reservoir for the collection of waste medium exiting the growth chamber, and a reservoir for the collection of harvested cells.

The Cell Cassette also includes a gas chamber which is supplied with a controlled mixture of gases for pH stability and oxygenation of the growth chamber through a gas permeable, hydrophobic membrane that separates the two chambers.

An Identification key containing a non-volatile memory device is attached to the Cell Cassette at the beginning of use and accessed by the System electronics during the cell expansion process to record pertinent data. The Identification Key is detached after cell harvest, and can be archived as part of the patient specific cell expansion record.

1.2.2 The Incubator unit provides the biological and physical environment to support the cell growth process. The Cell Cassette is inserted into the Incubator unit after inoculation is complete and controls: the flow of medium to the Cell Culture Chamber; the temperature of the growth medium supply compartment; the temperature of the growth chamber compartment; and the concentration and flow rate of gases delivered to the gas chamber. The Incubator unit provides various safety/alarm parameters to ensure that the cell expansion process is proceeding as expected.

The Incubator unit receives commands from keys on its front panel and communicates with the operator through a central System Manager. An integral Incubator display also provides information to the operator. Up to fifty Incubator units can be connected to the System Manager. Each Incubator has its own micro-processor controlled systems and operates independently of the System Manager. As such, it will continue to function in the event of failure of the System Manager.

1.2.3 The Processor performs the initial setup of the Cell Cassette with growth medium (supplemented with growth factors) and the inoculation of cells. The same unit also performs the removal of the cells from the Cell Cassette at the completion of the cell expansion process. The System design provides for the appropriate level of sterility assurance during the inoculation and harvest procedures.

1.2.3.1 During initial set up and fill, the operator loads the Cell Cassette onto the Processor, connects the medium supply (supplemented with growth factors) to the Cell Cassette and transfers the medium to an internal reservoir. The operator is prompted to manually and aseptically inject the cells into the Cell Cassette at the appropriate time. The process then continues under software control until the Cell Cassette is ready to be placed in the Incubator unit for cell expansion.

1.2.3.2 At the completion of the expansion process, the operator loads the Cell Cassette back into the Processor, attaches the harvest reagents, and harvesting of the expanded cells proceeds under software control. At the completion of the harvest process, the expanded cell product is contained in a single container to facilitate washing and preparation for direct infusion or cryopreservation.

1.2.4 The Growth Medium for the expansion of hematopoietic cells will be distributed as a separate item in packaging that will facilitate the addition of growth factors and glutamine followed by sterile connection to the Cell Cassette just prior to use.

1.2.5 The Harvest Reagents needed for the process will be distributed as separate items in packaging that will facilitate an aseptic connection to the Cell Cassette for cell harvest.

1.2.6 The system Rack conveniently integrates several Incubators and the System Manager. The Rack organizes connections to the facility and the inter connections between the various modules.

1.2.7 The Application Key is preprogrammed to contain the instructions required for automatic control of the Processor and Incubator operation. It is inserted into the Cell Cassette at the clinical site prior to inoculation of the Cell Cassette and used by the Processor and Incubator to record normal and abnormal processing events, as well as the current state of cell production in the devices. It is the procedure stored on the Application Key that determines the controlled culture conditions needed to allow different types of cells to survive, replicate and differentiate.

The Instrument consists of the components described in paragraphs 1.2.2 (Incubator and System Manager), 1.2.3 (Processor), 1.2.6 (Rack) and 1.2.7 (Application Key).

EXHIBIT B

Specifications for the Instruments

Instrument Specifications are defined in the following SeaMED documents

Document No.	Description
"*"	Specification HDW Requirements Incubator Argonaut
"*"	Specification HDW Requirements Processor Argonaut
"*"	Specification HDW Requirements Rack Argonaut
"*"	Specification HDW Requirements System Manager Argonaut
To be Determined	Specification HDW Requirements Application Key Argonaut

EXHIBIT C

Document Change Control Agreement

1. Purpose and Scope of This Agreement.

1.1 The objective of this agreement is to define the document change control process for documents involved in SeaMED's manufacture of Instruments for Aastrom.

1.2 "*"

1.3 "*"

1.4 "*"

2. "*"

2.1 "*"

2.2 "*"

2.2.1 "*"

2.2.2 "*"

2.2.3 "*"

2.2.4 "*"

2.3 "*"

3. "*"

3.1 "*"

3.2 "*"

3.3 "*"

3.4 "*"

3.5 "*"

3.6 "*"

3.7 "*"

4. "*"

4.1 "*"

4.2 "*"

5. Document Change Authorization.

Aastrom Biosciences, Inc. designated representatives with authority to approve/disapprove proposed changes. Aastrom Biosciences, Inc. is responsible for providing SeaMED with updated names of designated representatives.

	Name (printed)	Signature	Initial
Representative	James Maluta		
Alternate	Bruce Husel		
Alternate	Brian Hampson		

Agreed to, for Aastrom Biosciences, Inc.

- ---------- -----
Name Date

Agreed to, for SeaMED Corp.

- ---------- -----
Document Control Supervisor Date

- ---------- -----
Project Director Date

EXHIBIT D

Pricing

I. Purchase Price. The following formula schedule is used to calculate the Purchase Price for the Instrument.

"*"

EXHIBIT 10.42

EMPLOYMENT AGREEMENT

This employment Agreement (the "Agreement") is entered into as of August 10, 1998, by and between Aastrom Biosciences, Inc., a Michigan corporation ("Employer") and WILLIAM ODELL ("Employee").

NEW THEREFORE, the parties agree as follows:

1. EMPLOYMENT Employer hereby engages Employee, and Employee hereby accepts such engagement, upon the terms and conditions set forth herein.

2. DUTIES Employee is engaged as Sr. Vice President Product Operations. Employee shall perform faithfully and diligently the duties customarily performed by persons in the position for which employee is engaged, together with such other reasonable and appropriate duties as Employer shall designate from time to time. Employee shall devote Employee's full business time and efforts to the rendition of such services and to the performance of such duties. As a full-time employee of Employer, Employee shall not be entitled to provide consulting services or other business or scientific services to any other party, without the prior written consent of Employer.

3. COMPENSATION

3.1 BASE SALARY During the term of this Agreement, as compensation for the proper and satisfactory performance of all duties to be performed by Employee hereunder, Employer shall pay Employees at an annual salary rate of One Hundred Eighty-Five Thousand Dollars ($185,000), payable in semi-monthly installments, less required deductions for state and federal withholding tax, Social Security and all other employee taxes and payroll deductions. The base salary shall be subject to review and adjustment on an annual basis.

4. TERM

4.1 COMMENCEMENT The employment relationship pursuant to this Agreement shall commence on or before August 17th, 1998.

4.2 TERMINATION AT WILL Although Employer and Employee anticipate a long and mutually rewarding employment relationship, either party may terminate this Agreement, without cause, upon fourteen (14) days' prior written notice delivered to the other. It is expressly understood and agreed that the employment relationship is "at will," and with no agreement for employment for any specified term, and with no agreement for employment for so long as Employee performs satisfactorily. Provided, however, before Employer exercises this right of termination at will, Employer shall first either (i) discuss with Employee the needs of Employer and why Employee no longer meets those needs, or (ii) discuss with Employee any concerns or dissatisfactions which Employer has with Employee's performance, and give to Employee a reasonable opportunity to remedy those concerns or dissatisfactions, to the reasonable satisfaction of Employer.

4.3 TERMINATION FOR CAUSE Either party may terminate this employment relationship immediately upon notice to the other party in the event of any good cause, such as a default, dishonesty, neglect of duties, failure to perform by the other party, or death or disability of Employee.

4.4 PAYMENT OF COMPENSATION UPON TERMINATION Upon termination for cause, Employee shall be entitled to the compensation set forth as "base salary" herein, prorated to the effective date of such termination as full compensation for any and all claims of Employee under this Agreement.

5. FRINGE BENEFITS

5.1 CUSTOMARY FRINGE BENEFITS Employee shall be entitled to such fringe benefits as Employer customarily makes available to employees of Employer engaged in the same or similar position as Employee ("Fringe Benefits"). Such Fringe Benefits may include vacation leave, sick leave, and health insurance coverage. Employer reserves the right to change the Fringe Benefits on a prospective basis, at any time, effective upon delivery of written notice to Employee.

5.2 ACCUMULATION Employee shall not earn and accumulate unused vacation in excess of Fifteen (15) days. Employee shall not earn and accumulate sick leave or other Fringe Benefits in excess of an unused amount equal to twice the amount earned for one year. Further, Employee shall not be entitled to receive payments in lieu of said Fringe Benefits, other than for unused vacation leave earned and accumulated at the time the employment relationship terminates.

6. INVENTION, TRADE SECRETS AND CONFIDENTIALITY

6.1 DEFINITIONS

6.1.1 Invention Defined. As used herein "Invention" means inventions, discoveries, concepts, and ideas, whether patentable or copyrightable or not, including but not limited to processes, methods, formulas, techniques, materials, devices, designs, programs (including computer programs), computer graphics, apparatus, products, as well as improvements thereof or know-how related thereto, relating to any present or anticipated business or activities of Employer.

6.1.2 Trade Secret Defined. As used herein "Trade Secret" means, without limitation, any document or information relating to Employer's products, processes or services, including documents and information relating to Inventions, and to the research, development, engineering or manufacture of Inventions, and to Employer's purchasing, customer or supplier lists, which documents or information have been disclosed to Employee or known to Employee as a consequence of or through Employee's employment by Employer (including documents, information or Inventions conceived, originated, discovered or developed by Employee), which is not generally known in the relevant trade or industry.

6.2 INVENTIONS

6.2.1 Disclosure. Employee shall disclose promptly to Employer each Invention, whether or not reduced to practice, which is conceived or learned by Employee (either alone or jointly with others) during the term of his employment with Employer. Employee shall disclose in confidence to Employer all patent applications filed by or on behalf of Employee during the term of his employment and for a period of three (3) years thereafter. Any disclosure of an Invention, or any patent application, made within one (1) year after termination of employment shall be presumed to relate to an Invention made during Employee's term of Employment with Employer, unless Employee clearly proves otherwise.

6.2.2 Employer Property; Assignment. Employee acknowledges and agrees that all Inventions which are discovered, conceived, developed, made, produced or prepared by Employee (alone or in conjunction with others) during the duration of Employee's employment with Employer shall be the sole property of Employer. Said property rights of Employer include without limitation all domestic and foreign patent rights, rights of registration or other protection under the patent and copyright laws, and all other rights pertaining to the Inventions. Employee further agrees that all services, products and Inventions that directly or indirectly result from engagement with Company shall be deemed "works for hire" as that term is defined in Title 17 of the United States Codes, and accordingly all rights associated therewith shall vest in the Company. Notwithstanding the foregoing, Employee hereby assigns to Employer all of Employee's right, title and

interest in any such services, products and Inventions, in the event any such services, products and Inventions shall be determined not to constitute "works for hire."

6.2.3 Exclusion Notice. The Assignment by Employee of Inventions under this Agreement does not apply to any Inventions which are owned or controlled by Employee prior to the commencement of employment of Employee by Employer (all of which are set forth on Exhibit "A" hereto). Additionally, Employee is not required to assign an idea or invention where the Invention or idea meets all of the following criteria; namely if the invention or idea: (i) was created or conceived without the use of any of Employer's equipment, supplies, facilities, or trade secret information, and (ii) was developed entirely on Employee's own time, and (iii) does not relate to the business of Employer, and (iv) does not relate to Employer's actual or demonstrably anticipated research or development, and (v) does not result from any work performed by Employee for Employer.

6.2.4 Patents and Copyrights; Attorney-in-Fact. Both before and after termination of this Agreement (and with reasonable compensation paid by Employer to Employee after termination), Employee agrees to assist the Employer to apply for, obtain and enforce patents on, and to apply for, obtain and enforce copyright protection and registration of, the Inventions described in Section 6.2.2 in any and all countries. To that end, Employee shall (at Employer's request) without limitation, testify in any proceeding, and execute any documents and assignments determined to be necessary or convenient for use in applying for, obtaining, registering and enforcing patent or copyright protection involving any of the Inventions. Employee hereby irrevocably appoints Employer, and its duly authorized officers and agents, as Employee's agent and attorney-in-fact, to act for and in behalf of Employee in filing all patent applications, applications for copyright protection and registration, amendments, renewals, and all other appropriate documents in any way related to the Inventions described in Section 6.2.2.

6.3 TRADE SECRETS

6.3.1 Acknowledgment of Proprietary Interest. Employee recognizes the proprietary interest of Employer in any Trade Secrets of Employer. Employee acknowledges and agrees that any and all Trade Secrets of Employer, whether developed by Employee alone or in conjunction with others or otherwise, shall be and are the property of Employer.

6.3.2 Covenant Not to Divulge Trade Secrets. Employee acknowledges and agrees that Employer is entitled to prevent the disclosure of Trade Secrets of Employer. As a portion of the consideration for the employment of Employee and for the compensation being paid to Employee by Employer, Employee agrees at all times during the term of the employment by Employer and thereafter to hold in strictest confidence, and not to use, disclose or allow to be disclosed to any person, firm, or corporation, Trade Secrets of Employer, including Trade Secrets developed by Employee, other than disclosures to persons engaged by Employer to further the business of Employer, and other than use in the pursuit of the business of Employer.

6.3.3 Confidential Information of Others. Employee represents and warrants that if Employee had any confidential information belonging to others, Employee will not use or disclose to Employer any such information or documents. Employee represents that his employment with Employer will not require him to violate any obligation to or confidence with any other party.

6.4 NO ADVERSE USE Employee will not at any time use Employer's Trade Secrets or Inventions in any manner which may directly or indirectly have an adverse effect upon Employer's business, nor will Employee perform any acts which would tend to reduce Employer's proprietary value in Employer's Trade Secrets or Inventions.

6.5 RETURN OF MATERIALS AT TERMINATION In the event of any termination of Employee's employment, Employee will promptly deliver to Employer all materials, property, documents, data, and other information belonging to Employer or pertaining to Trade Secrets or Inventions. Employee shall not take any materials, property, documents or other information, or any reproduction or excerpt thereof, belonging to Employer or containing or pertaining to any Trade Secrets or Inventions.

6.6 REMEDIES UPON BREACH In the event of any breach by Employee of the provision in this Section 6, Employer shall be entitled, if it so elects, to institute and prosecute proceedings in any court of competent jurisdiction, either in law or in equity, to enjoin Employee from violating any of the terms of this Section 6, to enforce the specific performance by Employee of any of the terms of this Section 6, and to obtain damages for any of them, but nothing herein contained shall be construed to prevent such remedy or combination of remedies as Employer may elect to Invoke. The failure of Employer to promptly institute legal action upon any breach of this Section 6 shall not constitute a waiver of that or any other breach hereof.

7. COVENANT NOT TO COMPETE Employee agrees that, during Employee's employment, Employee will not directly or indirectly compete with Employer in any way, and that Employee will not act as an officer, director, employee, consultant, shareholder, lender or agent of any other entity which is engaged in any business of the same nature as, or in competition with, the business in which Employer is now engaged, or in which Employer becomes engaged during the term of Employee's employment, or which is involved in science or technology which is similar to Employer's science or technology.

8. GENERAL PROVISIONS

8.1 ATTORNEYS' FEES In the event of any dispute or breach arising with respect to this Agreement, the party prevailing in any negotiations or proceedings for the resolution or enforcement thereof shall be entitled to recover from the losing party reasonable expenses, attorneys' fees and costs incurred therein.

8.2 AMENDMENTS No amendment or modification of the terms or conditions of this Agreement shall be valid unless in writing and signed by both parties hereto. There shall be no implied-in-fact contracts modifying the terms of this Agreement.

8.3 ENTIRE AGREEMENT This Agreement constitutes the entire agreement between the parties with respect to the employment of Employee. This Agreement supersedes all prior agreements, understandings, negotiations and representation with respect to the employment relationship.

8.4 SUCCESSORS AND ASSIGNS The Rights and obligations of Employer under this Agreement shall inure to the benefit of and shall be binding upon the successors and assigns of Employer. Employee shall not be entitled to assign any of Employee's rights or obligations under this Agreement.

8.5 WAIVER Either party's failure to enforce any provision of this Agreement shall not in any way be construed as a waiver of any such provision, or prevent that party thereafter from enforcing each and every other provision of this Agreement.

8.6 SEVERABLE PROVISIONS The provisions of this Agreement are severable, and if any or more provisions may be determined to be judicially unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

8.7 EMPLOYMENT ELIGIBILITY During the term of this Agreement, Employee shall maintain citizenship in the United States or documentation to establish employment eligibility in compliance with the Federal Immigration Reform and Control Act of 1986.

9. EMPLOYEE'S REPRESENTATIONS Employee represents and warrants that Employee (i) is free to enter this Agreement and to perform each of the terms and covenants contained herein, (ii) is not restricted or prohibited, contractually or otherwise, from entering into and performing this Agreement, and (iii) will not be in violation or breach of any other agreement by reason of Employee's execution and performance of this Agreement.

IN WITNESS THEREOF, the parties have executed this Agreement as of the date set forth above.

EMPLOYER:

Aastrom Biosciences, Inc.

By: /s/ R. Douglas Armstrong

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

EMPLOYEE:

/s/ William Odell

William Odell

Address: 570 Chateaux Brione Dr.

Barrington, IL 60010

EXHIBIT A

List of Prior Inventions
(Section 6.2.3)

None, other than the following:

_____

_____

_____

_____

_____

_____

_____

_____

_____

Exhibit 11.1

AASTROM BIOSCIENCES, INC.
(a development stage company)

STATEMENT RE COMPUTATION OF NET LOSS PER COMMON SHARE

	Year ended June 30,		
	1996 (1)	1997 (1)	1998
Weighted average number of common shares outstanding (1)	1,812,000	6,328,000	13,363,000
Weighted average number of common shares representing assumed conversion of Series A, Series B, Series C, Series D and Series E Preferred Stock from the date of issuance	7,457,000	4,900,000	-
Weighted average number of common and common equivalent shares outstanding	9,269,000	11,228,000	13,363,000
Computation of net loss applicable to common shares (2):			
Net loss	$(9,917,000)	$(14,288,000)	$(17,233,000)
Dividends on 5.5% Convertible Preferred Stock	-	-	(351,000)
Charge related to issuance of 5.5% Convertible Preferred Stock	-	-	(3,439,000)
Net loss applicable to common shares	$(9,917,000)	$(14,288,000)	$ (21,023,000)
Net loss per common share (Basic and Diluted)	$ (1.07)	$ (1.27)	$ (1.57)

- ------------------------

(1) Reflects the February 1998 adoption, of Securities and Exchange Commission Staff Accounting Bulletin No. 98 ("SAB 98"), which modified the methods used in computing net loss per common share as previously set forth in SFAS 128. As set forth in SAB 98, the Company has retroactively applied SAB 98 for all periods presented in the accompanying financial statements.

(2) The computations of net loss per common share for the year ended June 30, 1998 include an adjustment for dividends paid on the 5.5% Convertible Preferred Stock reflects a one-time charge of $3,439,000 related to the sale of the such stock in December 1997. The one-time charge and dividends affect only the computation of net loss per common share and are not included in the computation of net loss for the periods.

EXHIBIT 13.1

AASTROM BIOSCIENCES, INC.
1998 ANNUAL REPORT

ADVANCING THE PRACTICE OF CELL THERAPY
(Color cover has collage of male figure with small amount of cells leaving body, surgery scene, globe, AastromReplicell(TM) System, large amount of cells going back into male figure watermark over entire cover: infectious disease, autoimmune disease, oncology, solid tissue repair)
- - COVER

MISSION
Aastrom Biosciences is pioneering clinical systems for the practical enablement of ex vivo cell production and genetic modification of cells used in transplantation therapies for the treatment of cancer and infectious diseases, and in the restoration of tissues.
(Photo of AastromReplicell(TM) System)

I. PROFILE

Aastrom Biosciences, Inc. (Nasdaq: ASTM) is developing automated clinical systems designed to produce human cells to enable therapeutic procedures using living cells for the restoration of normal tissues in patients treated for cancer and other diseases. The Company's lead product candidate, the AastromReplicell(TM) Cell Production System, is designed as a family of products keyed by a multi-use instrumentation platform that operates single-use therapy-specific kits tailored for each patient application. The AastromReplicell(TM) System is currently in multi-site clinical trials for the production of both bone marrow and umbilical cord blood cells to restore blood and immune system function in patients following aggressive chemotherapy used to treat cancer and other diseases.

The Company intends to obtain permission to affix the CE Mark to the AastromReplicell(TM) System by year-end 1998, which is necessary for product introduction in Europe. The Company also intends to initiate pivotal clinical trials necessary to seek regulatory approval for product introduction in the U.S. Designed to place patient-specific cell production capabilities directly into patient treatment centers, the AastromReplicell(TM) System is being developed to be the first cost-effective product to fill a current and growing need in the emerging cell therapy market for access to needed numbers of transplantable cells.

II. ACCOMPLISHMENTS

Steady progress has been made in several key aspects of the business:

- Initiation of stem cell therapy clinical trials in Europe;
- Announcement of initial positive clinical results and expansion of U.S. stem cell therapy trials;
- Initiation, and then expansion of, a multi-center cord blood transplant clinical trial;
- Award of several key pioneering patents;

. Completion of two public equity financings totaling $16 million and award of research grants providing funding of up to $1.3 million;
. Scientific journal publication of studies demonstrating reduction or purging of tumor cells by the AastromReplicell(TM) System.

- - INSIDE FRONT COVER

TO OUR SHAREHOLDERS:

The evolution of a new medical technology from the laboratory to clinical practice is both challenging and exciting. Aastrom Biosciences is in the process of making this transition, and we are looking forward to changing the lives of patients through our products for the growing practice of cell therapy, and thereby building value for our shareholders.

There is an increasing need in medicine for the use of living cells to transplant into patients to restore or repair different tissues that have been damaged by disease, injury or toxic treatments. Numerous researchers around the world have learned how to grow these valuable cells, but generally by using highly technical, hands-on laboratory procedures which have not been practical in a typical hospital setting. Aastrom has developed a novel platform product line - the AastromReplicell(TM) Cell Production System - that is designed to enable hospitals to routinely produce cells for transplantation therapies.

This year, Aastrom has successfully used prototypes of the AastromReplicell(TM) System in clinical trials. In studies underway at multiple clinical sites in the United States, bone marrow cells produced using the AastromReplicell(TM) System were successfully used to complete a full bone marrow transplant in cancer patients. Those same cells also enabled an otherwise ineffective blood stem cell transplant to become effective. These demonstrations are an important part of the foundation we are building for the use of this product in standard stem cell therapy procedures for cancer patients.

Another type of clinical study was also initiated this year, designed for the AastromReplicell(TM) System to produce transplant cells from donor umbilical cord blood (UCB) samples. Children who have aggressive blood diseases, such as leukemia, are in need of stem cells from a transplant to obtain a new blood and immune system, but they lack a suitable bone marrow or blood stem cell donor. Cord blood from donors has been shown to be an effective alternative source of these cells and is being increasingly saved for these types of transplants. Generally, the more cells available, the better the patient recovery, but unfortunately, the quantity of cord blood available from a single donor is limited, resulting in problematic recoveries and survival. The AastromReplicell(TM) System is being used in a trial at Duke University Medical Center (under the direction of Joanne Kurtzberg, M.D.) to increase the number of transplantable cord blood cells in an effort to improve recovery outcomes in children with these types of otherwise fatal blood diseases. This trial, conducted under an FDA Investigational Device Exemption, was expanded this year based on positive initial results. A similar clinical study, using AastromReplicell(TM) System-expanded cord blood cells for adult cancer patients, is also underway at Loyola University Medical Center in Chicago and Hackensack Medical Center in New Jersey.

In addition to stem cell therapy, the AastromReplicell(TM) System is designed to be used for other cell types and therapies. In this regard, we have been conducting preclinical studies with cells such as T-cells and dendritic cells to be used in the treatment of cancer and viral infections. In an important new development, the unique growth environment of the AastromReplicell(TM) System has now been shown to produce certain cell types that have improved biologic function compared

with cells produced using other cell culture approaches. This important advancement supports the design and function of the AastromReplicell(TM) System to provide both clinical access to desired cells, as well as an improved therapeutic cell product.

A principal objective for Aastrom is to now advance the AastromReplicell(TM) System to commercialization. There are three key steps needed to accomplish this objective: (i) complete the transition of the AastromReplicell(TM) System from prototype to the production level; (ii) demonstrate the use of the AastromReplicell(TM) System in clinical treatments; and (iii) gain approval from the applicable regulatory agencies.

Aastrom is on track to have the AastromReplicell(TM) System platform and the lead stem cell therapy kits at final production level as early as the end of 1998, after which we will pursue the CE Mark necessary to begin marketing in certain European countries. In the United States, the production- level system will be used to begin the pivotal clinical trials necessary to support an FDA regulatory filing. The clinical utility of the system is now being demonstrated in our clinical trials. As these trial results are published in medical journals, the medical marketplace will become increasingly informed of the AastromReplicell(TM) System's potential for the treatment of patients.

To support this progress, Aastrom has been growing and we now have approximately 85 people on staff, with key personnel additions this year in our quality system, clinical, regulatory and product support areas. We continue to conduct our manufacturing through contract relationships with specialized medical device manufacturers. Toward this end, we completed our commercial instrument manufacturing agreement with SeaMed Corporation (Nasdaq: SEMD) this year.

As you are aware, in recent months small cap healthcare stocks have suffered a valuation decline. Data provided by SG Cowen Securities indicate that this sector - which includes Aastrom - declined over 40% from August 1997 to August 1998. As a member of this group, Aastrom's stock has also dropped over this period. While disappointing, we do not believe that this trend reflects our extensive progress over this period which has positioned us for the completion of the AastromReplicell(TM) System, the initiation of U.S. pivotal trials, and our preparation for European launch of the AastromReplicell(TM) System for stem cell therapy.

The emergence of new cell therapies holds a promising and bright future in improving patient care, and Aastrom has strengthened its position as a leader to enable key therapies to transition from the laboratory to the hospital. Your support of the Company is an integral part of our progress -- and it is this progress that should, in return, enhance the value for you, our shareholders.

Sincerely,
(Signature, and color photo of Douglas Armstrong)
R. Douglas Armstrong, Ph.D.
President and Chief Executive Officer
September 30, 1998

III. AASTROM'S ROLE IN THE NEXT GENERATION OF CELL THERAPY

(Color schematic of AastromReplicell(TM) System Person getting prescription from doctor for cells, operator of AastromReplicell(TM) System producing cells, illustration of male figure receiving cells)

Cell therapy, the practice of using living cells to treat a medical disorder, has been used for many years, beginning with simple, but very effective, blood and platelet transfusions. More recently, the field of cell therapy has expanded to include bone marrow, or stem cell transplants, primarily used for the treatment of cancer patients following aggressive disease treatments.

Critical to the success of cell therapies is the ability for physicians to have access to the cells necessary for transplantation. Current approaches to cell therapy have involved the collection of large amounts of cells from patients or matched donors, which are then transplanted to the patient. Large volume cell collection is often time consuming, costly and invasive to the patient or donor. The AastromReplicell(TM) System is designed to be the first cost-effective clinical system to place patient-specific cell manufacturing capabilities directly in patient treatment centers, thereby enabling physicians to access cells as they do with traditional pharmaceuticals. An improved availability and access to cells should expand the use of current cell therapies, as well as increase the breadth of new disease treatments with cells.

The AastromReplicell(TM) System is designed as a family of products consisting of an instrumentation platform that operates single-use, patient-specific therapy kits. The initial application of the AastromReplicell(TM) System is in the production of cells for stem cell therapy. However, once established for use in stem cell therapy, the Company plans to leverage the cell production capabilities of the AastromReplicell(TM) System across multiple cell therapy opportunities directed toward the treatment of cancer, infectious diseases, autoimmune diseases and in the restoration of solid tissues.

STEM CELL THERAPY Stem cell therapy is an established and reimbursed medical procedure used in patients to restore blood and immune system function following very aggressive, and

quite toxic therapies to treat cancer and other diseases. Approximately 50,000 stem cell transplant procedures are currently performed worldwide each year. Current procedures for obtaining the cells necessary for transplant (bone marrow harvest or peripheral blood stem cell "PBSC" collections) are time consuming, expensive and invasive to the patient or donor. The AastromReplicell(TM) System provides an alternative to these collection procedures by enabling the production of cells from a small starting volume of either bone marrow or umbilical cord blood cells over a twelve-day expansion period, after which cells are available for transplant to the patient. Further, the automation enabled through the AastromReplicell(TM) System allows physician and patient access to cells, which are manufactured directly on-site by hospital personnel. (Color chart comparing Cell Therapy Challenge to Aastrom Solution)
- - PAGE 3

The AastromReplicell(TM) System is being evaluated in multi-site clinical trials in the U.S. and Europe. The initial goals of the Company's clinical trial program are to obtain a Premarket Approval (PMA) in the U.S., necessary to market the AastromReplicell(TM) System for autologous stem cell therapy and umbilical cord blood transplants, and to obtain approval in Europe to market the AastromReplicell(TM) System for a variety of cell therapy applications, by affixing the CE Mark.

BONE MARROW TRANSPLANTATION IN CANCER PATIENTS In collaboration with its clinical trial partners at Loyola University Medical Center and Hackensack University Medical Center, Aastrom is conducting two clinical trials evaluating stem cells produced in the AastromReplicell(TM) System from a small starting amount of bone marrow. The first study utilizes cells produced in the AastromReplicell(TM) System from small aspirate bone marrow collections as the sole cellular support following ablative chemo-therapy. Initial results from the first study have demonstrated the ability of the AastromReplicell(TM) System to safely and reliably produce stem and progenitor cells that engraft and restore blood and immune system function in cancer patients who had undergone very aggressive chemotherapy. Further, the small volume aspirate, along with a purging of contaminated tumor cells during the stem cell production has indicated a way to offer patients a transplant with a lower risk of receiving back tumor cells. In a second study, the AastromReplicell(TM) System is being used to complement traditional therapies by augmenting stem cells collected from a single PBSC apheresis procedure. The objectives of this study are to demonstrate that an optimal targeted transplant recovery can be achieved using AastromReplicell(TM) System-produced cells with a PBSC dose of cells that would otherwise not provide this desired outcome. This procedure appears to improve the certainty of procedure outcome by providing a more reliable means of cell collection and patient recovery. (Color graphic of a small blood bag with caption: Aastrom's cell production process begins with a small starting volume of cells taken either from the patient or a donor. Color graphic of large blood bag with caption: Using theAastromReplicell(TM) System, the small quantity of cells is expanded to provide patients with therapeutic quantities of cells necessary for treatment.)

UMBILICAL CORD BLOOD: NEW HOPE FOR CANCER AND BLOOD DISEASE PATIENTS Aastrom has also initiated clinical feasibility trials to evaluate umbilical cord blood (UCB) cells produced in the AastromReplicell(TM) System to improve transplant recoveries of pediatric and adult patients requiring donor-derived (or allogeneic) stem cell transplants. Preliminary results of the pediatric transplants indicated that AastromReplicell(TM) System-produced cells were safe and well tolerated by the patients, and that transplant cell recoveries during the 100-day post-transplant period were very favorable. Based on the positive data, this pediatric trial was expanded from 10 to 22 patients in May 1998. The banking infrastructure together with the expansion capabilities of the AastromReplicell(TM) System may lead to UCB as a promising new source of cells for therapeutic use. (Color photo of Dr. Joanne Kurtzberg with Fabiana Leibel, cord blood transplant patient with the caption: "We are pleased with Fabiana's progress following her cord blood transplant using cells produced in the AastromReplicell(TM) System." Joanne Kurtzberg, M.D. Director, Pediatric Bone Marrow Transplant Program at Duke University Medical Center (right) with Fabiana Leibel, cord blood transplant patient

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IV. BOARD OF DIRECTORS

Robert J. Kunze, (Chairman)
Partner, McFarland and Dewey
R. Douglas Armstrong, Ph.D.
President and Chief Executive Officer,
Aastrom Biosciences, Inc.
Stephen G. Emerson, M.D., Ph.D.
Professor of Medicine,
University of Pennsylvania
Mary L. Campbell
General Partner,
Enterprise Development Fund
Horst R. Witzel, Dr.-Ing.
Chairman of the Board of Executive Directors (Retired),
Schering AG
Edward C. Wood, Jr.
President,
COBE BCT, Inc.

V. CORPORATE OFFICERS

R. Douglas Armstrong, Ph.D.
President and Chief Executive Officer
William L. Odell
Senior Vice President Product Operations
Todd E. Simpson
Vice President Finance and Administration,
Chief Financial Officer
Alan K. Smith, Ph.D.
Vice President Research
Bruce V. Husel
Vice President Quality Systems

VI. CORPORATE HEADQUARTERS

24 Frank Lloyd Wright Dr., Lobby L
Ann Arbor, MI 48105
Tel: (734) 930-5777
Fax: (734) 665-0485

VII. TRANSFER AGENT AND REGISTRAR

Communications concerning stock transfer requirements,
lost certificates and change of address should be directed to:

VIII. CONTINENTAL STOCK TRANSFER & TRUST COMPANY

Two Broadway
New York, NY 10004
Tel: (212) 509-4000

IX. GENERAL COUNSEL

Gray Cary Ware & Freidenrich
4365 Executive Dr., Suite 1600
San Diego, CA 92121

X. INDEPENDENT ACCOUNTANTS

PricewaterhouseCoopers LLP
2050 N. Woodward Ave, Suite 200
Bloomfield Hills, MI 48304

XI. INVESTOR RELATIONS

General shareholder inquiries, including requests for the Company's Annual Report on Form 10-K should be directed to:

Todd E. Simpson
Vice President Finance and Administration,
Chief Financial Officer
Aastrom Biosciences, Inc.
P.O. Box 376
Ann Arbor, MI 48106
Tel: (734) 930-5777
Fax: (734) 665-0485
http://www.aastrom.com

XII. ANNUAL MEETING

The Annual Meeting of Shareholders will be held on Wednesday, November 11, 1998 at 9:00 a.m. at:

Holiday Inn North Campus
3600 Plymouth Rd.
Ann Arbor, MI 48105

XIII. STOCK LISTING

Since February 4, 1997 the Company's Common Stock has been quoted on the Nasdaq National Market under the symbol "ASTM". The following table sets forth the high and low sales prices per share of Common Stock as reported on the Nasdaq National Market:

Price Range of Common Stock Period ended 6/30/97:	High	Low
3rd Quarter	7 5/8	5 1/4
4th Quarter	8 1/2	3 1/2
Year ended 6/30/98:		
1st Quarter	9 15/16	3 1/4
2nd Quarter	8 1/8	4 3/8
3rd Quarter	6 1/2	4 3/8
4th Quarter	6 3/4	3 1/2

As of August 31, 1998, there were approximately 190 holders of record of the Common Stock. The Company has never 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.

XIV. TRADEMARKS

Aastrom(TM), AastromReplicell(TM) System and the Company's stylized logo are registered trademarks of Aastrom Biosciences, Inc.

This document contains forward-looking statements, including without limitation statements concerning product development objectives, clinical trial results, regulatory filings and anticipated reviews, and potential advantages of the AastromReplicellTM System, which involve certain risks and uncertainties. Actual results may differ significantly from the expectations contained in the forward-looking statements. Among the factors that may result in differences are the results obtained from clinical trial and development activities, regulatory approval requirements and outcomes, and the availability of resources. These and other significant factors are discussed in greater detail in Aastrom's Annual Report on Form-10K and other filings with the Securities and Exchange Commission.

- - BACK INSIDE COVER

(Color Logo of Aastrom Biosciences, Inc.)

24 Frank Lloyd Wright Dr., Lobby L
Ann Arbor, MI 48105
Tel: (734) 930-5777
Fax: (734) 665-0485

- - BACK COVER

SELECTED FINANCIAL DATA

The statement of operations data for the fiscal years ended June 30, 1996, 1997 and 1998 and for the period from Inception to June 30, 1998 and the balance sheet data at June 30, 1997 and 1998, are derived from, and are qualified by reference to, the audited financial statements included in the Company's report on Form 10-K 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, 1994 and 1995, and the balance sheet data at June 30, 1994, 1995 and 1996, are derived from audited financial statements not included herein. 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,
	1994	1995	1996	1997	1998	1998
STATEMENT OF OPERATIONS DATA:						
Revenues:						
Research and development agreements...	$ 49,000	$ 396,000	$ 1,342,000	$ 230,000	$ 3,000	$ 2,020,000
Grants.....	823,000	121,000	267,000	148,000	246,000	2,389,000
Total revenues.....	872,000	517,000	1,609,000	378,000	249,000	4,409,000
Costs and expenses:						
Research and development.....	5,627,000	4,889,000	10,075,000	13,357,000	15,498,000	53,930,000
General and administrative.....	1,565,000	1,558,000	2,067,000	1,953,000	2,858,000	11,900,000
Total costs and expenses.....	7,192,000	6,447,000	12,142,000	15,310,000	18,356,000	65,830,000
Loss from operations.....	(6,320,000)	(5,930,000)	(10,533,000)	(14,932,000)	(18,107,000)	(61,421,000)
Other income (expense):						
Interest income.....	245,000	279,000	678,000	676,000	886,000	3,138,000
Interest expenses.....	(65,000)	(66,000)	(62,000)	(32,000)	(12,000)	(263,000)
Net loss.....	$ (6,140,000)	$ (5,717,000)	$ (9,917,000)	$(14,288,000)	$(17,233,000)	$(58,546,000)
Net loss applicable to common shares.....	$ (6,140,000)	$ (5,717,000)	$ (9,917,000)	$(14,288,000)	$(21,023,000)	
Net loss per common share (Basic and diluted).....	$ (1.00)	$ (.78)	$ (1.07)	$ (1.27)	$ (1.57)	
Weighted average number of common shares outstanding.....	6,127,000	7,309,000	9,269,000	11,228,000	13,363,000	

	June 30,				
	1994	1995	1996	1997	1998
BALANCE SHEET DATA:					
Cash, cash equivalents and short-term investments.....	$ 6,730,000	$ 11,068,000	$ 10,967,000	$ 17,007,000	$ 11,212,000
Working capital.....	6,187,000	10,319,000	9,851,000	15,600,000	10,121,000
Total assets.....	8,227,000	12,551,000	12,673,000	18,410,000	12,374,000
Long-term capital lease obligations.....	425,000	412,000	189,000	65,000	-
Deficit accumulated during the development stage.....	(11,391,000)	(17,108,000)	(27,025,000)	(41,313,000)	(58,897,000)
Total shareholders' equity.....	6,985,000	11,186,000	10,850,000	16,583,000	10,846,000

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

OVERVIEW

Since its inception, the Company has been in the development stage and engaged in research and product development, conducted principally on its own behalf but also in connection with various collaborative research and development agreements with other entities. The Company does not expect to generate positive cash flows from operations for at least the next several years and until product sales commence. Until product sales commence, the Company expects that its revenue sources will continue to be limited to grant revenue, research funding and 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 receipt of necessary regulatory approvals, the timing of the achievement of certain other 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 2% 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 two fiscal 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 and other 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 result of operations for any future 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 moderate growth in employee headcount necessary to address increasing requirements in the areas of product development, research, clinical and regulatory affairs, quality systems 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 or initiates product sales, the net loss will continue to increase as well. The Company has never been profitable and does not anticipate having net income unless and until product sales commence. Through June 30, 1998, the Company has accumulated losses of $58,546,000. There can be no assurance that the Company will be able to achieve profitability on a sustained basis, if at all.

RESULTS OF OPERATIONS

Total revenues were $249,000 in 1998, $378,000 in 1997 and $1,609,000 in 1996. Grant revenues increased to $246,000 in 1998 from $148,000 in 1997 and were $267,000 in 1996, 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 99%, 39% and 17% of total revenues for the years ended June 30, 1998, 1997 and 1996, respectively, and are recorded on a cost-reimbursement basis. Revenues from research and development agreements totaled $3,000 in 1998, $230,000 in 1997 and $1,342,000 in 1996. Revenues in 1996, reflect research funding received by the Company under its collaboration with Rhone-Poulenc Rorer, Inc. (RPR) which commenced in September 1995 and ended in September 1996. Revenues from RPR accounted for 52% and 83% of such revenue in 1997 and 1996, respectively.

Total costs and expenses were $18,356,000 in 1998, $15,310,000 in 1997 and $12,142,000 in 1996. The increases in costs and expenses in 1998 and 1997 are primarily the result of increases in research and development expense to $15,498,000 in 1998 from $13,357,000 in 1997 and $10,075,000 in 1996. Research and development expense includes charges of $1,100,000, $1,000,000 and $1,500,000 for the years ended June 30, 1998, 1997 and 1996, respectively, representing license fee payments pursuant to the Company's supply agreement with Immunex. The increases in research and development expense reflect increased product and clinical development activities for the AastromReplicell Cell Production System (System). General and administrative expenses were $2,858,000 in 1998, $1,953,000 in 1997 and $2,067,000 in 1996. General and administrative expenses, which decreased slightly in 1997 compared to 1996, but increased in 1998, reflect increased finance, legal and other administrative and marketing expenses in support of the Company's product development and research activities.

Interest income was $886,000 in 1998, $676,000 in 1997 and $678,000 in 1996. The fluctuations in interest income are due primarily to corresponding changes in the levels of cash, cash equivalents and short-term investments for such periods. Interest expense was $12,000 in 1998, $32,000 in 1997 and $62,000 in 1996, reflecting decreasing amounts outstanding under capital leases during these periods.

The Company's net loss was $17,233,000, or $1.57 per common share in 1998, $14,288,000, or $1.27 per common share in 1997 and $9,917,000, or $1.07 per common share in 1996. The computations of net loss per common share for the year ended June 30, 1998 includes an adjustment for dividends paid on preferred stock that was issued by the Company in December 1997 and reflects a one-time charge of $3,439,000 related to the sale of the preferred stock. The one-time charge and dividends affect only the computation of net loss per common share and are not included in the net loss for the periods. The Company expects to report substantial net losses until product sales commence.

The Company has not generated any profits to date and therefore has not paid any federal income taxes since inception. At June 30, 1998, the Company's Federal tax net operating loss and tax credit carryfowards were $57,002,000 and $1,626,000, respectively, which will expire from 2004 through 2018, if not utilized. The Company underwent an ownership change in October 1993, which has resulted in a limitation under which the Company can utilize a portion of its net operating loss carryforward amounting to $1,153,000 per year. As of June 1998, the portion of the Company's net operating loss that remains subject to this limitation is $1,337,000 and therefore is not expected to ultimately effect the Company's ability to utilize the benefit. In July 1998, the Company issued shares of 1998 Series I Convertible Preferred Stock which resulted in an annual limitation of $3,136,000, which applies to losses incurred between October 1993 and July 1998. The Company's ability to utilize its net operating loss and tax credit carryforwards may become subject to further annual limitation.

LIQUIDITY AND CAPITAL RESOURCES

The Company has financed its operations since inception primarily through public and private sales of its equity securities, which, from inception through June 30, 1998, have totaled approximately $69,404,000 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. Under the Company's primary equipment leasing agreement, the lessor is granted a security interest in all of the Company's property and assets.

The Company's combined cash, cash equivalents and short-term investments totaled $11,212,000 at June 30, 1998, a decrease of $5,795,000 from June 30, 1997. The primary uses of cash, cash equivalents and short-term investments during the year ended June 30, 1998 included $15,459,000 to finance the Company's operations and working capital requirements, $234,000 in capital equipment additions and $124,000 in scheduled debt payments. During the years ended June 30, 1997 and 1998, the Company raised net proceeds of $19,885,000 and $9,930,000, respectively, through the public sale of its equity securities. In

addition, the Company completed the sale of $5,000,000 of its 1998 Series I Convertible Preferred Stock in July 1998 and will issue an additional $3,000,000 of its 1998 Series II Convertible Preferred Stock upon meeting certain conditions.

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 at least the next several years due to the expected increase in spending for research and development programs and the expected cost of commercializing its product candidates. The Company intends to seek additional funding through research and development agreements with suitable corporate collaborators, grants and through public or private financing transactions. The Company anticipates that its available cash resources and expected interest income thereon, will be sufficient to finance the development and manufacture of the AastromReplicell Cell Production System for use in clinical trials, expanded clinical trials, other research and development and working capital and other corporate requirements until mid 1999. This estimate is based on certain assumptions which could be negatively impacted by the matters discussed under this heading and under the caption "Business Risks" in the Company's Annual Report on Form 10-K. 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 debt or equity securities. There can be no assurance that such collaborative arrangements, or any public or private financing, will be available on acceptable terms, if at all, or can be sustained. Several factors will affect the Company's ability to raise additional funding, including, but not limited to, market volatility of the Company's Common Stock and economic conditions affecting the public markets generally or some portion or all of the technology sector. 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 "Business Risks--Future Capital Needs; Uncertainty of Additional Funding" in the Company's 1998 Annual Report on Form 10-K and Notes to Financial Statements included herein.

The Company is currently evaluating the impact of the year 2000 on the processing of date-sensitive information by the Company's computerized information systems. The Company is substantially complete with its assessment of potential year 2000 problems, and based upon available information, believes that it is substantially year 2000 compliant and that the costs of correcting year 2000 processing problems are not expected to have a material adverse impact on the Company's financial position, results of operations or cash flows in future periods. There can however be no assurance that all of the Company's information systems will be year 2000 compliant or that the systems of other companies and government agencies on which the Company relies will be converted in a timely manner. Such failure could cause delays in the Company's ability to process transactions or otherwise conduct business, resulting in material financial risk.

RECENT ACCOUNTING PRONOUNCEMENT

In June 1997, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" (SFAS 130), which sets forth additional requirements for companies to report in the financial statements Comprehensive Income in addition to Net Income. Upon adoption of SFAS 130, the Company will present comprehensive income in its financial statements for earlier periods. The Company currently expects that adopting SFAS 130 for its previously issued financial statements will primarily affect the treatment of preferred stock dividends and yields and the one-time charge associated with the sale of its 5.5% Preferred Stock. The Company will adopt SFAS 130 effective July 1, 1998 and has not yet determined the manner in which comprehensive income will be presented.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Shareholders of
Aastrom Biosciences, Inc.

In our opinion, the accompanying balance sheets and the related statements of operations, of shareholders' equity and of cash flows present fairly, in all material respects, the financial position of Aastrom Biosciences, Inc. (a development stage company) at June 30, 1997 and 1998, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 1998, and for the period from March 24, 1989 (Inception) to June 30, 1998, in conformity with generally accepted accounting principles. 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 of these statements in accordance with generally accepted auditing standards which 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

PricewaterhouseCoopers LLP
Bloomfield Hills, Michigan
August 7, 1998

AASTROM BIOSCIENCES, INC.
(A DEVELOPMENT STAGE COMPANY)

BALANCE SHEETS

	June 30, 1997	June 30, 1998
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 1,943,000	$ 2,078,000
Short-term investments	15,064,000	9,134,000
Receivables	229,000	167,000
Prepaid expenses	126,000	270,000
Total current assets	17,362,000	11,649,000
PROPERTY, NET	1,048,000	725,000
Total assets	$ 18,410,000	$ 12,374,000
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable and accrued expenses	$ 1,508,000	1,313,000
Accrued employee expenses	130,000	150,000
Current portion of capital lease obligations	124,000	65,000
Total current liabilities	1,762,000	1,528,000
CAPITAL LEASE OBLIGATIONS	65,000	-
COMMITMENTS (Note 7)		
SHAREHOLDERS' EQUITY:		
Preferred Stock, no par value; shares authorized - 5,000,000; shares issued and outstanding - 0 and 2,200,000, respectively	-	9,930,000
Common Stock, no par value; shares authorized - 40,000,000; shares issued and outstanding - 13,275,208 and 13,639,817, respectively	58,073,000	59,474,000
Deficit accumulated during the development stage	(41,313,000)	(58,897,000)
Shareholder notes receivable	(167,000)	-
Stock purchase warrants	-	335,000
Unrealized gains (losses) on investments	(10,000)	4,000
Total shareholders' equity	16,583,000	10,846,000
Total liabilities and shareholders' equity	$ 18,410,000	$ 12,374,000

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

AASTROM BIOSCIENCES, INC.
(A DEVELOPMENT STAGE COMPANY)

STATEMENT OF OPERATIONS

	Year ended June 30,			March 24, 1989 (Inception) to June 30,
	1996	1997	1998	1998
REVENUES:				
Research and development agreements	$ 1,342,000	$ 230,000	$ 3,000	$ 2,020,000
Grants	267,000	148,000	246,000	2,389,000
Total revenues	1,609,000	378,000	249,000	4,409,000
COSTS AND EXPENSES:				
Research and development	10,075,000	13,357,000	15,498,000	53,930,000
General and administrative	2,067,000	1,953,000	2,858,000	11,900,000
Total costs and expenses	12,142,000	15,310,000	18,356,000	65,830,000
LOSS FROM OPERATIONS	(10,533,000)	(14,932,000)	(18,107,000)	(61,421,000)
OTHER INCOME (EXPENSE):				
Interest income	678,000	676,000	886,000	3,138,000
Interest expense	(62,000)	(32,000)	(12,000)	(263,000)
Other income	616,000	644,000	874,000	2,875,000
NET LOSS	$ (9,917,000)	$(14,288,000)	$(17,233,000)	$(58,546,000)
COMPUTATION OF NET LOSS APPLICABLE TO COMMON SHARES:				
Net loss	$ (9,917,000)	$(14,288,000)	$(17,233,000)	
Dividends on preferred stock	-	-	(351,000)	
Charge related to issuance of preferred stock	-	-	(3,439,000)	
Net loss applicable to Common Shares	$ (9,917,000)	$(14,288,000)	$(21,023,000)	
NET LOSS PER COMMON SHARE (Basic and Diluted)	$ (1.07)	$ (1.27)	$ (1.57)	
Weighted average number of common and common equivalent shares outstanding	9,269,000	11,228,000	13,363,000	

The accompanying notes are an integral part of these statements.

AASTROM BIOSCIENCES, INC.
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF SHAREHOLDERS' EQUITY

	Preferred Stock		Common Stock		Deficit accumulated during the development stage
	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			
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			
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			
Issuance of Common Stock for services			33,333	10,000	
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			1,268,585	238,000	
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			
Retirement of Common Shares outstanding			(25,000)	(7,000)	
Unrealized loss on investments					
Net loss					(17,108,000)
BALANCE, JUNE 30, 1995	8,040,001	28,253,000	1,731,463	241,000	(17,108,000)
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					
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					
Unrealized gain on investments					
Net loss					(9,917,000)
BALANCE, JUNE 30, 1996	9,451,766	34,218,000	1,886,479	324,000	(27,025,000)
Exercise of stock options			40,307	26,000	
Issuance of Series E Preferred Stock at $17.00 per share	205,882	3,500,000			
Issuance of Common Stock at $7.00 per share, net of issuance costs of $2,865,000			3,250,000	19,885,000	
Conversion of preferred stock	(9,657,648)	(37,718,000)	8,098,422	37,718,000	
Compensation expense related to stock options granted				120,000	
Unrealized losses on investments					
Net loss					(14,288,000)
BALANCE, JUNE 30, 1997	-	-	13,275,208	58,073,000	(41,313,000)
Exercise of stock options			68,500	83,000	
Issuance of 5.5% Convertible Preferred Stock at $5.00 per share, net of issuance costs of $1,070,000	2,200,000	9,930,000			
Dividend paid on 5.5% Convertible Preferred Stock			72,940	351,000	(351,000)
Issuance of Common Stock			255,340	1,144,000	
Repurchase and retirement of Common Shares outstanding			(32,171)	(240,000)	
Compensation expense related to stock options and warrants granted				63,000	
Unrealized gains on investments					
Net loss					(17,233,000)
BALANCE, JUNE 30, 1998	2,200,000	$ 9,930,000	13,639,817	$ 59,474,000	$(58,897,000)

	Shareholder notes receivable	Stock purchase rights and warrants	Unrealized gains/ (losses) on investments	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
Issuance of Series A Preferred Stock in March 1991 at $1.00 per share, net of issuance costs of $5,000				995,000
Issuance of Series B Preferred Stock in April 1992 at $2.00 per share, net of issuance costs of $46,000				6,014,000
Issuance of Common Stock for services				10,000
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	(198,000)			40,000
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
Retirement of Common Shares outstanding				(7,000)
Unrealized loss on investments				
Net loss			(2,000)	(2,000)
				(17,108,000)
BALANCE, JUNE 30, 1995	(198,000)	-	(2,000)	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				
Issuance of Stock Purchase Rights for cash in September 1995 and March 1996		3,500,000		30,000 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			31,000
Unrealized gain on investments			2,000	2,000
Net loss				(9,917,000)
BALANCE, JUNE 30, 1996	(167,000)	3,500,000	-	10,850,000
Exercise of stock options				26,000
Issuance of Series E Preferred Stock at $17.00 per share		(3,500,000)		-
Issuance of Common Stock at $7.00 per share, net of issuance costs of $2,865,000				19,885,000
Conversion of preferred stock				-
Compensation expense related to stock options granted				120,000
Unrealized losses on investments			(10,000)	(10,000)
Net loss				(14,288,000)
BALANCE, JUNE 30, 1997	(167,000)	-	(10,000)	16,583,000
Exercise of stock options				83,000
Issuance of 5.5% Convertible Preferred Stock at $5.00 per share, net of issuance costs of $1,070,000				9,930,000
Dividend paid on 5.5% Convertible Preferred Stock				-
Issuance of Common Stock				1,144,000
Repurchase and retirement of Common Shares outstanding	167,000			(73,000)
Compensation expense related to stock options and warrants granted		335,000		398,000
Unrealized gains on investments			14,000	14,000
Net loss				(17,233,000)
BALANCE, JUNE 30, 1998	$ -	$ 335,000	$ 4,000	$ 10,846,000

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

AASTROM BIOSCIENCES, INC.
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF CASH FLOWS

	Year ended June 30,			March 24, 1989 (Inception) to June 30,
	1996	1997	1998	1998
OPERATING ACTIVITIES:				
Net loss	$(9,917,000)	$(14,288,000)	$(17,233,000)	$(58,546,000)
Adjustments to reconcile net loss to net cash used for operating activities:				
Depreciation and amortization	536,000	564,000	557,000	2,388,000
Loss on property held for resale	-	-	-	110,000
Amortization of discounts and premiums on investments	(110,000)	(84,000)	(180,000)	(383,000)
Expense related to stock issued and stock purchase rights granted	-	120,000	1,498,000	1,628,000
Changes in assets and liabilities:				
Receivables	18,000	(148,000)	38,000	(191,000)
Prepaid expenses	(332,000)	311,000	(144,000)	(270,000)
Accounts payable and accrued expenses	864,000	316,000	(195,000)	1,313,000
Accrued employee expenses	(33,000)	33,000	20,000	150,000
Deferred revenue	(103,000)	(122,000)	-	-
Net cash used for operating activities	(9,077,000)	(13,298,000)	(15,639,000)	(53,801,000)
INVESTING ACTIVITIES:				
Organizational costs	-	-	-	(73,000)
Purchase of short-term investments	-	(19,190,000)	(12,326,000)	(43,464,000)
Maturities of short-term investments	8,500,000	4,200,000	18,450,000	34,717,000
Capital purchases	(445,000)	(424,000)	(234,000)	(2,376,000)
Proceeds from sale of property held for resale	-	-	-	400,000
Net cash provided by (used for) investing activities	8,055,000	(15,414,000)	5,890,000	(10,796,000)
FINANCING ACTIVITIES:				
Issuance of preferred stock	5,965,000	-	9,930,000	44,148,000
Issuance of Common Stock	83,000	19,911,000	127,000	20,154,000
Repurchase of Common Stock	-	-	(49,000)	(49,000)
Payments received for stock purchase rights	3,500,000	-	-	3,500,000
Payments received under shareholder notes	31,000	-	-	31,000
Principal payments under capital lease obligations	(270,000)	(223,000)	(124,000)	(1,109,000)
Net cash provided by financing activities	9,309,000	19,688,000	9,884,000	66,675,000
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	8,287,000	(9,024,000)	135,000	2,078,000
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	2,680,000	10,967,000	1,943,000	-
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$10,967,000	$ 1,943,000	$ 2,078,000	$ 2,078,000
SUPPLEMENTAL CASH FLOW INFORMATION:				
Interest paid	$ 62,000	$ 32,000	$ 12,000	$ 263,000
Additions to capital lease obligations	-	-	-	1,174,000

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

AASTROM BIOSCIENCES, INC.
(A DEVELOPMENT STAGE COMPANY)
NOTES TO FINANCIAL STATEMENTS

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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 products for the ex vivo production of human cells for use in cell and ex vivo gene therapy.

Successful future operations are subject to several technical and business risks, including satisfactory product development, obtaining regulatory approval and market acceptance for its products and the Company's continued ability to maintain adequate levels of funding.

SIGNIFICANT REVENUE RELATIONSHIPS - One company accounted for 83% and 52% of total revenues for the year ended June 30, 1996 and 1997, respectively. One company accounted for 41% of total revenues for the period from Inception to June 30, 1998. 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 and less than one year. Short-term investments are classified as available-for-sale, and are presented at market value, with unrealized gains and losses on investments reflected as a component of shareholders' equity.

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. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. The Company has not experienced any significant realized 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.

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 $1,294,000, $154,000 and $3,000 for the years ended June 30, 1996, 1997 and 1998, respectively, and $1,645,000 for the period from Inception to June 30, 1998.

STOCK COMPENSATION - The Company adopted the disclosure provisions of Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation" (SFAS 123) as of July 1, 1996. As permitted by SFAS 123, the Company continues to apply Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," (APB 25) and related interpretations and does not recognize compensation expense for its employee stock-based compensation plans as allowed by SFAS 123.

INCOME TAXES - The Company recognizes deferred tax assets and liabilities for the differences between the carrying amounts and the tax basis of assets and liabilities, as well as net operating loss and tax credit carryforwards. Additionally, the Company establishes a valuation allowance to reflect the likelihood of realization of deferred tax assets.

NET LOSS PER COMMON SHARE - Net loss per common 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. Due to the automatic conversion of all previously outstanding preferred stock into Common Stock upon the completion of the initial public offering, such preferred stock is assumed to have been converted into Common Stock at the time of issuance.

The computations of net loss per common share for the year ended June 30, 1998 reflects a one-time charge of $3,439,000 related to the sale of 5.5% Convertible Preferred Stock (5.5% Preferred Stock) in December 1997 and includes an adjustment for dividends paid on the 5.5% Preferred Stock. The one-time charge and dividends affect only the computation of net loss per common share and are not included in the computation of net loss for the periods.

During March 1997, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 128, "Earnings Per Share" (SFAS 128), which amended the standards for computing earnings per share previously set forth in Accounting Principles Board Opinion No. 15, "Earnings per Share" (APB 15). SFAS 128, which was adopted by the Company for all periods ending on or after December 31, 1997, did not have a material effect on the computation of the Company's historical net loss per common share amounts. In February 1998, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 98 (SAB 98), which modifies the methods used in computing net loss per common share as previously set forth in SFAS 128. As set forth in SAB 98, the Company has retroactively applied SAB 98 for all periods presented in the accompanying financial statements. Application of this retroactive adjustment resulted in an increase in the net loss per common share of $.09 and $.01 for the years ended June 30, 1996 and 1997, respectively.

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 - The Company evaluates the fair value of those assets and liabilities identified as financial instruments 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.

LONG-LIVED ASSETS - The Company evaluates the impairment of long-lived assets and long-lived assets to be disposed of whenever events or changes in circumstances indicate that the carrying amount of those assets may not be recoverable. No significant impairment losses have been identified by the Company for any of the periods presented in the accompanying financial statements.

COMPREHENSIVE INCOME - In June 1997, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" (SFAS 130), which sets forth additional requirements for companies to report in the financial statements Comprehensive Income in addition to Net Income. Upon adoption of SFAS 130, the Company will present comprehensive income in its financial statements for earlier periods. The Company currently expects that adopting SFAS 130 for its previously issued financial statements will primarily affect the treatment of preferred stock dividends and yields and the one-time charge associated with the sale of its 5.5% Preferred Stock. The Company will adopt SFAS 130 effective July 1, 1998 and has not yet determined the manner in which comprehensive income will be presented.

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:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Market Value
June 30, 1997:				
U.S. Government Securities	$13,574,000	$ 1,000	$ (11,000)	$13,564,000
Commercial Paper	1,500,000	-	-	1,500,000
	$15,074,000	$ 1,000	$ (11,000)	$15,064,000
June 30, 1998:				
U.S. Government Securities	$ 7,157,000	$ 4,000	$ -	$ 7,161,000
Commercial Paper	1,973,000	-	-	1,973,000
	$ 9,130,000	$ 4,000	$ -	$ 9,134,000

3. PROPERTY

Property consists of the following:

	June 30,	
	1997	1998
Machinery and equipment	$ 1,425,000	$ 1,473,000
Office equipment	733,000	903,000
Leasehold improvements	605,000	621,000
	2,763,000	2,997,000
Less accumulated depreciation and amortization	(1,715,000)	(2,272,000)
	$ 1,048,000	$ 725,000

Equipment under capital leases totaled $558,000 and $240,000 at June 30, 1997 and 1998, respectively, with related accumulated amortization of $333,000 and $159,000, respectively.

4. Shareholders' Equity

Initial Public Offering - In February 1997, the Company completed an underwritten initial public offering of 3,000,000 shares of its Common Stock at an offering price of $7.00 per share. In March 1997, the underwriters elected to purchase an additional 250,000 shares of Common Stock pursuant to the underwriters' over-allotment option at a price of $7.00 per share. Proceeds from the offering, net of underwriters' commissions and expenses, were $19,885,000.

PREFERRED STOCK - In connection with the Company's initial public offering, all 9,657,648 shares of then outstanding preferred stock were automatically converted into 8,098,422 shares of Common Stock.

In December 1997, the Company completed a directed placement of 2,200,000 shares of its 5.5% Preferred Stock at a price of $5.00 per share. Proceeds from the offering, net of placement agent commissions and expenses, were $9,930,000. The

5.5% Preferred Stock is convertible into shares of Common Stock at a conversion price of $4.99 per share, subject to certain anti-dilution adjustments, and is convertible at the option of the holder at any time. The 5.5% Preferred Stock will automatically convert into Common Stock if at any time after December 2, 1999, the price of the Company's Common Stock is greater than $10 per share for 20 consecutive trading days, or upon the occurrence of certain other events. The 5.5% Preferred Stock accrues a dividend at an annual rate of 5.5%, which is declared and paid by the Company on a quarterly basis, and has a liquidation preference of $5.00 per share, plus accrued but unpaid dividends. The Company has the option to pay dividends on the 5.5% Preferred Stock in the form of a cash payment or by the issuance of shares of Common Stock. If the Company elects to pay the dividend in Common Stock, such shares are valued at an average daily trading price of the Common Stock prior to the quarterly record date.

In July 1998, the Company completed the sale of $5,000,000 of its 1998 Series I Convertible Preferred Stock, yielding 5.5% per annum (1998 Preferred Stock). The conversion price of the 1998 Preferred Stock is based on the market price of the Company's common stock during a pricing period preceding conversion, up to a maximum conversion price of $4.81 per share and automatically converts in July 2001 or earlier upon certain events. The 1998 Preferred Stock has a preference in liquidation equal to $5,000,000 plus a 5.5% yield, prorated for the period since issuance. With limited exceptions, during the nine-month period ending in April 1999, the 1998 Preferred Stock is convertible only after the market price of the Company's common stock equals or exceeds $4.81 per share. Additionally, Aastrom and the investor have agreed to a second closing for an additional $3,000,000, under similar terms, if certain requirements are met, including trading volume of the Company's Common Stock at a price per share above $6 per share.

No cash dividends have ever been declared or paid; however, as of June 30, 1998, the Company has issued 72,940 shares of Common Stock valued at $351,000 in payment of the dividends on the 5.5% Preferred Stock.

COBE LABORATORIES, INC. STOCK PURCHASE RIGHTS - In connection with the purchase of the Series C Convertible 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 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, which is exercisable until February 2000, must be exercised in full with the purchase price of the shares equal to 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 substantially all of the Company's assets, or any material portion of the assets of the Company used by the Company in performing its obligation 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 2,986,594 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 years ended June 30, 1997 and 1998, compensation expense totaling $120,000 and $63,000 respectively has been charged with respect to these options. Additional future compensation expense with respect to the issuance of such options totals $55,000 and will be recognized through December 2001.

As permitted by SFAS 123, the Company continues to apply APB 25 and related interpretations in accounting for its stock option plans and does not recognize compensation expense for its employee stock-based compensation plans as prescribed in SFAS 123. If the Company had elected to recognize compensation expense based upon the fair value at the grant dates for stock option awards granted in 1996, 1997 and 1998, in accordance with SFAS No. 123, the pro forma net loss and net loss per share would be as follows.

	June 30,		
	1996	1997	1998
Net loss applicable to Common Shares:			
As reported	$9,917,000	$14,288,000	$21,023,000
Pro forma	9,942,000	14,793,000	21,832,000
Net loss per common share:			
As reported	$ (1.07)	$ (1.27)	$ (1.57)
Pro forma	(1.07)	(1.32)	(1.63)

The fair value of options was estimated at the date of grant using the Black-Scholes option pricing model with the following assumptions; no dividend yields, 40% volatility, risk free interest rates ranging from 5.2% to 6.8% and expected option lives of three to five years.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options which have no vesting restrictions and are fully transferable. In addition, option valuation models require the use of highly subjective assumptions including the expected stock price volatility. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in subjective assumptions can materially affect the fair value estimates, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock based compensation plans.

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

	Options Outstanding	Options Available For Grant	Weighted Average Exercise Price Per Share	Options Exercisable At Period End
March 24, 1989 (Inception)				
Options authorized.....	-	2,036,594		
Options granted.....	1,782,444	(1,782,444)	$ .34	
Options exercised.....	(1,268,585)	-	$ .19	
Options canceled.....	(164,194)	164,194	$ .54	
Balance, June 30, 1995.....	349,665	418,344	$ .78	108,492
Options authorized.....	-	800,000		
Options granted.....	155,337	(155,337)	$1.44	
Options exercised.....	(130,016)	-	$ .41	
Options canceled.....	(44,690)	44,690	$ .85	
Balance, June 30, 1996.....	330,296	1,107,697	$1.20	101,021
Options authorized.....	-	150,000		
Options granted.....	785,200	(785,200)	$6.78	
Options exercised.....	(40,307)	-	$ .65	
Options canceled.....	(16,818)	16,818	$1.83	
Balance, June 30, 1997.....	1,058,371	489,315	$5.36	483,376
Options granted.....	372,520	(372,520)	$5.17	
Options exercised.....	(68,500)	-	$1.21	
Options canceled.....	(199,873)	199,873	$5.79	
Balance, June 30, 1998.....	1,162,518	316,668	$5.12	593,930

OUTSIDE DIRECTORS' STOCK OPTION PLAN - The Company has an outside directors' stock option plan which provides for the issuance of options to purchase up to 150,000 shares of Common Stock to outside directors. Under this plan, non-qualified options to purchase 5,000 shares of Common Stock are granted to each outside director on the day of the Annual Shareholders' meeting. These options generally vest over a one-year period and expire ten years after the date of grant. As of June 30, 1998, options to purchase 45,000 shares of Common Stock at prices ranging from $5.25 to $7.00 per share are outstanding under this plan, of which options to purchase 33,751 shares of Common Stock are exercisable.

The following table summarizes information about stock-based compensation plans outstanding as of June 30, 1998:

Range of Exercise Prices	Number of Options Outstanding	Remaining Contractual Life-years	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price of Exercisable Options
$ .30 - $1.20	165,480	6.9	$1.13	118,898	$1.10
$3.20 - $4.75	258,205	8.7	$4.30	25,126	$3.35
$5.25 - $7.13	738,833	8.2	$6.84	449,906	$6.96
	1,162,518			593,930	

The weighted average fair value of options granted during the year ended June 30, 1998 was $2.28 per share.

EMPLOYEE STOCK PURCHASE PLAN - The Company has an employee stock purchase plan under which eligible employees can purchase Common Stock, at a discount to the market price, through payroll deductions up to 10% of the employees base compensation, subject to certain limitations, during sequential 24-month offering periods. Each offering period is divided into four consecutive six-month purchase periods beginning on March 1 and September 1 of each year. 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 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. During the year ended June 30, 1998, 13,900 shares of Common Stock were issued under this plan.

STOCK PURCHASE WARRANTS - The Company has issued warrants to purchase 69,444 shares of Common Stock which expire on October 15, 2000. These warrants may be exercised, in whole or in part, at a price equal to the lesser of (a) $12.00 per share, which price increases by $3.00 per share on February 3, 1999 and 2000; or (b) 85% of the fair market value of the Company's Common Stock at the time of exercise. In addition, the Company has issued warrants to purchase 200,000 shares of Common Stock at $7.24 per share which expire no later than October 2002. Compensation expense of $335,000 related to these warrants is reflected in the accompanying financial statements for the year ended June 30, 1998.

COMMON SHARES RESERVED - As of June 30, 1998, the Company has reserved shares of Common Stock for future issuance as follows:

Issuance under stock option plans:		
1992 Incentive and Non-Qualified Stock Option Plan.....	1,329,186	
1995 Outside Director Stock Option Plan.....	150,000	
		1,479,186
Issuance under 1996 Employee Stock Purchase Plan.....		236,100
Exercise of Stock Purchase Warrants.....		269,444
Conversion of 5.5% Preferred Stock.....		2,204,408
		4,189,138

5. INCOME TAXES

Deferred tax assets consist of the following:

	June 30, 1997	June 30, 1998
Net operating loss carryforwards.....	$ 14,150,000	$ 19,950,000
Tax credits and other.....	1,162,000	1,911,000
Gross deferred tax assets.....	15,312,000	21,861,000
Deferred tax assets valuation allowance.....	(15,312,000)	(21,861,000)
	$ -	$ -

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 future income taxes.

At June 30, 1998, the Company's Federal tax net operating loss and tax credit carryfowards were $57,002,000 and $1,626,000, respectively, which will expire from 2004 through 2018, if not utilized. The Company underwent an ownership change in October 1993, which has resulted in a limitation under which the Company can utilize a portion of its net operating loss carryforward amounting to $1,153,000 per year. As of June 1998, the portion of the Company's net operating loss that remains subject to this limitation is $1,337,000 and therefore is not expected to ultimately effect the Company's ability to utilize the benefit. In July 1998, the Company issued shares of 1998 Series I Convertible Preferred Stock which resulted in an annual limitation of $3,136,000, which applies to losses incurred between October 1993 and July 1998. The Company's ability to utilize its net operating loss and tax credit carryforwards may become subject to further annual limitation.

6. LICENSES, ROYALTIES AND COLLABORATIVE AGREEMENTS:

UNIVERSITY OF MICHIGAN - In August 1989, the Company entered into a research agreement with the University of Michigan (the University). Under the terms of this research agreement, as amended, the Company agreed to reimburse the University for certain research costs through the date of its expiration in December 1994. Payments made to the University under the aforementioned agreements totaled $2,521,000 for the period from Inception to June 30, 1998, which amount is 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, and as provided for under the research agreement, 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 AastromReplicell/(TM)/ Cell Production System 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. Cobe has the right to terminate its Distribution Agreement with the Company with twelve months' notice upon a change of control of the Company, other than to Cobe, or if Cobe determines that commercialization of the AastromReplicell/(TM)/ System for stem cell therapy on or prior to December 31, 1998 is unlikely. Pursuant to the Distribution Agreement, Cobe BCT will perform worldwide marketing and distribution activities of the AastromReplicell/(TM)/ System 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.

MANUFACTURE, SUPPLY AND OTHER AGREEMENTS - The Company has entered into various agreements relating to the manufacture of its products and supply of certain components. Pursuant to one such license agreement, the Company and the licensor amended the agreement to provide for the issuance of $1,100,000 in Common Stock by the Company as payment for an annual renewal fee of $1,000,000 due in March 1998 under the agreement.

In October 1997, the Company entered into a Strategic Planning Consulting Services and Collaboration Agreement (the "Consulting Agreement"), pursuant to which the Company will receive consultation on potential strategic alliances. The Consulting Agreement, which can be terminated by either party following periods of up to 30 days following notice, provides for payments by the Company based upon the timing and amount of proceeds received under certain strategic alliances. In addition, the Company will issue warrants to purchase additional shares of Common Stock, depending upon the achievement of certain milestones.

In September 1995, the Company entered into a research and development collaboration which was completed in September 1996. Under this collaboration, the Company received $3,500,000 in equity payments and recognized $1,538,000 in research revenue.

7. COMMITMENTS

The Company leases its facility under an operating lease which expires in August 2000. The Company has the option to renew the lease for an additional period of up to five years and has certain expansion options.

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

	Operating Leases
Year Ending June 30,	
1999	$ 476,000
2000	494,000
2001	92,000
Total minimum lease payments	$1,062,000

Rent expense for the years ended June 30, 1996, 1997 and 1998, was $338,000, $456,000 and $487,000, respectively, and $1,774,000 for the period from Inception to June 30, 1998.

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, 1998, the Company has made no contributions to the plan.

Exhibit 23.1

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-25021) of Aastrom Biosciences, Inc. of our report dated August 7, 1998 appearing on page 9 of the Annual Report to Shareholders which is incorporated in this Annual Report on Form 10-K.

/s/ PRICEWATERHOUSECOOPERS LLP

Bloomfield Hills, Michigan
September 28, 1998

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE COMPANY'S ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED JUNE 30, 1998, AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

12-MOS
JUN-30-1998
JUL-01-1997
JUN-30-1998
2,078,000
9,134,000
0
0
0
11,649,000
2,997,000
2,272,000
12,374,000
1,528,000
0
0
9,930,000
59,474,000
(58,558,000)
12,374,000
0
249,000
0
18,356,000
0
0
12,000
(17,233,000)
0
(17,233,000)
0
0
0
(17,233,000)
(1.57)
(1.57)